MPEG-4 IP Surveillance

Buyer's Guide

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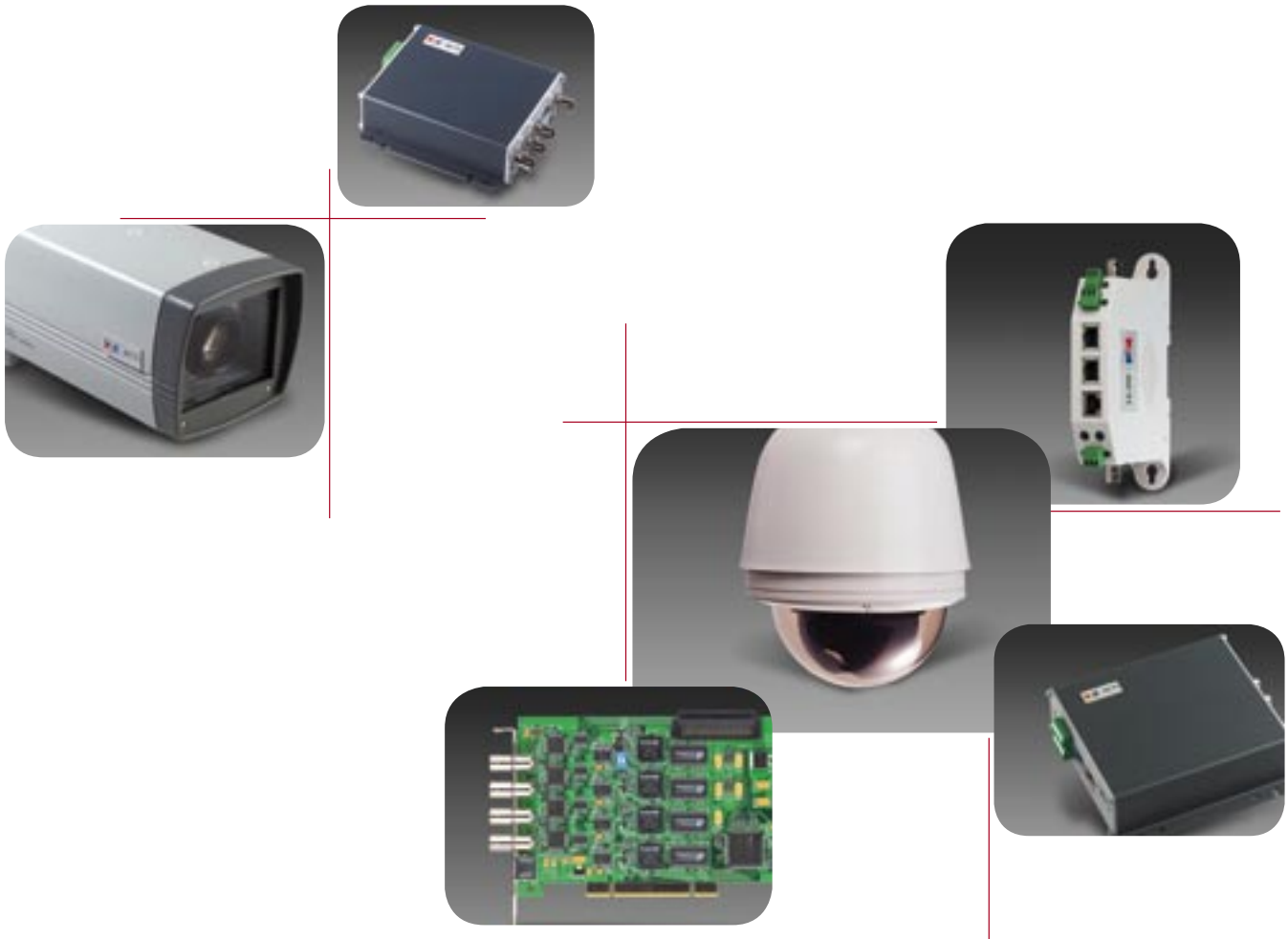
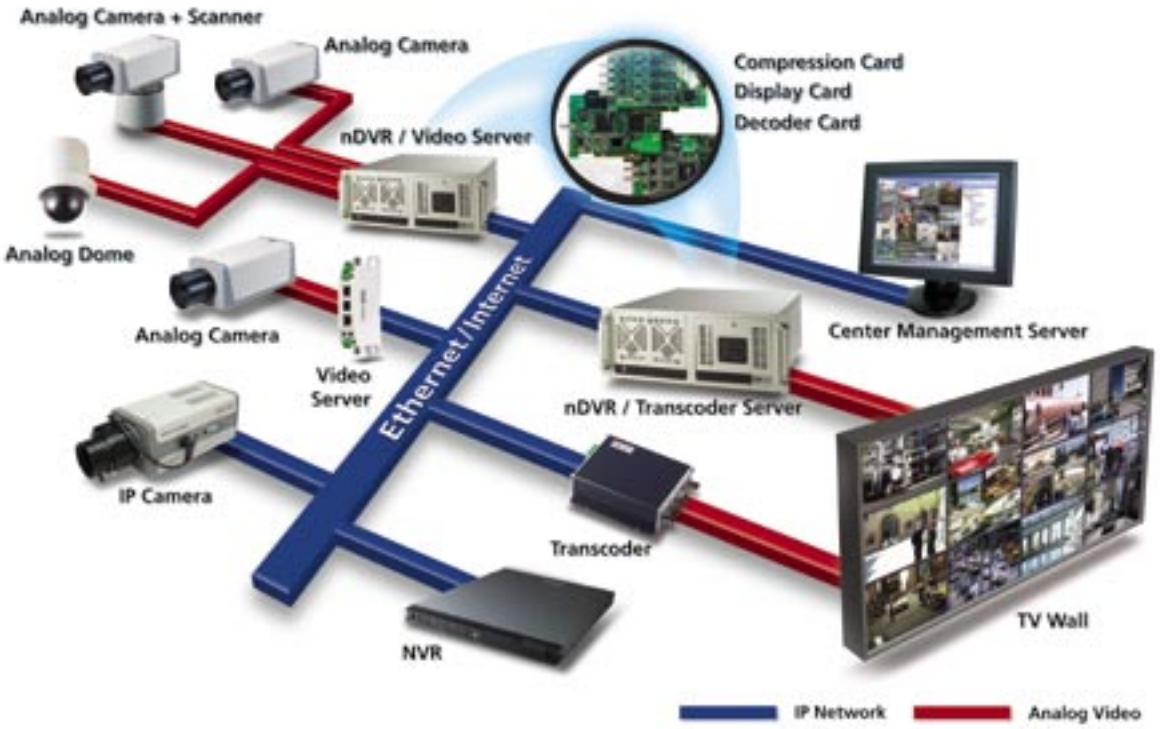
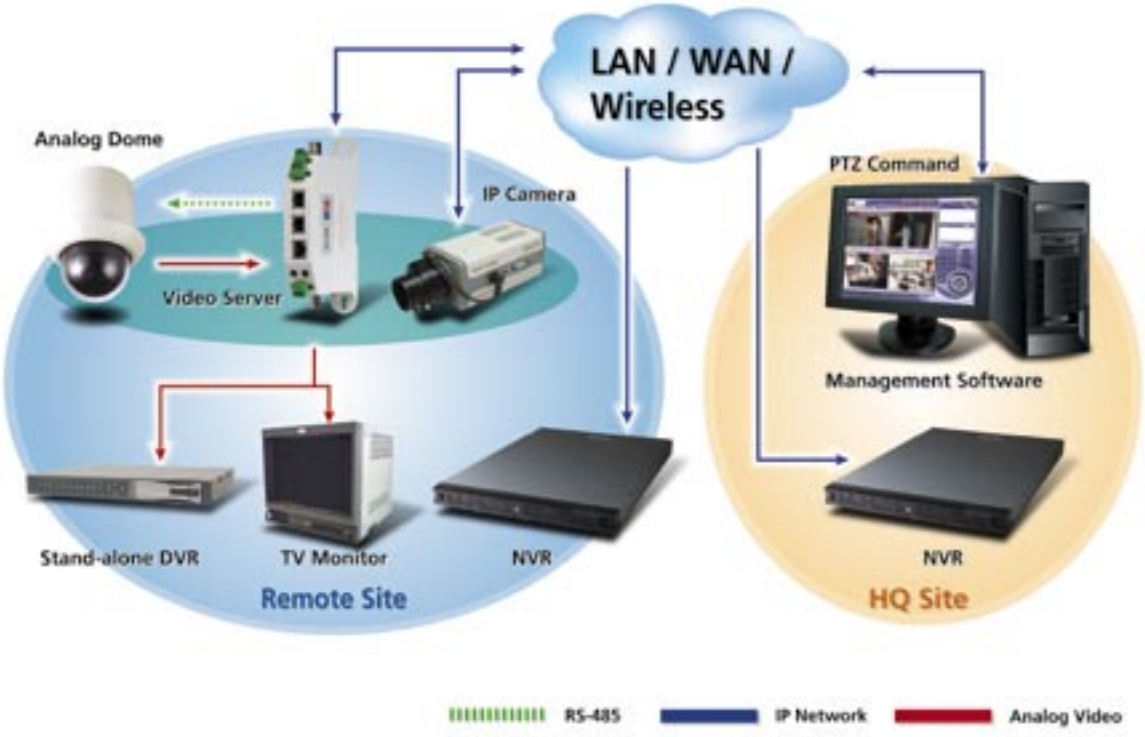


Solution Template

Converged IP Surveillance Solution

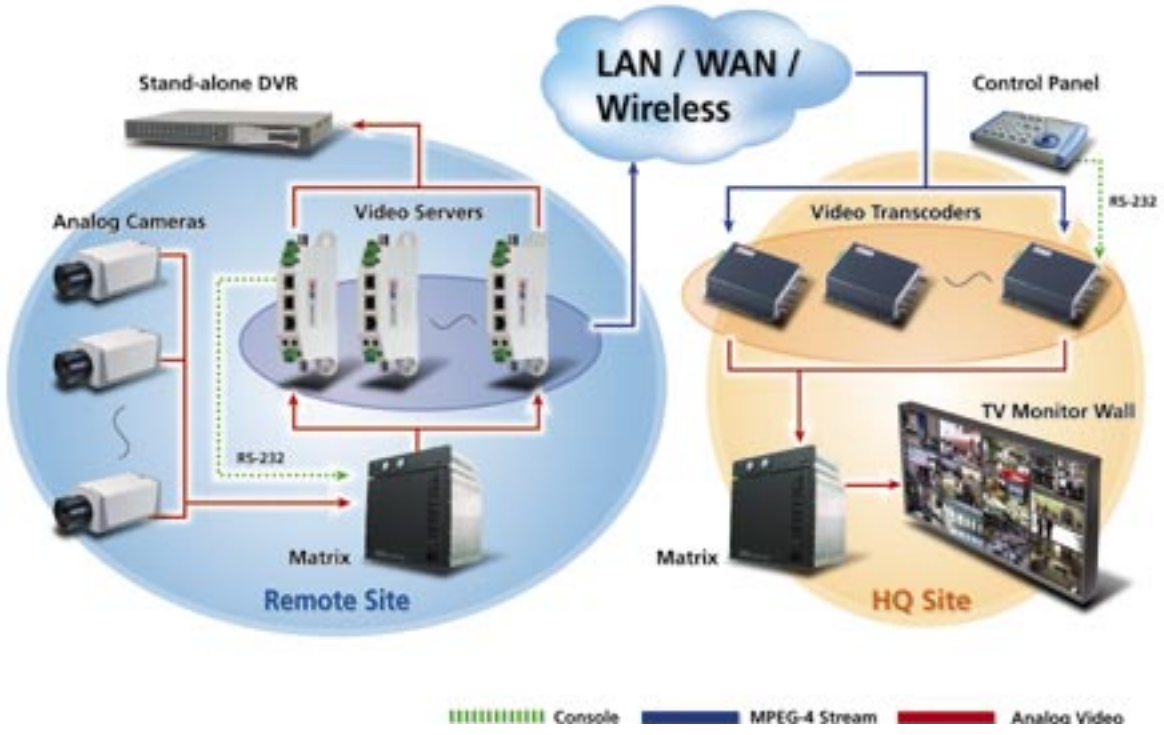


Best MPEG-4 IP Surveillance Solutions

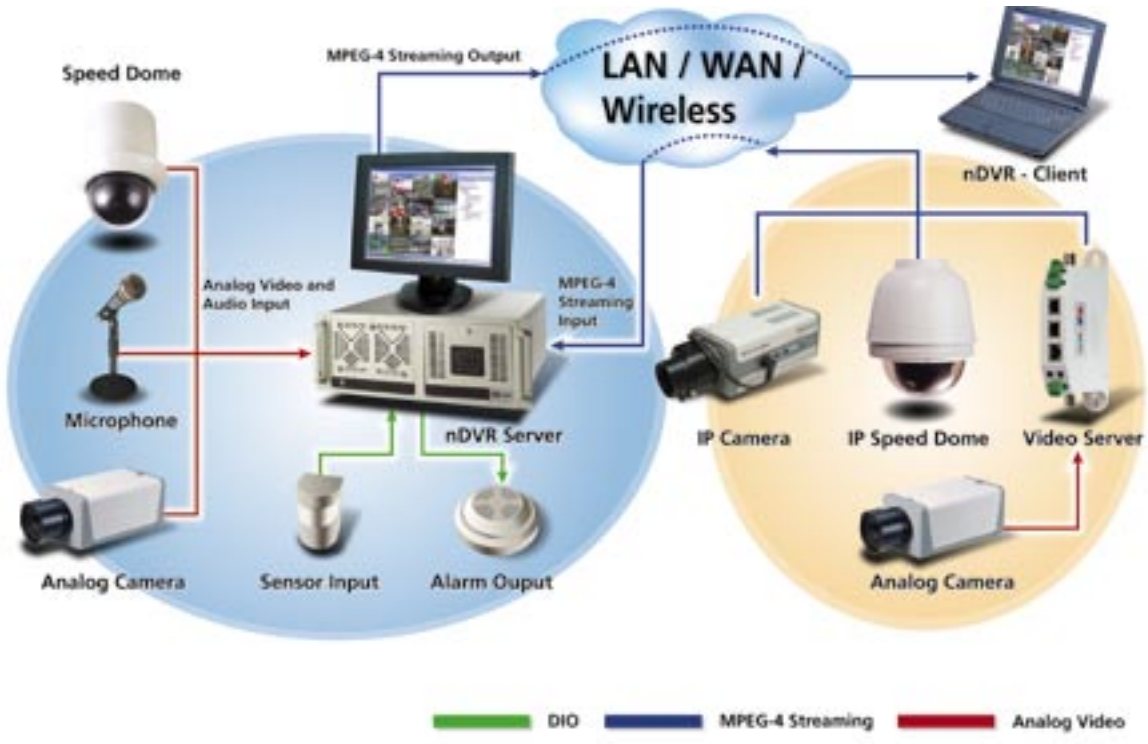


Solution Template

Hybrid Solution -- CCTV + IP



Hybrid Solution -- nDVR + IP



CAM-5100

MPEG-4 Real-time Network Streaming IP Camera

* The lens is not included.

- 1/3” SONY SuperHAD color CCD sensor
- MPEG-4 ASP compliant hardware compression
- CIF up to Full D1 resolution at 30/25 FPS
- Dual MPEG-4 video stream output via LAN and WAN (PPPoE supported) ports at the same time
- QoS enabled (L2, L3) for video streaming (UniCast/MultiCast)
- Min. 0.15 Lux at F=1.2
- Backlight Compensation, Auto Iris Control, Auto White Balance supported
- Digital time code embedded
- Built-in motion detection

MPEG-4 compression gives a high resolution image quality

The CAM-5100 MPEG-4 IP Camera adopts MPEG-4 Advanced Simple Profile (ASP) compliant compression technology to produce DVD-like high resolution video. It utilizes the premium 1/3” CCD SONY SuperHAD color CCD sensor, and has horizontal resolution of 480 TV lines. The real-time image transmission is 30 fps (720 x 480 pixels, NTSC) and 25 fps (720 x 576 pixels, PAL).

Advanced network technologies enable real-time surveillance

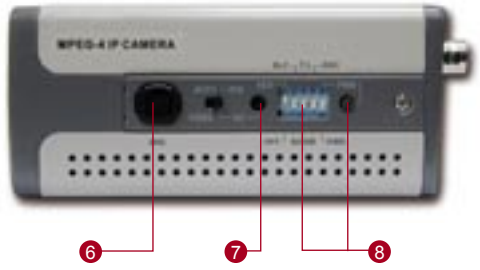
With the LAN and WAN ports built-in, the CAM-5100 applies QoS (Quality of Service, IEEE 802.1pQ) technology to fully utilize the network bandwidth. CAM-5100 supports automatic (or manual) frame rate control for concurrent video streams accessing at different network bandwidth.

With advanced MPEG-4 ASP compliant video compression and QoS-enabled streaming, the CAM-5130 delivers smooth ananlog-video like transmission over LAN or WAN to reach true remote video surveillance goal.

The CAM-5100 not only supports DDNS, but also has a built-in web server to enable authorized users to do live-viewing and adjust the camera setting via remote web browsers.

Sophisticated design

In addition to support of the DC and video auto iris lens, the CAM-5100 also has DIP-switch controlled functions including back light compensation, auto white balance, auto gain control and flickerless for different application conditions.



1. Composite video output
2. Digital input/output
3. DC 12 V power input
4. WAN port
5. LAN port
6. Auto Iris lens control port
7. DC level
8. Function DIP switch

PRODUCT SPECIFICATION

Image System	
Image Sensor	1/3" SONY SuperHAD CCD
Effective Pixels (HxV)	811 x 508 (NTSC) 795 x 596 (PAL)
Resolution	480 TVL / 380 TVL
Min. Illumination	0.15 Lux at F=1.2
Auto Electronic Shutter	AES On: 1/50 (60) sec. ~ 1/100,000 sec; AES Off: 1/50 (60) sec.
Backlight Compensation	On/Off (switchable)
Signal to Noise Ratio	More than 50 dB (AGC off)
F.L. (Flickerless)	On/Off (switchable)
Automatic Gain Control	On/Off (switchable)
Auto Iris Control	Video/DC (switchable)
Auto White Balance	AWB(ATW)/PWB (switchable)
Lens Mount	C/CS (with adaptor)
Video Compression	
Compression	MPEG-4 ASP compliant hardware compression
Resolution	QCIF (160 x 112 in NTSC, 176 x 144 in PAL) CIF (352 x 240 in NTSC, 352 x 288 in PAL) Full D1 (720 x 480 in NTSC, 720 x 576 in PAL)
Image Frame Rate	30 fps at full D1 resolution (NTSC) 25 fps at full D1 resolution (PAL)
Network	
Protocol Supported	TCP, UDP, HTTP, PPPoE, DDNS, DHCP, IGMP
QoS	Layer 2, 3

I/O Interface	
Ethernet	RJ-45 x2 (WAN/LAN) • 10/100base-T
Serial Port	RJ-45 x1 (RS-485)
Analog Video Output	BNC connector x1 • Composite video 1 Vpp, 75Ω
Digital Input	Terminal blocks x1 • Logic Level 0: 0 ~ 0.8 V • Logic Level 1: 2.31 ~ 5.3 V
Digital Output	Terminal blocks x1 • Logic Level 0: 0 ~ 0.5 V • Logic Level 1: 2.8 ~ 3.3 V
Mechanical & Environment	
Dimensions (W x H x D)	63 x 52 x 120 mm (2.48" x 2.05" x 4.756")
Weight	450 g (0.99 lb)
Power Requirement	12 V / 1 A / 12 W
Operation Temp.	5 °C ~ 50 °C (40 °F ~ 122 °F)
Others	
Security	Password/username protection for restricted camera access
General Functions	• Motion detection with multiple sensitivity windows • Built-in Web Server and network interface • Digital time-code embedded
Client Software OS Supported	Win 2000, Win XP, Win 2003
Certification	CE, FCC

ORDERING INFORMATION

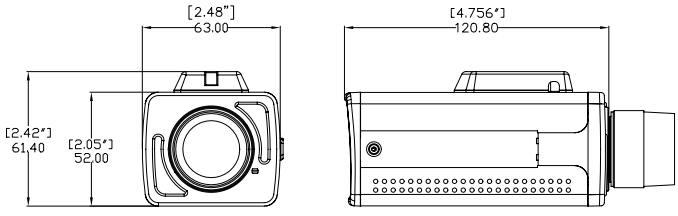
Part Number	Full D1	CIF	NTSC	PAL	480 TVL	380 TVL	4 MB Flash	8 MB Flash
CAM-5100HN	V		V		V		V	
CAM-5100HP	V			V	V		V	
CAM-5100MN	V		V			V	V	
CAM-5100MP	V			V		V	V	
CAM-5100SN		V	V			V	V	
CAM-5100SP		V		V		V	V	
CAM-5101HN	V		V		V			V
CAM-5101HP	V			V	V			V
CAM-5101MN	V		V			V		V
CAM-5101MP	V			V		V		V
CAM-5101SN		V	V			V		V
CAM-5101SP		V		V		V		V

PS. After CAM-5101 series become available, CAM-5100 series will only be produced upon request.

ACCESSORY OPTIONS

- Lens, f3.0~8mm F1.0, CS mount, Format 1/3" 0690-00002-000
- Lens, f6.0~18mm F1.2, CS mount, Format 1/3" 0690-00003-000
- Lens, f5.0~55mm F1.4, CS mount, Format 1/3" 0690-00004-000

DIMENSION DIAGRAM



Unit: mm [inch]

CAM-5120

MPEG-4 Real-time Day and Night Network Streaming IP Camera

- 1/3” SONY Exview HAD CCD sensor
- Both color and B/W capabilities
- Super Gain Control, IR cut-filter switching mechanism
- Optional IR Aspherical lens
- MPEG-4 ASP compliant hardware compression
- CIF up to Full D1 resolution at 30/25 FPS
- Dual MPEG-4 video stream output via LAN and WAN (PPPoE supported) ports at the same time
- QoS enabled (L2, L3) video streaming (UniCast/MultiCast)
- Min. 0.05 Lux at F=1.2
- Digital time code embedded
- Built-in motion detection

MPEG-4 compression gives a high resolution image quality

The CAM-5120 Day and Night MPEG-4 IP Camera adopts MPEG-4 Advanced Simple Profile (ASP) compliant compression technology to perform Full D1 resolution. It utilizes the premium 1/3” SONY Exview HAD CCD sensor, and has horizontal resolution of 480 TV lines. With Super Gain Control mechanism, it will switch to color and monochrome picture automatically. The real-time image transmission is 30 fps (720 x 480 pixels, NTSC) and 25 fps (720 x 576 pixels, PAL).

Advanced network technologies enable real-time surveillance

With the LAN and WAN ports built-in, the CAM-5120 applies QoS (Quality of Service, IEEE 802.1pQ) technology to fully utilize the network bandwidth. CAM-5120 supports automatic (or manual) frame rate control for concurrent video streams accessing at different network bandwidth.

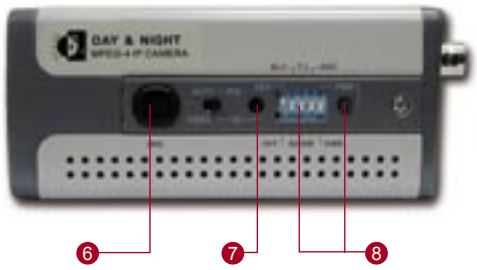
With advanced MPEG-4 ASP compliant video compression and QoS-enabled streaming, the CAM-5130 delivers smooth ananlog-video like transmission over LAN or WAN to reach true remote video surveillance goal.

The CAM-5120 not only supports DDNS, but also has a built-in web server to enable authorized users to do live-viewing and adjust the camera setting via remote web browsers.

Sophisticated design

In addition to support of the DC and video auto iris lens, the CAM-5120 also has DIP-switch controlled functions including back light compensation, auto white balance, auto gain control and flickerless for different application conditions.

1. Composite video output
2. Digital input/output
3. DC 12 V power input
4. WAN port



5. LAN port
6. Auto Iris lens control port
7. DC level
8. Function DIP switch

PRODUCT SPECIFICATION

Image System	
Image Sensor	1/3" SONY Exview HAD CCD
Effective Pixels (HxV)	811 x 508 (NTSC) 795 x 697 (PAL)
Horizontal Resolution	480 TVL
Min. Illumination	Color mode automatically switched to B/W mode under 4 Lux; 0.05 Lux at F = 1.2 without IR light; 0 Lux at F = 1.2 with IR light
Auto Electronic Shutter	AES On: 1/50 (60) sec. ~ 1/100,000 sec; AES Off: 1/50 (60) sec.
Sync System	Internal
Day/Night Switch	Mechanical IR cut-filter
Mechanical IR Cut-filter	Auto; Color/Monochrome
Infra Red Sensitivity	700 ~ 1100nm
Backlight Compensation	On/Off (switchable)
Signal to Noise Ratio	More than 50 dB (AGC off)
F.L. (Flickerless)	On/Off (switchable)
Automatic Gain Control	On/Off(switchable)*
Auto Iris Control	Video/DC (switchable)
Auto White Balance	AWB(ATW)/PWB (switchable)
Video Output	1Vp-p Composite/75Ω
Lens Mount	C/CS (with adaptor)
Video Compression	
Compression	MPEG-4 ASP compliant hardware compression
Resolution	QCIF (160 x 112 in NTSC, 176 x 144 in PAL) CIF (352 x 240 in NTSC, 352 x 288 in PAL) Full D1 (720 x 480 in NTSC, 720 x 576 in PAL)
Image Frame Rate	30 fps at full D1 resolution (NTSC) 25 fps at full D1 resolution (PAL)

*Turning off Automatic Gain Control (AGC) will disable Day and Night function.

Network	
Protocol Supported	TCP, UDP, HTTP, PPPoE, DDNS, DHCP, IGMP
QoS	Layer 2, 3
I/O Interface	
Ethernet	RJ-45 x2 (WAN/LAN) • 10/100base-T
Serial Port	RJ-45 x1 (RS-485)
Analog Video Output	Composite x1, BNC connector (NTSC/PAL)
Digital Input	Terminal blocks x1 • Logic Level 0: 0 ~ 0.8 V • Logic Level 1: 2.31 ~ 5.3 V
Digital Output	Terminal blocks x1 • Logic Level 0: 0 ~ 0.5 V • Logic Level 1: 2.8 ~ 3.3 V
Mechanical & Environment	
Dimensions (W x H x D)	63 x 52 x 120 mm (2.48" x 2.05" x 4.756")
Weight	450 g (0.99 lb)
Power Requirement	12 V / 1 A / 12 W
Operation Temp.	5 °C ~ 50 °C (40 °F ~ 122 °F)
Others	
Security	Password/username protection for restricted camera access
General Functions	• Motion detection with multiple sensitivity windows • Built-in Web Server and network interface • Digital time-code embedded
Client Software OS Supported	Win 2000, Win XP, Win 2003
Certification	CE, FCC

ORDERING INFORMATION

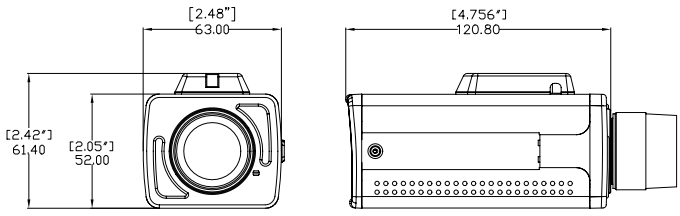
Part Number	Full D1	NTSC	PAL	480 TVL	Day & Night	4 MB Flash	8 MB Flash
CAM-5120HN	V	V		V	V	V	
CAM-5120HP	V		V	V	V	V	
CAM-5121HN	V	V		V	V		V
CAM-5121HP	V		V	V	V		V

PS. After CAM-5121 series become available, CAM-5120 series will only be produced upon request.

ACCESSORY OPTIONS

- Aspherical IR Lens, f3.0~8.5mm F1.0, CS mount, Format 1/3" 0690-00012-000
- Aspherical IR Lens, f7.5~50mm F1.3, CS mount, Format 1/3" 0690-00013-000

DIMENSION DIAGRAM



Unit: mm [inch]

CAM-5130

MPEG-4 Real-time Network Streaming Indoor Day and Night 230X IP Zoom Camera

- 1/4” SONY SuperHAD with 470K/410K pixels
- MPEG-4 ASP compliant compression
- CIF Up to Full D1 resolution at 30/25 FPS
- QoS enabled (L2, L3) video streaming (UniCast/MultiCast)
- Built-in auto focus / auto iris / 23X optical zoom lens with 10X digital zoom
- Smart Optical Low Pass Filter (OLPF) switching mechanism allows working consistently in day time (visible light) in color and night time (invisible light) in monochrome mode with no focus shift
- Backlight Compensation (BLC), motion detection and masking functions
- Advanced white balance mode: ATW, AWB, MWB (level, R-Y gain, B-Y gain control)
- Digital time code embedded
- Built-in LAN and WAN (low latency PPPoE supported) ports
- IP66 water proof

MPEG-4 compression gives a high resolution image quality

The CAM-5130 MPEG-4 Day and Night IP Zoom Camera adopts MPEG-4 Advanced Simple Profile (ASP) compliant compression technology to produce Full D1 (4 CIF) resolution. It utilizes the premium 1/4” SONY SuperHAD CCD sensor, and has horizontal resolution of 480 TV lines. The Smart Optical Low Pass Filter (OLPF) switching mechanism allows working consistently in day time (visible light) in color and night time (invisible light) in mono chrome mode with no focus shift. The real-time image transmission is 30 fps (720 x 480 pixels, NTSC) and 25 fps (720 x 576 pixels, PAL)

Advanced network technologies enable real-time surveillance

With the LAN and WAN terminal blocks build in, the CAM-5130 applies QoS (Quality of Services, IEEE 802.1pQ) technology to fully utilize the network bandwidth. CAM-5130 supports automatic (or manual) frame rate control for concurrent video streams accessing at different network bandwidth.

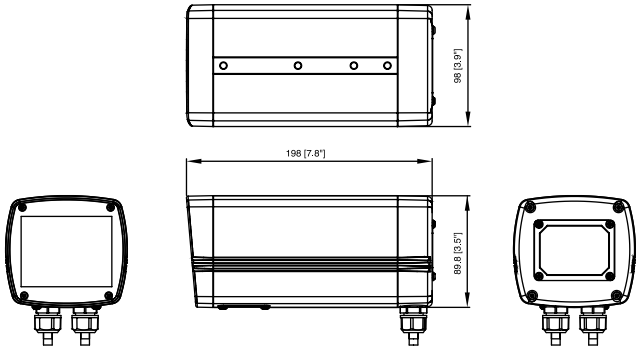
With advanced MPEG-4 ASP compliant video compression and QoS-enabled streaming, the CAM-5130 delivers smooth ananlog-video like transmission over LAN or WAN to reach true remote video surveillance goal.

The CAM-5130 not only supports DDNS, but also has a build-in web server to enable authorized users to do live-viewing and adjust the camera setting via remote web browsers.

Sophisticated design

In addition to support a video auto iris lens, the CAM-5130 also has software-controlled including backlight compen sation, auto white balance, auto gain control, automatic electronic shutter and fix shutter mode (1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 sec.) for different application conditions.

DIMENSION DIAGRAM



Unit: mm [inch]

PRODUCT SPECIFICATION

Image System	
Image Sensor	1/4" Interline Transfer SONY SuperHAD CCD
Effective Pixels(HxV)	811 x 508 (NTSC) 795 x 596 (PAL)
Horizontal Resolution	480 TV Lines
Sync System	Internal / External
Optical Zoom	23X optical zoom lens (F 1.6~3.8, f=3.6~82.8mm)
Digital Zoom	10X digital zoom
Signal to Noise Ratio	More than 50 dB
Min. Illumination	0.5 lux at F1.6 (color mode, 30 IRE, SAGC) 0.1 lux at F1.6 (B/W mode, 30 IRE, SAGC) 0.01 lux at F1.6 (64x sense up, 30 IRE, SAGC)
Backlight Compensation	Auto On/ Off, 48 zones and weighting adjustable
Gain Control	Super AGC 0 ~ 36 dB
Electronic Shutter	1/60 ~ 1/100,000 sec. Flickerlses (NTSC) 1/50 ~ 1/100,000 sec. Flickerless (PAL)
Fixed Shutter	1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000
Zoom Speed	4.2 sec.
Auto White Balance	ATW 2500 ºK~9600 ºK (Preset / Manual)
OLPF Removable	Intenal (auto switching) / External
OLPF Change Level Adj.	0.1 ~ 15 lux adjustable
OLPF Change Delay Time	5 ~ 8 sec.
Gamma	0.45 (CRT), 1 (TFT)
Frame Integration	2x ~ 64x sense up adjustable
Video Output	1Vpp composite output, 75 ohm
Video Compression	
Compression type	MPEG-4 ASP compliant hardware compression
Image Frame Rate	30 fps at Full D1 resolution (NTSC) 25 fps at Full D1 resolution (PAL)
Max. Resolution	QCIF(160x112 in NTSC, 176x144 in PAL) CIF(352x240 in NTSC, 352x288 in PAL) Full D1(720x480 in NTSC, 720x576 in PAL)
Network	
Protocol Supported	TCP, UDP, HTTP, PPPoE, DDNS, DHCP, IGMP
QoS	Layer 2, 3
Simultaneous Access	Unlimited (multicast)

I/O Interface	
WAN Port	Terminal blocks x4 (10/100base-T)
LAN Port	Terminal blocks x4 (10/100base-T)
Analog Video Output	Terminal blocks x3 (composite video, 1 Vpp, 75Ω)
Digital Output / Input	Terminal blocks x3 • Logic Level 0: 0 ~ 0.5 V(Output) • Logic Level 1: 2.8 ~ 3.3 V(Output) • Logic Level 0: 0 ~ 0.8 V(Input) • Logic Level 1: 2.31 ~ 5.3 V(Input)
Mechanical	
Dimensions (W x H x D)	98 mm x 89.8 mm x 198 mm (3.9" x 3.5" x 7.8")
Weight	1 Kg
Power supply	
Power Source	DC 12 V / 1.5 A, AC 24 V, AC 100 ~ 240 V
Environment	
Operation Temp.	0 °C ~ 50 °C (32 °F ~ 122 °F)
Humidity	RH10 % ~ 85 %
Others	
Security	Password/username protection for restricted camera access
General Functions	• DI/O event triggered via Ethernet • Built-in Web Server and network interface
Client Software OS Supported	Win 2000, Win XP, Win 2003
Certification	CE, FCC

ORDERING INFORMATION

Model Number	NTSC	PAL	DC 12 V	AC 24 V	AC 100 ~ 240 V
CAM-5130HP		v	v		
CAM-5131HP		v		v	
CAM-5132HP		v			v
CAM-5130HN	v		v		
CAM-5131HN	v			v	
CAM-5132HN	v				v

CAM-5140

MPEG-4 Real-time Network Streaming Outdoor Day and Night 230X IP Zoom Camera

- 1/4” SONY Exview HAD with 470K/410K pixels
- MPEG-4 ASP compliant compression
- CIF Up to Full D1 resolution at 30/25 FPS
- QoS enabled (L2, L3) video streaming (UniCast/MultiCast)
- Built-in auto focus / auto iris / 23X optical zoom lens with 10X digital zoom
- Smart Optical Low Pass Filter (OLPF) switching mechanism allows working consistently in day time (visible light) in color and night time (invisible light) in monochrome mode with no focus shift
- Backlight Compensation (BLC), motion detection and masking functions
- Advanced white balance mode: ATW, AWB, MWB (level, R-Y gain, B-Y gain control)
- Digital time code embedded
- Built-in LAN and WAN (low latency PPPoE supported) ports
- IP66 water proof

MPEG-4 compression gives a high resolution image quality

The CAM-5140 MPEG-4 Day and Night IP Zoom Camera adopts MPEG-4 Advanced Simple Profile (ASP) compliant compression technology to produce Full D1 resolution. It utilizes the premium 1/4” SONY Exview HAD CCD sensor, and has general resolution of 480 TV lines. The Smart Optical Low Pass Filter (OLPF) switching mechanism allows working consistently in day time (visible light) in color and night time (invisible light) in monochrome mode with no focus shift. The real-time image transmission is 30 fps (720 x 480 pixels, NTSC) and 25 fps (720 x 576 pixels, PAL)

Advanced network technologies enable real-time surveillance

With the LAN and WAN terminal blocks build in, the CAM-5140 applies QoS (Quality of Services, IEEE 802.1pQ) technology to fully utilize the network bandwidth. CAM-5140 supports automatic (or manual) frame rate control for concurrent video streams accessing at different network bandwidth.

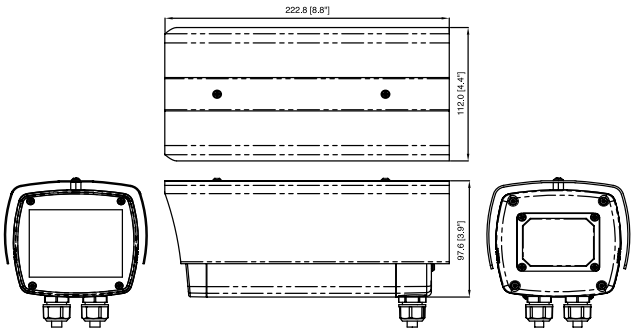
With advanced MPEG-4 ASP compliant video compression and QoS-enabled streaming, the CAM-5130 delivers smooth ananlog-video like transmission over LAN or WAN to reach true remote video surveillance goal.

The CAM-5140 not only supports DDNS, but also has a build-in web server to enable authorized users to adjust the camera setting via remote web browsers.

Sophisticated design

In addition to support a video auto iris lens, the CAM-5140 also has software-controlled including backlight compensation, auto white balance, auto gain control, automatic electronic shutter and fix shutter mode (1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 sec.) for different application conditions.

DIMENSION DIAGRAM



Unit: mm [inch]

PRODUCT SPECIFICATION

Image System	
Image sensor	1/4" Interline Transfer SONY Exview HAD CCD
Effective Pixels(HxV)	811 x 508 (NTSC) 795 x 596 (PAL)
Horizontal resolution	480 TV Lines
Sync System	Internal / External
Optical Zoom	23X optical zoom lens (F 1.6~3.8, f=3.6~82.8mm)
Digital Zoom	10X digital zoom
Signal to Noise Ratio	More than 50 dB
Min. Illumination	0.1 lux at F1.6 (color mode, 30 IRE, SAGC) 0.02 lux at F1.6 (B/W mode, 30 IRE, SAGC) 0.002 lux at F1.6 (64x sense up, 30 IRE, SAGC)
Backlight Compensation	Auto On/ Off, 48 Zones and weighting adjustable
Gain Control	Super AGC 0~ 36 dB
Electronic Shutter	1/60 ~ 1/100,000 sec. Flickerlses (NTSC) 1/50 ~ 1/100,000 sec. Flickerless (PAL)
Fixed Shutter	1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000
Zoom Speed	4.2 sec.
Auto White Balance	ATW 2500 ºK~9600 ºK (Preset / Manual)
OLPF Removable	Intenal (auto switching) / External
OLPF Change Level Adj.	0.02 ~15 lux adjustable
OLPF Change Delay Time	5 ~ 8 sec.
Gamma	0.45 (CRT), 1(TFT)
Frame integration	2x ~ 64x sense up adjustable
Video Output	1Vpp composite output, 75 ohm
Video Compression	
Compression Type	MPEG-4 ASP compliant hardware compression
Image Frame Rate	30 fps at Full D1 resolution (NTSC) 25 fps at Full D1 resolution (PAL)
Max. Resolution	QCIF(160x112 in NTSC, 176x144 in PAL) CIF(352x240 in NTSC, 352x288 in PAL) Full D1(720x480 in NTSC, 720x576 in PAL)
Network	
Protocol Supported	TCP, UDP, HTTP, PPPoE, DDNS, DHCP, IGMP
QoS	Layer 2, 3
Simultaneous Access	Unlimited (multicast)

I/O Interface	
WAN Port	Terminal blocks x4 (10/100base-T)
LAN Port	Terminal blocks x4 (10/100base-T)
Analog Video Output	Terminal blocks x3 (composite video, 1 Vpp, 75Ω)
Digital Output / Input	Terminal blocks x3 • Logic Level 0: 0 ~ 0.5 V (output) • Logic Level 1: 2.8 ~ 3.3 V (output) • Logic Level 0: 0 ~ 0.8 V (input) • Logic Level 1: 2.31 ~ 5.3 V (input)
Mechanical	
Dimensions (W x H x D)	112 mm x 97.6 mm x 222.8 mm (4.4" x 3.9" x 8.8")
Weight	1 Kg
Power supply	
Power Source	DC 12 V / 1.5 A, AC 24 V, AC 100 ~ 240 V
Environment	
Operation Temp.	0 °C ~ 50 °C (32 °F ~ 122 °F)
Humidity	RH10 % ~ 85 %
Others	
Security	Password/username protection for restricted camera access
General Functions	• DI/O event triggered via Ethernet • Built-in Web Server and network interface
Client Software OS Supported	Win 2000, Win XP, Win 2003
Certification	CE, FCC

ORDERING INFORMATION

Model Number	NTSC	PAL	DC 12 V	AC 24 V	AC 100 ~ 240 V
CAM-5140HP		v	v		
CAM-5141HP		v		v	
CAM-5142HP		v			v
CAM-5140HN	v		v		
CAM-5141HN	v			v	
CAM-5142HN	v				v

CAM-5200

MPEG-4 Real-time Network Streaming IP Camera with Audio

- 1/3” SONY SuperHAD color CCD sensor
- MPEG-4 ASP compliant hardware compression
- CIF up to Full D1 resolution at 30/25 FPS
- Dual MPEG-4 video stream output via LAN and WAN (PPPoE supported) ports at the same time
- QoS enabled (L2, L3) video streaming (UniCast/MultiCast)
- Min. 0.15 Lux at F=1.2
- Backlight Compensation, Auto Iris Control, Auto White Balance supported
- Digital time code embedded
- Built-in motion detection
- Audio function supported
- Power Over Ethernet (IEEE 802.3af) supported (CAM-5201) or AC 24 V power source supported (CAM-5202)

MPEG-4 compression gives a high resolution image quality

The CAM-5200 MPEG-4 IP Camera adopts MPEG-4 Advanced Simple Profile (ASP) compliant compression technology to produce DVD-like high resolution video. It utilizes the premium 1/3” SONY SuperHAD color CCD sensor, and has horizontal resolution of 480 TV lines. The real-time image transmission is 30 fps (720 x 480 pixels, NTSC) and 25 fps (720 x 576 pixels, PAL).

Advanced network technologies enable real-time surveillance

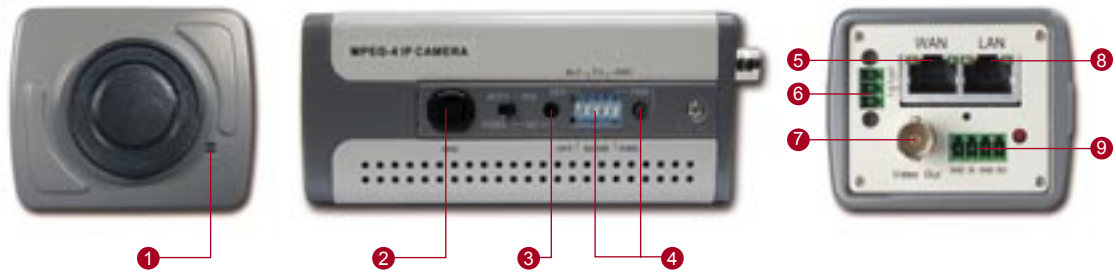
With the LAN and WAN ports built-in, the CAM-5200 applies QoS (Quality of Service, IEEE 802.1pQ) technology to fully utilize the network bandwidth. CAM-5200 supports automatic (or manual) frame rate control for concurrent video streams accessing at different network bandwidth.

With advanced MPEG-4 ASP compliant video compression and QoS-enabled streaming, the CAM-5130 delivers smooth ananlog-video like transmission over LAN or WAN to reach true remote video surveillance goal.

The CAM-5200 not only supports DDNS, but also has a built-in web server to enable authorized users to do live-viewing and adjust the camera setting via remote web browsers.

Sophisticated design

In addition to support of the DC and a video auto iris lens, the CAM-5200 also has DIP-switch controlled functions including backlight compensation, auto white balance, auto gain control and flickerless for different application conditions.



1. Audio input
2. Auto IRIS
3. DC level
4. Function DIP switch
5. WAN port
6. DC 12 V/AC 24 V power input
7. Composite video output
8. LAN port
9. Digital input/output

PRODUCT SPECIFICATION

Image System	
Image Sensor	1/3" SONY SuperHAD CCD
Effective Pixels(HxV)	811 x 508 (NTSC) 795 x 596 (PAL)
Horizontal Resolution	480 TVL / 380 TVL
Min. Illumination	0.15 Lux at F=1.2
Auto Electronic Shutter	AES On: 1/50 (60) sec. ~ 1/100,000 sec; AES Off: 1/50 (60) sec.
Backlight Compensation	On/Off (switchable)
Signal to Noise Ratio	More than 50 dB (AGC off)
F.L. (Flickerless)	On/Off (switchable)
Automatic Gain Control	On/Off (switchable)
Auto Iris Control	Video/DC (switchable)
Auto White Balance	AWB(ATW)/PWB (switchable)
Lens Mount	C/CS (with adaptor)
Video Compression	
Compression	MPEG-4 ASP compliant hardware compression
Resolution	QCIF (160 x 112 in NTSC, 176 x 144 in PAL) CIF (352 x 240 in NTSC, 352 x 288 in PAL) Full D1 (720 x 480 in NTSC, 720 x 576 in PAL)
Image Frame Rate	30 fps at full D1 resolution (NTSC) 25 fps at full D1 resolution (PAL)
Network	
Protocol Supported	TCP, UDP, HTTP, PPPoE, DDNS, DHCP, IGMP
QoS	Layer 2, 3

I/O Interface	
Ethernet	RJ-45 x2 (WAN/LAN) • 10/100base-T
Audio	Built-in microphone
Video	BNC connector x1 • Composite video 1 Vpp, 75Ω
Digital Input	Terminal blocks x1 • Logic Level 0: 0 ~ 0.4 V • Logic Level 1: 3.3 ~ 30 V
Digital Output	Terminal blocks x1 • Logic Level 0: 0.1 ~ 0.6 V • Logic Level 1: 2.4 ~ 5 V
Mechanical & Environment	
Dimensions (W x H x D)	63 x 52 x 120 mm (2.48" x 2.05" x 4.756")
Weight	450 g (0.99 lb)
Power Source	DC 12 V (CAM-5200) PoE (IEEE802.3af) with Class 3 (CAM-5201) AC 24 V (CAM-5202)
Power Consumption	9 W
Operation Temp.	5 °C ~ 50 °C (40 °F ~ 122 °F)
Others	
Security	Password/username protection for restricted camera access
General Functions	• Motion detection with multiple sensitivity windows • Built-in Web Server and network interface • Digital time-code embedded
Client Software OS Supported	Win 2000, Win XP, Win 2003
Certification	CE, FCC

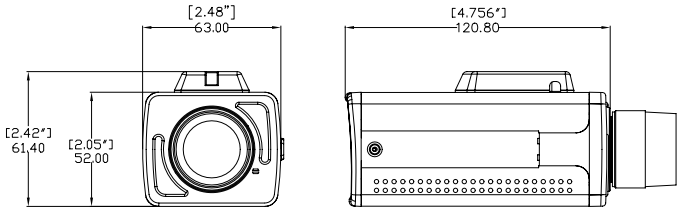
ORDERING INFORMATION

Part Number	Full D1	CIF	NTSC	PAL	480 TVL	380 TVL	DC 12 V	PoE	AC 24 V
CAM-5200HN	V		V		V		V		
CAM-5200HP	V			V	V		V		
CAM-5200SN		V	V			V	V		
CAM-5200SP		V		V		V	V		
CAM-5201HN	V		V		V			V	
CAM-5201HP	V			V	V			V	
CAM-5201SN		V	V			V		V	
CAM-5201SP		V		V		V		V	
CAM-5202HN	V		V		V				V
CAM-5202HP	V			V	V				V
CAM-5202SN		V	V			V			V
CAM-5202SP		V		V		V			V

ACCESSORY OPTIONS

- Lens, f3.0~8mm F1.0, CS mount, Format 1/3" 0690-00002-000
- Lens, f6.0~18mm F1.2, CS mount, Format 1/3" 0690-00003-000
- Lens, f5.0~55mm F1.4, CS mount, Format 1/3" 0690-00004-000

DIMENSION DIAGRAM



Unit: mm [inch]

CAM-6100

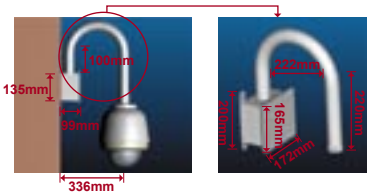
MPEG-4 Real-time IP High Speed Dome

- 1/4”-type Sony SuperHAD CCD Sensor
- MPEG-4 ASP compliant hardware compression
- CIF up to Full D1 resolution at 30/25 FPS
- Dual MPEG-4 video stream output via LAN and WAN (PPPoE supported) ports at the same time
- QoS enabled (L2, L3) for video streaming (UniCast/MultiCast)
- DDNS supported
- Remote Pan/Tilt/Zoom control
- 216X zoom : 18X optical zoom and 12X digital zoom
- Built-in motion detection

Outdoor wall mount

Speed dome module + Outdoor housing + Wall mount bracket

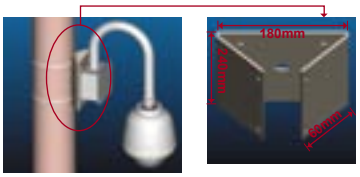
Appearance



Outdoor pole mount

Speed dome module + Outdoor housing + Wall mount bracket + Pole-mount bracket

Appearance



Outdoor corner mount

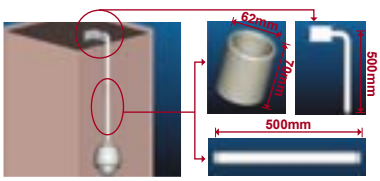
Speed dome module + Outdoor housing + Wall mount bracket + Corner-mount bracket

Appearance

Outdoor ceiling mount

Speed dome module + Outdoor housing + Ceiling mount bracket + Bracket extention

Appearance



Indoor ceiling mount

Speed dome module + Indoor housing

PRODUCT SPECIFICATION

Image System	
Image Pickup Device	1/4"-type Sony SuperHAD CCD
Effective Pixels(HxV)	768 x 494 (NTSC) 752 x 582 (PAL)
Compression	MPEG-4 ASP hardware compression
Resolution	QCIF (160 x 112 in NTSC, 176 x 144 in PAL) CIF (352 x 240 in NTSC, 352 x 288 in PAL) Full D1 (720 x 480 in NTSC, 720 x 576 in PAL)
Image Frame Rate	30 fps at 720 x 480 resolution (NTSC) 25 fps at 720 x 576 resolution (PAL)
Electric	
Sync System	Internal / linelock
Lens	18X optical zoom, f=4.1~73.8 mm, F1.4~3.0
Digital Zoom	12X (up to 216X with optical zoom)
Focusing System	Auto (normal sensitivity / low sensitivity)
Minimum Illumination	Normal Mode : 3 lux (F1.4. 1/60 (1/50) sec., AGC on, 50 IRE)
S/N Ratio	More than 50 dB (AGC off)
Tour	4 tours memorizing up 6 mins of manual control
Iris Control	Auto / manual
Gain Control	Auto
White Balance	Auto / ATW / one push WB
Electric Shutter	Auto 1/60 (1/50) to 1/100,000sec. Manual 16 steps 1/60 (1/50) to 1/10,000 sec.
BLC	On / Off
Auto Exposure Control	Auto / manual / backlight compensation
Auto Exposure Compensation	-10.5 ~ +10.5 dB(15 steps)
Preset	64 points
Privacy Zone	On / off, up to 8 zones
Alarm	4 inputs / 1 output
OSD	Yes

Remote Control	Via Ethernet or via RS-485 (RJ-45)
Video Output	1 Vpp composite output, 75 ohm
Network	
Ethernet	10/100base-T x2 for LAN/WAN
Protocol Supported	TCP, UDP, HTTP, PPPoE, DDNS, DHCP, IGMP
QoS	Layer 2,3
I/O Interface	
Network	RJ-45 x2
Serial Port	RJ-45 x1 (RS-485)
Analog Video Output	BNC connector x1 (NTSC/PAL)
Digital Input/Output	DI x2, DO x2
Mechanism	
Panning Range	360º endless
Tilting Range	92º
Pan-tilt Accurancy	Cumulative error less than 0.6º per 10,000 rotations
Pan-tilt Warranty	1 million rotations guarantee
Panning Speed	Manual: 0.1º ~ 90º /sec Turbo:150º /sec Preset: 300º /sec
Tilting Speed	Manual: 0.1º ~45º /sec Preset: 200º /sec
Dimensions(øxH)	134 mm x 233.7 mm (5.27" x 9.2")
Weight	1750 g approx. (3.86 lb)
Power supply	
Power Requirement	AC 23 V
Power Consumption	Indoor 27 W (max.) / Outdoor 57 W (max.)
Environment	
Operating Temperature	0 ºC ~ 50 ºC
Operating Humidity	20% ~ 80% RH
Storage Temperature	-20 ºC ~ 60 ºC

ORDERING INFORMATION

Model Number	NTSC	PAL	Indoor Ceiling Mount	Outdoor Ceiling Mount	Outdoor Wall Mount	Outdoor Corner Mount	Outdoor Pole Mount	4 MB Flash	8 MB Flash
CAM-6100NN	v		v					v	
CAM-6100NE	v			v				v	
CAM-6100NW	v				v			v	
CAM-6100NC	v					v		v	
CAM-6100NP	v						v	v	
CAM-6100PN		v	v					v	
CAM-6100PE		v		v				v	
CAM-6100PW		v			v			v	
CAM-6100PC		v				v		v	
CAM-6100PP		v					v	v	
CAM-6101NN	v		v						v
CAM-6101NE	v			v					v
CAM-6101NW	v				v				v
CAM-6101NC	v					v			v
CAM-6101NP	v						v		v
CAM-6101PN		v	v						v
CAM-6101PE		v		v					v
CAM-6101PW		v			v				v
CAM-6101PC		v				v			v
CAM-6101PP		v					v		v

PS. After CAM-6101 series become available, CAM-6100 series will only be produced upon request.

CAM-6110

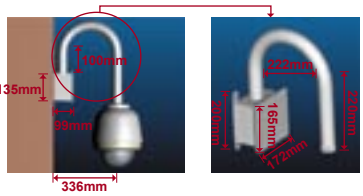
MPEG-4 Real-time IP High Speed Dome With Day and Night

- 1/4”-type Sony Exview HAD CCD Sensor
- MPEG-4 ASP compliant hardware compression
- CIF up to Full D1 resolution at 30/25 FPS
- Dual MPEG-4 video stream output via LAN and WAN (PPPoE supported) ports at the same time
- QoS enabled (L2, L3) for video streaming (UniCast/MultiCast)
- DDNS supported
- Remote Pan/Tilt/Zoom control
- 216X zoom : 18X optical zoom and 12X digital zoom
- Built-in motion detection

Outdoor wall mount

Speed dome module + Outdoor housing + Wall mount bracket

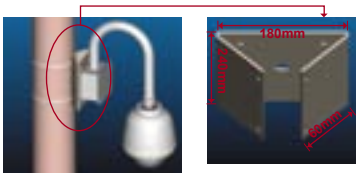
Appearance



Outdoor pole mount

Speed dome module + Outdoor housing + Wall mount bracket + Pole-mount bracket

Appearance



Outdoor corner mount

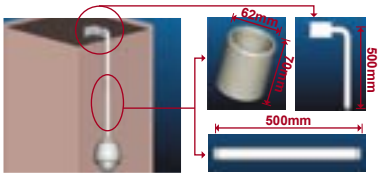
Speed dome module + Outdoor housing + Wall mount bracket + Corner-mount bracket

Appearance

Outdoor ceiling mount

Speed dome module + Outdoor housing + Ceiling mount bracket + Bracket extention

Appearance



Indoor ceiling mount

Speed dome module + Indoor housing

PRODUCT SPECIFICATION

Image System	
Image Pickup Device	1/4"-type Sony Exview HAD CCD
Effective Pixels(HxV)	768 x 494 (NTSC) 752 x 582 (PAL)
Compression	MPEG-4 ASP hardware compression
Resolution	QCIF (160 x 112 in NTSC, 176 x 144 in PAL) CIF (352 x 240 in NTSC, 352 x 288 in PAL) Full D1 (720 x 480 in NTSC, 720 x 576 in PAL)
Image Frame Rate	30 fps at 720 x 480 resolution (NTSC) 25 fps at 720 x 576 resolution (PAL)
Electric	
Sync System	Internal / linelock
Lens	18X optical zoom, f=4.1~73.8 mm, F1.4~3.0
Digital Zoom	12X (up to 216X with optical zoom)
Focusing System	Auto(normal sensitivity / low sensitivity)
Minimum Illumination	Normal mode: 0.7 lux (F1.4, 1/60 (1/50) sec., AGC on, 50 IRE) Slow shutter mode : 0.05 lux (F1.4, 1/4 (1/3) sec., AGC on, 50 IRE) Night mode : 0.01 lux (F1.4, 1/4 (1/3) sec., AGC on, 50 IRE)
S/N Ratio	More than 50 dB (AGC off)
Tour	4 tours memorizing up 6 mins of manual control
Iris Control	Auto / manual
Gain Control	Auto
White Balance	Auto / ATW / one push WB
Electric Shutter	Auto 1/60 (1/50) to 1/100,000 sec. Manual 22 steps 1/1 to 1/10,000 sec.
Auto Slow Shutter	On (max. 1/1 sec.) / Off
BLC	On / Off
Auto Exposure Control	Auto / manual / backlight compensation
Auto Exposure Compensation	-10.5 ~ +10.5 dB(15 steps)
Preset	64 points
Privacy Zone	On / off, up to 8 zones
Alarm	4 inputs / 1 output

Day/Night Mode	Auto / manual
OSD	Yes
Remote control	Via Ethernet or via RS-485 (RJ-45)
Video output	1 Vpp composite output, 75 ohm
Network	
Ethernet	10/100base-T x2 for LAN/WAN
Protocol Supported	TCP, UDP, HTTP, PPPoE, DDNS, DHCP, IGMP
QoS	Layer 2,3
I/O Interface	
Network	RJ-45 x2
Serial Port	RJ-45 x1 (RS-485)
Analog Video Output	BNC connector x1 (NTSC/PAL)
Digital Input/Output	DI x2, DO x2
Mechanism	
Panning Range	360° endless
Tilting Range	92°
Pan-tilt Accurancy	Cumulative error less than 0.6° per 10,000 rotations
Pan-tilt Warranty	1 million rotations guarantee
Panning Speed	Manual: 0.1° ~ 90° /sec Turbo:150° /sec Preset: 300° /sec
Tilting Speed	Manual: 0.1° ~45° /sec Preset: 200° /sec
Dimensions(øxH)	134 mm x 233.7 mm (5.27" x 9.2")
Weight	1750 g approx. (3.86 lb)
Power supply	
Power Requirement	AC 23 V
Power Consumption	Indoor 27 W (max.) / Outdoor 57 W (max.)
Environment	
Operating Temperature	0 °C ~ 50 °C
Operating Humidity	20% ~ 80% RH
Storage Temperature	-20 °C ~ 60 °C

ORDERING INFORMATION

Model Number	NTSC	PAL	Indoor Ceiling Mount	Outdoor Ceiling Mount	Outdoor Wall Mount	Outdoor Corner Mount	Outdoor Pole Mount	IR Supported (Day & Night)	4 MB Flash	8 MB Flash
CAM-6110NN	v		v					v	v	
CAM-6110NE	v			v				v	v	
CAM-6110NW	v				v			v	v	
CAM-6110NC	v					v		v	v	
CAM-6110NP	v						v	v	v	
CAM-6110PN		v	v					v	v	
CAM-6110PE		v		v				v	v	
CAM-6110PW		v			v			v	v	
CAM-6110PC		v				v		v	v	
CAM-6110PP		v					v	v	v	
CAM-6111NN	v		v					v		v
CAM-6111NE	v			v				v		v
CAM-6111NW	v				v			v		v
CAM-6111NC	v					v		v		v
CAM-6111NP	v						v	v		v
CAM-6111PN		v	v					v		v
CAM-6111PE		v		v				v		v
CAM-6111PW		v			v			v		v
CAM-6111PC		v				v		v		v
CAM-6111PP		v					v	v		v

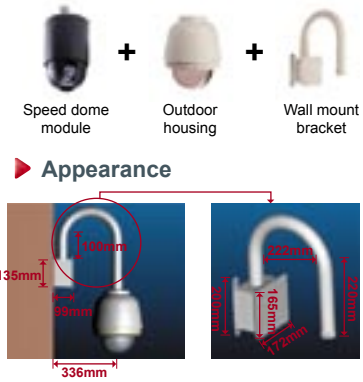
PS. After CAM-6111 series become available, CAM-6110 series will only be produced upon request.

CAM-6120

MPEG-4 Real-time IP High Speed Dome With Day and Night, Image Stabilizer

- 1/6”-type Sony SuperHAD CCD
- MPEG-4 ASP compliant hardware compression
- CIF up to Full D1 resolution at 30/25 FPS
- Dual MPEG-4 video stream output via LAN and WAN (PPPoE supported) ports at the same time
- QoS enabled (L2, L3) for video streaming (UniCast/MultiCast)
- DDNS supported
- Remote Pan/Tilt/Zoom control
- 300X zoom : 25X optical zoom and 12X digital zoom
- Built-in motion detection
- Image stabilizer

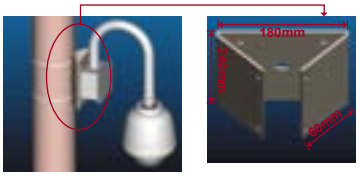
Outdoor wall mount



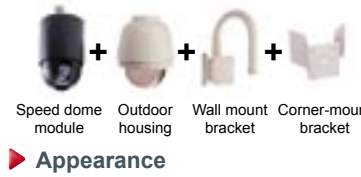
Appearance

Outdoor pole mount

Appearance



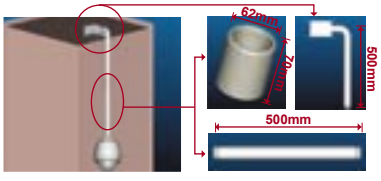
Outdoor corner mount



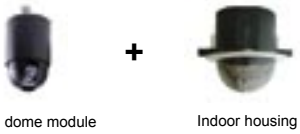
Appearance

Outdoor ceiling mount

Appearance



Indoor ceiling mount



PRODUCT SPECIFICATION

Image System	
Image Pickup Device	1/6"-type Sony SuperHAD CCD
Effective Pixels(HxV)	600K pixels approx. (NTSC) 800K pixels approx. (PAL)
Compression	MPEG-4 ASP hardware compression
Resolution	QCIF (160x112 in NTSC, 176x144 in PAL) CIF (352x240 in NTSC, 352x288 in PAL) Full D1 (720x480 in NTSC, 720x576 in PAL)
Image Frame Rate	30 fps at 720 x 480 resolution (NTSC) 25 fps at 720 x 576 resolution (PAL)
Electric	
Sync System	Internal / linelock
Lens	25X optical zoom, f=2.4~60 mm, F1.4~3.0
Digital Zoom	12X (up to 300X with optical zoom)
Focusing System	Auto (normal sensitivity / low sensitivity)
Minimum Illumination	Normal mode: 3 lux (F1.4, 1/60 (1/50) sec., AGC on, 50 IRE) Slow shutter mode : 0.2 lux (F1.4, 1/4 (1/3) sec., AGC on, 50 IRE) Night mode : 0.08 lux (F1.4, 1/4 (1/3) sec., AGC on, 50 IRE)
S/N Ratio	More than 50 dB (AGC off)
Tour	4 tours memorizing up 6 mins of manual control
Iris Control	Auto / manual
Gain Control	Auto
White Balance	Auto / ATW / one push WB
Electric Shutter	Auto 1/60 (1/50) to 1/100,000 sec. Manual 20 steps 1/4 (1/3) to 1/10,000 sec.
Auto Slow Shutter	On (max. 1/4 (1/3) sec.) / Off
BLC	On / Off
Auto Exposure Control	Auto / manual / backlight compensation
Auto Exposure Compensation	-10.5 ~ +10.5 dB(15 steps)
Preset	64 points
Privacy Zone	On / off, up to 8 zones
Alarm	4 inputs / 1 output

Day/Night Mode	Auto / manual
OSD	Yes
Remote Control	Via Ethernet or via RS-485 (RJ-45)
Image Stabilizer	Yes
Video Output	1 Vpp composite output, 75 ohm
Network	
Ethernet	10/100base-T x2 for LAN/WAN
Protocol Supported	TCP, UDP, HTTP, PPPoE, DDNS, DHCP, IGMP
QoS	Layer 2,3
I/O Interface	
Network	RJ-45 x2
Serial Port	RJ-45 x1 (RS-485)
Analog Video Output	BNC connector x1 (NTSC/PAL)
Digital Input/Output	DI x2, DO x2
Mechanism	
Panning Range	360° endless
Tilting Range	92°
Pan-tilt Accurancy	Cumulative error less than 0.6° per 10,000 rotations
Pan-tilt Warranty	1 million rotations guarantee
Panning Speed	Manual: 0.1° ~ 90° /sec Turbo:150° /sec Preset: 300° /sec
Tilting Speed	Manual: 0.1° ~45° /sec Preset: 200° /sec
Dimensions(øxH)	134 mm x 233.7 mm (5.27" x 9.2")
Weight	1750 g approx. (3.86 lb)
Power supply	
Power Requirement	AC 23 V
Power Consumption	Indoor 27 W (max.) / Outdoor 57 W (max.)
Environment	
Operating Temperature	0 °C ~ 50 °C
Operating Humidity	20% ~ 80% RH
Storage Temperature	-20 °C ~ 60 °C

ORDERING INFORMATION

Model Number	NTSC	PAL	Indoor Ceiling Mount	Outdoor Ceiling Mount	Outdoor Wall Mount	Outdoor Corner Mount	Outdoor Pole Mount	IR Supported (Day & Night)	4 MB Flash	8 MB Flash
CAM-6120NN	v		v					v	v	
CAM-6120NE	v			v				v	v	
CAM-6120NW	v				v			v	v	
CAM-6120NC	v					v		v	v	
CAM-6120NP	v						v	v	v	
CAM-6120PN		v	v					v	v	
CAM-6120PE		v		v				v	v	
CAM-6120PW		v			v			v	v	
CAM-6120PC		v				v		v	v	
CAM-6120PP		v					v	v	v	
CAM-6121NN	v		v					v		v
CAM-6121NE	v			v				v		v
CAM-6121NW	v				v			v		v
CAM-6121NC	v					v		v		v
CAM-6121NP	v						v	v		v
CAM-6121PN		v	v					v		v
CAM-6121PE		v		v				v		v
CAM-6121PW		v			v			v		v
CAM-6121PC		v				v		v		v
CAM-6121PP		v					v	v		v

PS. After CAM-6121 series become available, CAM-6120 series will only be produced upon request.

CAM-6200

MPEG-4 Real-time IP Speed Dome

- 1/4” Sony SuperHAD CCD sensor
- 352X zoom : 22X optical zoom and 16X digital zoom
- MPEG-4 ASP compliant hardware compression
- CIF up to Full D1 resolution at 30/25 FPS
- Dual 10/100Base-T Ethernet ports for WAN & LAN
- QoS enabled (L2, L3) for video streaming
- PPPoE supported
- DDNS supported
- Remote Pan/Tilt/Zoom control

MPEG-4 compression provides high resolution image quality

The CAM-6200 IP speed dome offers an optimal combination of network, digital, and optical technology. The CAM-6200 adopts MPEG-4 ASP compliant compression technology which compress analog video into MPEG-4 video streaming while maintaining resolution up to full-D1, 30 fps. Built-in with LAN and WAN ports, the CAM-6200 applies QoS (Quality of Service) technology to fully utilize the network bandwidth. Meanwhile, CAM-6200 also supports multicast video streaming technologies to fulfill almost unlimited on-line video requests.

Remote control from any place at any time

The CAM-6200 adopts SoC base embedded system and web server which enables remote control of the camera. Through ACTi’s bundled application software, you can pan/tilt/zoom the camera, set up motion detection to a specified area, perform tour monitoring, set up different video resolutions, etc. In addition, features such as tour surveillance, alarm, 32 position presets further enhance the functionality of CAM-6200 to make your remote surveillance more flexible and more responsive to different situations or environments.

High quality and reliability in both optics and mechanism

With an intelligently designed pan/tilt mechanism and an industrial-grade slip ring, the CAM-6200 IP speed dome has an accurate auto zoom system, and powerful 352X zoom capability.

PRODUCT SPECIFICATION

Image System	
CCD SENSER	1/4" SuperHAD CCD
Picture Pixels	NTSC: 410,000. pixels PAL: 470,000. pixels
Compression	MPEG-4 ASP hardware compression
Resolution	QCIF(160x112/NTSC; 176x144/PAL) CIF(352x240/NTSC; 352x288/PAL) D1(720x480/NTSC; 720x576/PAL)
Image Frame Rate	30fps at full D1 resolution(NTSC) 25fps at full D1 resolution(PAL)
Electric	
Sync System	Internal
Lens	22 times optical lens f=3.9mm to 85.8mm F=1.6 to 3.7
Digital Zoom	352X zoom : 22X optical zoom and 16X digital zoom
Focus System	Auto / Manual
Iris Control	Auto
H-Resolution	480TV Lines at NTSC 470TV Lines at PAL
Min Illumination	1.0Lux / F1.6 (Color)
S/N ratio	More than 48 dB
Auto White Balance	Auto
Shutter	Auto, 1/60(50)~1/100,000.sec
BLC Control	ON / OFF
Video Output	1 Vpp composite output, 75 ohm

I/O Interface	
Network	RJ-45 x2
Analog Video Output	BNC connector x1
Power Input	DC jack x1
Network system	
Ethernet system	10/100base-T x2 for LAN/WAN
Protocol supported	TCP/IP, UDP, HTTP, ARP, PPPoE, DDNS, IGMP
QoS	Layer 2,3
WAN	WAN for FTTP, Cable modem or xDSL connectivity
Mechanism & Environment	
Pan Movement	0° ~ 360° endless
Tilt Movement	0° ~ 90°
Pan Speed	0.5°/sec. to 50°/sec. vari-speed
Tilt Speed	0.5°/sec. to 50°/sec. vari-speed
Preset	32 points
Power Requirement	DC 12 V, 1000 mA, 50/60 Hz
Dimension(øxH)	249.8 mm x 283 mm (9.83" x 11.14")
Operation Temperature	-10 °C ~ 40 °C
Humidity	RH10 % ~ 90 %

ORDERING INFORMATION

Model number	NTSC	PAL	Indoor Ceiling Mount	Outdoor Wall Mount	Outdoor Corner Mount	Outdoor Pole Mount	Outdoor Ceiling Mount	4 MB Flash	8 MB Flash
CAM-6200NN	v		v					v	
CAM-6200NW	v			v				v	
CAM-6200NC	v				v			v	
CAM-6200NP	v					v		v	
CAM-6200NE	v						v	v	
CAM-6200PN		v	v					v	
CAM-6200PW		v		v				v	
CAM-6200PC		v			v			v	
CAM-6200PP		v				v		v	
CAM-6200PE		v					v	v	
CAM-6201NN	v		v						v
CAM-6201NW	v			v					v
CAM-6201NC	v				v				v
CAM-6201NP	v					v			v
CAM-6201NE	v						v		v
CAM-6201PN		v	v						v
CAM-6201PW		v		v					v
CAM-6201PC		v			v				v
CAM-6201PP		v				v			v
CAM-6201PE		v					v		v

PS. After CAM-6201 series become available, CAM-6200 series will only be produced upon request.

CAM-6210

MPEG-4 Real-time IP Speed Dome with Vandal Proof

- 1/4” Sony SuperHAD CCD sensor
- 352X zoom : 22X optical zoom and 16X digital zoom
- MPEG-4 ASP compliant hardware compression
- CIF up to Full D1 resolution at 30/25 FPS
- Dual 10/100Base-T Ethernet ports for WAN & LAN
- QoS enabled (L2, L3) for video streaming
- PPPoE supported
- DDNS supported
- Remote Pan/Tilt/Zoom control
- Vandal proof housing

MPEG-4 compression provides high resolution image quality

The CAM-6210 IP speed dome offers an optimal combination of network, digital, and optical technology. The CAM-6210 adopts MPEG-4 ASP compliant compression technology which compress analog video into MPEG-4 video streaming while maintaining resolution up to full-D1, 30 fps. Built-in with LAN and WAN ports, the CAM-6210 applies QoS (Quality of Service) technology to fully utilize the network bandwidth. Meanwhile, CAM-6210 also supports multicast video streaming technologies to fulfill almost unlimited on-line video requests.

Remote control from any place at any time

The CAM-6210 adopts SoC base embedded system and web server which enables remote control of the camera. Through ACTi’s bundled application software, you can pan/tilt/zoom the camera, set up motion detection to a specified area, perform tour monitoring, set up different video resolutions, etc. In addition, features such as tour surveillance, alarm, 1 position preset further enhance the functionality of CAM-6210 to make your remote surveillance more flexible and more responsive to different situations or environments.

High quality and reliability in both optics and mechanism

With an intelligently designed pan/tilt mechanism and an industrial-grade slip ring, the CAM-6210 IP speed dome has an accurate auto zoom system, and powerful 352X zoom capability.

PRODUCT SPECIFICATION

Image System	
CCD SENSER	1/4" SuperHAD CCD
Picture Pixels	NTSC: 410,000. pixels PAL: 470,000. pixels
Compression	MPEG-4 ASP hardware compression
Resolution	QCIF(160x112/NTSC; 176x144/PAL) CIF(352x240/NTSC; 352x288/PAL) D1(720x480/NTSC; 720x576/PAL)
Image Frame Rate	30fps at full D1 resolution(NTSC) 25fps at full D1 resolution(PAL)
Electric	
Sync System	Internal
Lens	22 times optical lens f = 3.9 mm to 85.8 mm F = 1.6 to 3.7
Digital Zoom	352X zoom : 22X optical zoom and 16X digital zoom
Focus System	Auto / Manual
Iris Control	Auto
H-Resolution	480TV Lines at NTSC 470TV Lines at PAL
Min Illumination	1.0 Lux / F1.6 (color)
S/N ratio	More than 48 dB
Auto White Balance	Auto
Shutter	Auto, 1/60(50)~1/100,000.sec
BLC Control	ON / OFF
Video Output	1 Vpp composite output, 75 ohm

I/O Interface	
Network	RJ-45 x2
Analog Video Output	BNC connector x1
Power Input	DC jack x1
Network system	
Ethernet system	10/100base-T x2 for LAN/WAN
Protocol supported	TCP/IP, UDP, HTTP, ARP, PPPoE, DDNS, IGMP
QoS	Layer 2,3
WAN	WAN for FTTP, Cable modem or xDSL connectivity
Mechanism & Environment	
Pan Movement	0° ~ 360° endless
Tilt Movement	0° ~ 90°
Pan Speed	0.5°/sec. to 50°/sec. vari-speed
Tilt Speed	0.5°/sec. to 50°/sec. vari-speed
Preset	32 points
Power Requirement	DC 12 V, 1000 mA, 50/60 Hz
Dimension(øxH)	249.8 mm x 283 mm (9.83" x 11.14")
Operation Temperature	-10 °C ~ 40 °C
Humidity	RH10 % ~ 90 %

ORDERING INFORMATION

Model Number	NTSC	PAL	Outdoor Wall Mount	Outdoor Corner Mount	Outdoor Pole Mount	Outdoor Ceiling Mount	Vandal Proof	4 MB Flash	8 MB Flash
CAM-6210NW	v		v				v	v	
CAM-6210NC	v			v			v	v	
CAM-6210NP	v				v		v	v	
CAM-6210NE	v					v	v	v	
CAM-6210PW		v	v				v	v	
CAM-6210PC		v		v			v	v	
CAM-6210PP		v			v		v	v	
CAM-6210PE		v				v	v	v	
CAM-6211NW	v		v				v		v
CAM-6211NC	v			v			v		v
CAM-6211NP	v				v		v		v
CAM-6211NE	v					v	v		v
CAM-6211PW		v	v				v		v
CAM-6211PC		v		v			v		v
CAM-6211PP		v			v		v		v
CAM-6211PE		v				v	v		v

PS. After CAM-6211 series become available, CAM-6210 series will only be produced upon request.

CAM-6220

MPEG-4 Real-time IP Speed Dome with Day and Night

- 1/4” Sony SuperHAD CCD sensor
- 270X zoom : 27X optical zoom and 10X digital zoom
- MPEG-4 ASP compliant hardware compression
- CIF up to Full D1 resolution at 30/25 FPS
- Dual 10/100Base-T Ethernet ports for WAN & LAN
- QoS enabled (L2, L3) for video streaming
- PPPoE supported
- DDNS supported
- Remote Pan/Tilt/Zoom control

MPEG-4 compression provides high resolution image quality

The CAM-6220 IP speed dome offers an optimal combination of network, digital, and optical technology. The CAM-6220 adopts MPEG-4 ASP compliant compression technology which compress analog video into MPEG-4 video streaming while maintaining resolution up to full-D1, 30 fps. Built-in with LAN and WAN ports, the CAM-6220 applies QoS (Quality of Service) technology to fully utilize the network bandwidth. Meanwhile, CAM-6220 also supports multicast video streaming technologies to fulfill almost unlimited on-line video requests.

Remote control from any place at any time

The CAM-6220 adopts SoC base embedded system and web server which enables remote control of the camera. Through ACTi’s bundled application software, you can pan/tilt/zoom the camera, set up motion detection to a specified area, perform tour monitoring, set up different video resolutions, etc. In addition, features such as tour surveillance, alarm, 32 position presets further enhance the functionality of CAM-6220 to make your remote surveillance more flexible and more responsive to different situations or environments.

High quality and reliability in both optics and mechanism

With an intelligently designed pan/tilt mechanism and an industrial-grade slip ring, the CAM-6220 Day and Night IP has an Speed Dome accurate auto zoom system, and powerful 270X zoom capability.

PRODUCT SPECIFICATION

Image System	
CCD SENSER	1/4" Sony SuperHAD CCD
Picture Pixels	NTSC: 410,000. pixels PAL: 470,000. pixels
Compression	MPEG-4 ASP hardware compression
Resolution	QCIF(160x112/NTSC; 176x144/PAL) CIF(352x240/NTSC; 352x288/PAL) D1(720x480/NTSC; 720x576/PAL)
Image Frame Rate	30fps at full D1 resolution(NTSC) 25fps at full D1 resolution(PAL)
Electric	
Sync System	Internal
Lens	27 times optical lens F = 3.25 mm to 88 mm F = 1.5 to 3.6
Digital Zoom	270X zoom : 27X optical zoom and 10X digital zoom
Focus System	Auto / Manual
Iris Control	Auto
H-Resolution	480TV Lines at NTSC 470TV Lines at PAL
Min Illumination	1.0 Lux at F1.5 in color; 0.1 Lux at F1.5 in B/W
S/N ratio	More than 48 dB
Auto White Balance	Auto
Shutter	Auto, 1/60(50)~1/100,000.sec
BLC Control	ON / OFF
Video Output	1 Vpp composite output, 75 ohm

I/O Interface	
Network	RJ-45 x2
Analog Video Output	BNC connector x1
Power Input	DC jack x1
Network system	
Ethernet system	10/100base-T x2 for LAN/WAN
Protocol supported	TCP/IP, UDP, HTTP, ARP, PPPoE, DDNS, IGMP
QoS	Layer 2,3
WAN	WAN for FTTP, Cable modem or xDSL connectivity
Mechanism & Environment	
Pan Movement	0° ~ 360° endless
Tilt Movement	0° ~ 90°
Pan Speed	0.5°/sec. to 50°/sec. vari-speed
Tilt Speed	0.5°/sec. to 50°/sec. vari-speed
Preset	32 points
Power Requirement	DC 12 V, 1000 mA, 50/60 Hz
Dimension(øxH)	249.8 mm x 283 mm (9.83" x 11.14")
Operation Temperature	-10 °C ~ 40 °C
Humidity	RH10 % ~ 90 %

ORDERING INFORMATION

Model Number	NTSC	PAL	Indoor Ceiling Mount	Outdoor Wall Mount	Outdoor Corner Mount	Outdoor Pole Mount	Outdoor Ceiling Mount	4 MB Flash	8 MB Flash
CAM-6220NN	v		v					v	
CAM-6220NW	v			v				v	
CAM-6220NC	v				v			v	
CAM-6220NP	v					v		v	
CAM-6220NE	v						v	v	
CAM-6220PN		v	v					v	
CAM-6220PW		v		v				v	
CAM-6220PC		v			v			v	
CAM-6220PP		v				v		v	
CAM-6220PE		v					v	v	
CAM-6221NN	v		v						v
CAM-6221NW	v			v					v
CAM-6221NC	v				v				v
CAM-6221NP	v					v			v
CAM-6221NE	v						v		v
CAM-6221PN		v	v						v
CAM-6221PW		v		v					v
CAM-6221PC		v			v				v
CAM-6221PP		v				v			v
CAM-6221PE		v					v		v

PS. After CAM-6221 series become available, CAM-6220 series will only be produced upon request.

CAM-6230

MPEG-4 Real-time IP Speed Dome with Day and Night, Vandal Proof

- 1/4” Sony SuperHAD CCD sensor
- 270X zoom : 27X optical zoom and 10X digital zoom
- MPEG-4 ASP compliant hardware compression
- CIF up to Full D1 resolution at 30/25 FPS
- Dual 10/100Base-T Ethernet ports for WAN & LAN
- QoS enabled (L2, L3) for video streaming
- PPPoE supported
- DDNS supported
- Remote Pan/Tilt/Zoom control
- Vandal proof housing

MPEG-4 compression provides high resolution image quality

The CAM-6230 IP speed dome offers an optimal combination of network, digital, and optical technology. The CAM-6230 adopts MPEG-4 ASP compliant compression technology which compress analog video into MPEG-4 video streaming while maintaining resolution up to full-D1, 30 fps. Built-in with LAN and WAN ports, the CAM-6230 applies QoS (Quality of Service) technology to fully utilize the network bandwidth. Meanwhile, CAM-6230 also supports multicast video streaming technologies to fulfill almost unlimited on-line video requests.

Remote control from any place at any time

The CAM-6230 adopts SoC base embedded system and web server which enables remote control of the camera. Through ACTi's bundled application software, you can pan/tilt/zoom the camera, set up motion detection to a specified area, perform tour monitoring, set up different video resolutions, etc. In addition, features such as tour surveillance, alarm, 1 position preset further enhance the functionality of CAM-6230 to make your remote surveillance more flexible and more responsive to different situations or environments.

High quality and reliability in both optics and mechanism

With an intelligently designed pan/tilt mechanism and an industrial-grade slip ring, the CAM-6230 Day and Night IP has an Speed Dome accurate auto zoom system, and powerful 270X zoom capability.

PRODUCT SPECIFICATION

Image System	
CCD SENSER	1/4" Sony SuperHAD CCD
Picture Pixels	NTSC: 410,000. pixels PAL: 470,000. pixels
Compression	MPEG-4 ASP hardware compression
Resolution	QCIF(160x112/NTSC; 176x144/PAL) CIF(352x240/NTSC; 352x288/PAL) D1(720x480/NTSC; 720x576/PAL)
Image Frame Rate	30fps at full D1 resolution(NTSC) 25fps at full D1 resolution(PAL)
Electric	
Sync System	Internal
Lens	27 times optical lens f = 3.25 mm to 88 mm F = 1.5 to 3.6
Digital Zoom	270X zoom : 27X optical zoom and 10X digital zoom
Focus System	Auto / Manual
Iris Control	Auto
H-Resolution	480TV Lines at NTSC 470TV Lines at PAL
Min Illumination	1.0 Lux at F1.5 in Color ; 0.1 Lux at F1.5 in B/W
S/N ratio	More than 48 dB
Auto White Balance	Auto
Shutter	Auto, 1/60(50)~1/100,000.sec
BLC Control	ON / OFF
Video Output	1 Vpp composite output, 75 ohm

I/O Interface	
Network	RJ-45 x2
Analog Video Output	BNC connector x1
Power Input	DC jack x1
Network system	
Ethernet system	10/100base-T x2 for LAN/WAN
Protocol supported	TCP/IP, UDP, HTTP, ARP, PPPoE, DDNS, IGMP
QoS	Layer 2,3
WAN	WAN for FTTP, Cable modem or xDSL connectivity
Mechanism & Environment	
Pan Movement	0° ~ 360° endless
Tilt Movement	0° ~ 90°
Pan Speed	0.5°/sec. to 50°/sec. vari-speed
Tilt Speed	0.5°/sec. to 50°/sec. vari-speed
Preset	32 points
Power Requirement	DC 12 V, 1000 mA, 50/60 Hz
Dimension(øxH)	249.8 mm x 283 mm (9.83" x 11.14")
Operation Temperature	-10 °C ~ 40 °C
Humidity	RH10 % ~ 90 %

ORDERING INFORMATION

Model Number	NTSC	PAL	Outdoor Wall Mount	Outdoor Corner Mount	Outdoor Pole Mount	Outdoor Ceiling Mount	Vandal Proof	4 MB Flash	8 MB Flash
CAM-6230NW	v		v				v	v	
CAM-6230NC	v			v			v	v	
CAM-6230NP	v				v		v	v	
CAM-6230NE	v					v	v	v	
CAM-6230PW		v	v				v	v	
CAM-6230PC		v		v			v	v	
CAM-6230PP		v			v		v	v	
CAM-6230PE		v				v	v	v	
CAM-6231NW	v		v				v		v
CAM-6231NC	v			v			v		v
CAM-6231NP	v				v		v		v
CAM-6231NE	v					v	v		v
CAM-6231PW		v	v				v		v
CAM-6231PC		v		v			v		v
CAM-6231PP		v			v		v		v
CAM-6231PE		v				v	v		v

PS. After CAM-6231 series become available, CAM-6230 series will only be produced upon request.

CAM-7100

MPEG-4 Real-time Network Streaming IP Rugged Dome with Audio

- 1/3” Sony Super HAD color CCD sensor
- MPEG-4 ASP compliant hardware compression
- CIF up to Full D1 resolution at 30/25 FPS
- Dual MPEG-4 video stream output via LAN and WAN (PPPoE supported) ports at the same time
- QoS enabled (L2, L3) for video streaming (UniCast/MultiCast)
- 0.5 lux at F1.2 (30 IRE, SAGC ON) / 0 lux under IR illumination
- Backlight Compensation, Auto Iris Control, Auto White Balance supported
- Digital time code embedded
- Built-in motion detection
- Audio function supported

PRODUCT SPECIFICATION

Image System	
Image Sensor	1/3” interline transfer Sony Super HAD CCD
Effective Pixels(HxV)	811 x 508 (NTSC) 795 x 596 (PAL)
Scanning System	525 Lines, 2:1 Interlace (NTSC) 625 Lines, 2:1 Interlace (PAL)
Resolution	480 TVL
IR Wavelength	from 780 nm to 1100 nm
Day/Night Change Level Adjustment	0.1 ~ 9 lux
Min. Illumination	0.5 Lux at F1.2 (30 IRE, SAGC ON) / 0 lux under IR illumination
AE CCD Iris Mode	1/60 ~ 1/10,000 sec. (NTSC) 1/50 ~ 1/10,000 sec. (PAL)
AE AES Low Mode (Flickerless)	1/100 sec. (Flickerless) (NTSC) 1/120 ~ 1/100,000 sec. (PAL)
AE Auto Iris Mode	1/60 sec. (NTSC) 1/50 sec. (PAL)
AE AI Shutter Mode	1/60 ~ 1/10,000 sec. 8 Steps (NTSC) 1/50 ~ 1/10,000 sec. 8 Steps (PAL)
Backlight Compensation	Auto Detect ON/OFF; Histogram plus 225 area windows weight
Signal to Noise Ratio	Better than 48 dB
Gain	Auto Gain 0 ~ 36 dB
Auto White Balance	ATW 2500 ºK ~ 9500 ºK
Video Compression	
Compression	MPEG-4 ASP compliant hardware compression
Resolution	QCIF (160 x 112 in NTSC, 176 x 144 in PAL) CIF (352 x 240 in NTSC, 352 x 288 in PAL) Full D1 (720 x 480 in NTSC, 720 x 576 in PAL)
Image Frame Rate	30 fps at full D1 resolution (NTSC) 25 fps at full D1 resolution (PAL)

Network	
Protocol Supported	TCP, UDP, HTTP, PPPoE, DDNS, DHCP, IGMP
QoS	Layer 2, 3
I/O Connector	
Ethernet	RJ-45 x2 (WAN/LAN) • 10/100 base-T
Audio	Ear phone jack x 1 • 1.4 Vpp, 1.0 Vrms
Video	BNC connector x 1 • Composite video 1 Vpp, 75Ω
Digital Input	Terminal blocks x1 • Logic Level 0: 0 ~ 0.4 V • Logic Level 1: 3.3 ~ 30 V
Digital Output	Terminal blocks x1 • Logic Level 0: 0.1 ~ 0.6 V • Logic Level 1: 2.4 ~ 5 V
Mechanical & Environment	
Power Source	DC 12 V
Operation Temp.	5 °C ~ 50 °C (40 °F ~ 122 °F)
Others	
Security	Password/username protection for restricted camera acces
General Functions	• Motion detection with multiple sensitivity windows • Built-in Web Server and network interface • Digital time-code embedded
Client Software OS Supported	Win 2000, Win XP, Win 2003
Certification	CE, FCC

SED-2100

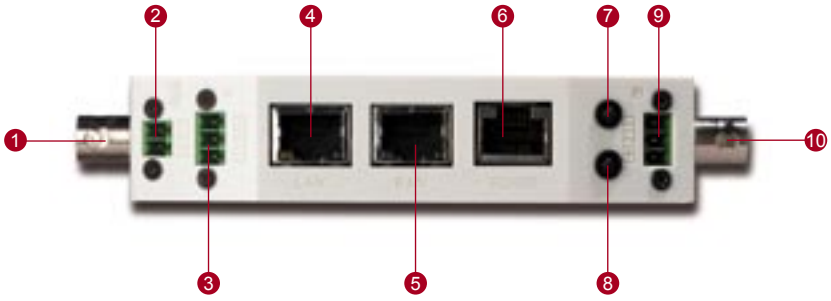
Din-rail Type MPEG-4 Real-time Network Streaming Video Server

- MPEG-4 ASP compliant hardware compression
- Up to Full D1 resolution at 30/25 FPS
- QoS enabled (L2, L3) video streaming (UniCast/MultiCast)
- Automatic and variable frame rate control for video streaming
- Digital time code embedded
- Dual MPEG-4 video stream output via LAN and WAN (PPPoE supported) ports at the same time
- DDNS supported
- Motion detection

Transmit analog image into digital data with ultra high resolution

The SED-2100R is a high resolution, Ethernet (LAN and WAN) ready digital video transmission device. It is specially designed to meet the increasing need for high quality, high reliability, real-time video streaming used in the field of surveillance and security.

The SED-2100R is based on Arm9 SoC, MPEG-4 ASP compliant compression technology to compress the video stream and transmit them via LAN and WAN. It supports automatic/manual frame rate control for concurrent video stream accessing in different bandwidth. The SED-2100R also provides RS-485 and digital I/O data transmission over Ethernet for product integrators or solution providers. With this system, users can build digital remote surveillance systems easily.



1. Analog video input
2. DC power input
3. Digital input
4. LAN port
5. WAN port
6. RS-485 port
7. RS-485 LED
8. Power LED
9. Digital output
10. Analog video output

SED-2100

PRODUCT SPECIFICATION

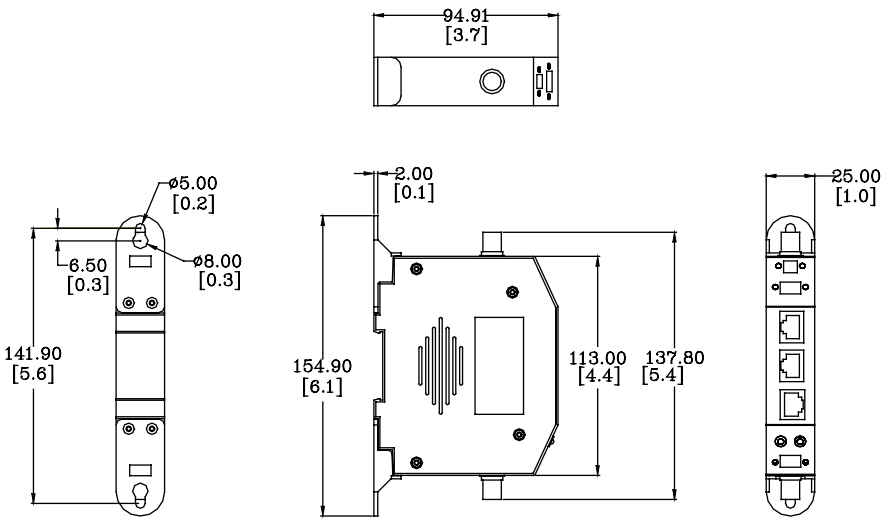
Model Name	SED-2100R	SED-2100S
Image System		
Compression	MPEG-4 ASP compliant hardware compression	MPEG-4 SP compliant hardware compression
Resolution	QCIF (160 x 112 in NTSC, 176 x 144 in PAL) CIF (352 x 240 in NTSC, 352 x 288 in PAL) Full D1 (720 x 480 in NTSC, 720 x 576 in PAL)	QCIF (160 x 112 in NTSC, 176 x 144 in PAL) CIF (352 x 240 in NTSC, 352 x 288 in PAL)
Image Frame Rate	30 fps at full D1 resolution (NTSC) 25 fps at full D1 resolution (PAL)	30 fps at CIF resolution (NTSC) 25 fps at CIF resolution (PAL)
Network		
Protocol Supported	TCP, UDP, HTTP, PPPoE, DDNS, DHCP, IGMP	
QoS	Layer 2, 3	
I/O Interface		
WAN Port	RJ-45 x1 (10/100base-T)	
LAN Port	RJ-45 x1 (10/100base-T)	
Serial Port	RJ-45 x1 (RS-485)	
Analog Video Input	Composite x1, BNC connector (NTSC/PAL)	
Analog Video Output	Composite x1, BNC connector (NTSC/PAL)	
Digital Input	Terminal blocks x2 • Logic Level 0: 0 ~ 0.8 V • Logic Level 1: 2.31 ~ 5.3 V	
Digital Output	Terminal blocks x2 • Logic Level 0: 0 ~ 0.5 V • Logic Level 1: 2.8 ~ 3.3 V	
Mechanical & Environment		
Dimensions (W x H x D)	25 mm x 113 mm x 95 mm (0.98” x 4.45” x 3.74”)	
Weight	200 g (0.44 lb)	
Power Requirement	12 V / 0.625 A / 7.5 W	
Operation Temp	5 °C ~ 50 °C (40 °F ~ 122 °F)	
Humidity	RH10 % ~ 90 %	
Others		
Security	Password/username protection for restricted camera access	
General Functions	• DI/O event triggered via Ethernet • Built-in Web Server and network interface	
Client Software OS Supported	Win 2000, Win XP, Win 2003	
Certification	CE, FCC	

ORDERING INFORMATION

Model Name	Full D1	CIF	4 MB Flash	8 MB Flash
SED-2100R	V		V	
SED-2101R	V			V
SED-2100S		V	V	
SED-2101S		V		V

PS. After SED-2101 series become available, SED-2100 series will only be produced upon request.

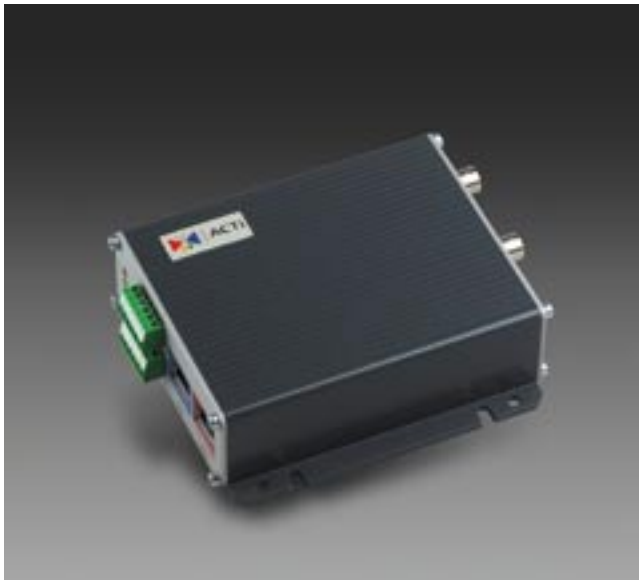
DIMENSION DIAGRAM



Unit: mm [inch]

SED-2120

MPEG-4 Real-time Network Streaming Video Server

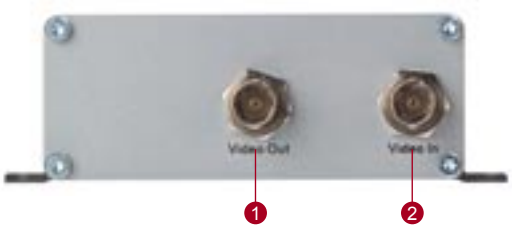


- MPEG-4 ASP compliant hardware compression
- Up to Full D1 resolution at 30/25 FPS
- QoS enabled (L2, L3) video streaming (UniCast/MultiCast)
- Automatic and variable frame rate control for video streaming
- Digital time code embedded
- Dual MPEG-4 video stream output via LAN and WAN (PPPoE supported) ports at the same time
- DDNS supported
- Motion detection

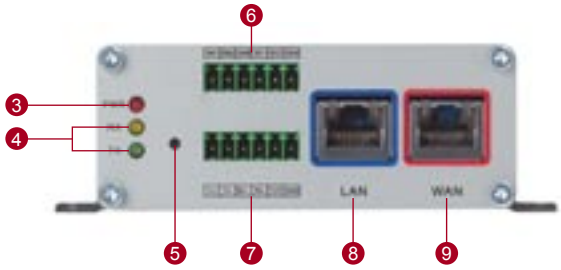
Transmit analog image into digital data with ultra high resolution

The SED-2120 is a high resolution, Ethernet (LAN and WAN) ready digital video transmission device.
It is specially designed to meet the increasing need for high quality, high reliability, real-time video streaming used in the field of surveillance and security.

The SED-2120 is based on Arm9 SoC, MPEG-4 ASP compliant compression technology to compress the video stream and transmit them via LAN and WAN. It supports automatic/manual frame rate control for concurrent video stream accessing in different bandwidth. The SED-2120 also provides RS-485 and digital I/O data transmission over Ethernet for product integrators or solution providers. With this system, users can build digital remote surveillance systems easily.



1 Analog video output
2 Analog video input



3 Power LED
4 RS-485 LED
5 Reset button
6 Digital input & digital output
7 Serial port input & power DC input
8 LAN port
9 WAN port

SED-2120

PRODUCT SPECIFICATION

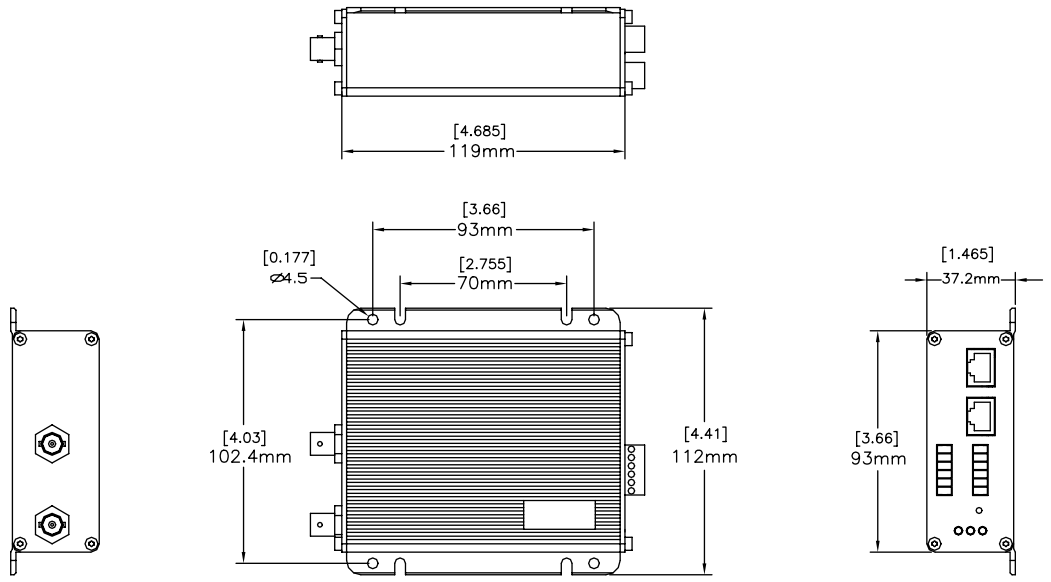
Model Name	SED-2120	SED-2120S
Image System		
Compression	MPEG-4 ASP compliant hardware compression	MPEG-4 SP compliant hardware compression
Resolution	QCIF (160 x 112 in NTSC, 176 x 144 in PAL) CIF (352 x 240 in NTSC, 352 x 288 in PAL) Full D1 (720 x 480 in NTSC, 720 x 576 in PAL)	QCIF (160 x 112 in NTSC, 176 x 144 in PAL) CIF (352 x 240 in NTSC, 352 x 288 in PAL)
Image Frame Rate	30 fps at full D1 resolution (NTSC) 25 fps at full D1 resolution (PAL)	30 fps at CIF resolution (NTSC) 25 fps at CIF resolution (PAL)
Network		
Protocol Supported	TCP, UDP, HTTP, PPPoE, DDNS, DHCP, IGMP	
QoS	Layer 2, 3	
I/O Interface		
WAN Port	RJ-45 x1 (10/100base-T)	
LAN Port	RJ-45 x1 (10/100base-T)	
Serial Port	4-pin terminal block (TX+, TX-, RX+, RX-)	
Analog Video Input	Composite x1, BNC connector (NTSC/PAL)	
Analog Video Output	Composite x1, BNC connector (NTSC/PAL)	
Digital Input	Terminal blocks x3 • Logic Level 0: 0 ~ 0.8 V • Logic Level 1: 2.31 ~ 5.3 V	
Digital Output	Terminal blocks x3 • Logic Level 0: 0 ~ 0.5 V • Logic Level 1: 2.8 ~ 3.3 V	
Mechanical & Environment		
Dimensions (W x H x D)	112 mm x 37.2 mm x 119 mm (4.41" x 1.46" x 4.68")	
Weight	350 g (0.66 lb)	
Power Requirement	12 V / 1.5A / 18W	
Operation Temp	5 °C ~ 50 °C (40 °F ~ 122 °F)	
Humidity	RH10 % ~ 90 %	
Others		
Security	Password/username protection for restricted camera access	
General Functions	• DI/O event triggered via Ethernet • Built-in Web Server and network interface	
Client Software OS Supported	Win 2000, Win XP, Win 2003	
Certification	CE, FCC	

ORDERING INFORMATION

Model Name	Description
SED-2120	MPEG-4, Full D1 Resolution, Real-time Network Streaming Video Server
SED-2120S	MPEG-4, CIF Resolution, Real-time Network Streaming Video Server

* SED-2120 series are only available in some territories. For more detail information, please contact you sales representative.

DIMENSION DIAGRAM



Unit: mm [inch]

SED-2400

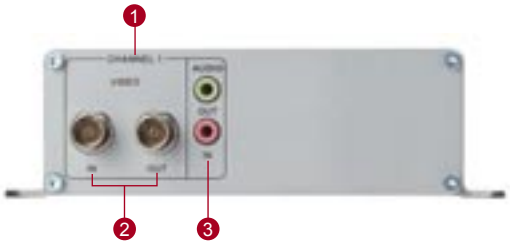
MPEG-4 Real-time Network Streaming Video Server with Audio

- MPEG-4 ASP compliant compression
- Bi-directional audio supported
- Up to Full D1 resolution at 30/25 FPS
- QoS enabled (L2, L3) video streaming (UniCast/MultiCast)
- Automatic frame rate control for video streaming
- Digital time code embedded
- Dual MPEG-4 video stream output via LAN and WAN (PPPoE supported) ports at the same time
- Isolated digital input and output supported
- Analog and digital video outputs simultaneously

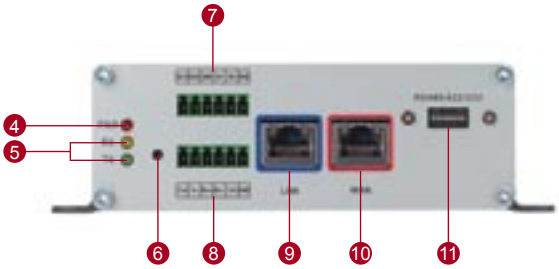
Transmit analog image into digital data with ultra high resolution

The SED-2400 is a high resolution, Ethernet (LAN and WAN) ready digital video/audio transmission device. It is specially designed to meet the increasing need for high quality, high reliability, real-time video streaming used in the field of surveillance and security.

The SED-2400 is based on Arm9 SoC, MPEG-4 ASP compliant compression technology to compress the video stream, and transmit video/audio via LAN and WAN. It supports automatic/manual frame rate control for concurrent video stream accessing in different bandwidth. The SED-2400 provides RS-232 or RS-422 or RS-485, and also provides digital I/O data transmission over Ethernet for product integrators or solution providers. With this system, users can build digital remote surveillance system easily.



1. Channel number
2. Video iuput / output
3. Audio iuput / output



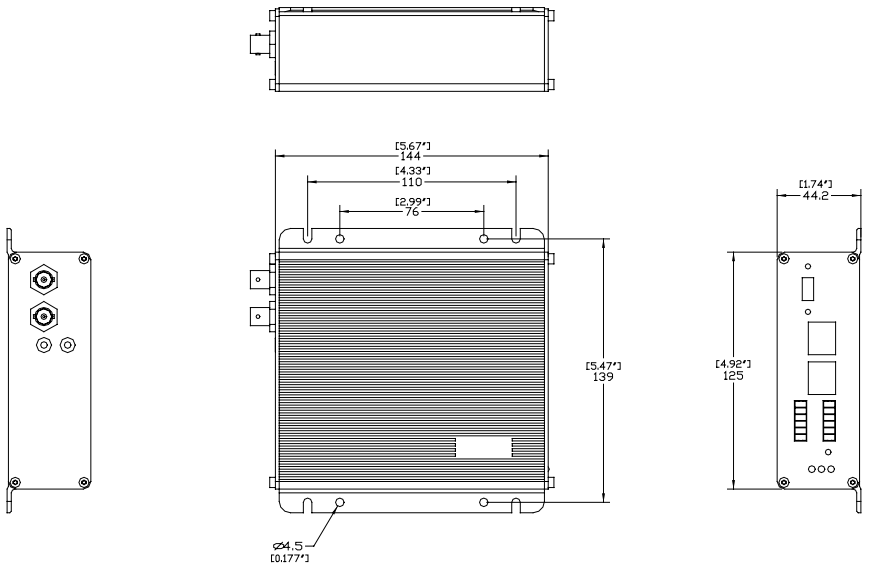
4. Power LED
5. RS-485 LED
6. Reset button
7. Digital input & digital output
8. Serial port input & power DC input
9. LAN port
10. WAN port
11. Serial port setting

SED-2400

PRODUCT SPECIFICATION

Video Compression	
Compression	MPEG-4 ASP compliant hardware compression
Resolution	QCIF (160 x 112 in NTSC, 176 x 144 in PAL) CIF (352 x 240 in NTSC, 352 x 288 in PAL) Full D1 (720 x 480 in NTSC, 720 x 576 in PAL)
Image Frame Rate	30 fps at 720 x 480 resolution (NTSC) 25 fps at 720 x 576 resolution (PAL)
Network	
Protocol Supported	TCP, UDP, HTTP, PPPoE, DDNS, DHCP, IGMP
QoS	Layer 2, 3
I/O Interface	
WAN Port	RJ-45 x1 • 10/100base-T
LAN Port	RJ-45 x1 • 10/100base-T
Serial Port	Terminal blocks (RS-232/422/485)
Audio Input	Ear phone jack x1 • 1.4 Vpp, 1.0 Vrms
Audio Output	Ear phone jack x1 • 1.4 Vpp, 1.0 Vrms
Video Input	BNC connector x1 • Composite video 1 Vpp, 75Ω
Video Output	BNC connector x1 • Composite video 1 Vpp, 75Ω
Isolated Digital Output	Terminal blocks x2 • Logic Level 0: 0.1 ~ 0.6 V • Logic Level 1: 2.4 ~ 5 V
Isolated Digital Input	Terminal blocks x2 • Logic Level 0: 0 ~ 0.4 V • Logic Level 1: 3.3 ~ 30 V
Mechanical	
Dimensions (W x H x D)	139 mm x 44.2 mm x 144 mm (5.47" x 1.74" x 5.67")
Weight	570 g (1.07 lb)
Power Requirement	12 V / 0.61 A / 7.3 W
Operation Temp	5 °C ~ 50 °C (40 °F ~ 122 °F)
Humidity	RH10 % ~ 90 %
Others	
Security	Password/username protection for restricted camera access
General Functions	• DI/O event triggered via Ethernet • Built-in Web Server and network interface
Client Software OS Supported	Win 2000, Win XP, Win 2003
Certification	CE, FCC Class B

DIMENSION DIAGRAM



Unit: mm [inch]

SED-2410/2420

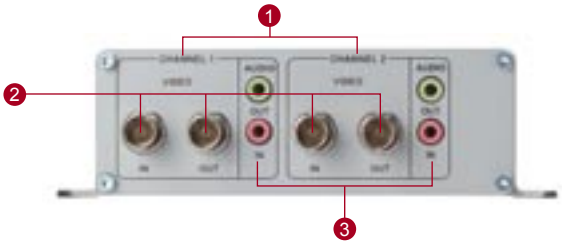
2-channel MPEG-4 Real-time Network Streaming Video Server with Audio

- MPEG-4 ASP compliant compression
- Bi-directional audio supported (SED-2420)
- Up to Full D1 resolution at 30/25 FPS
- QoS enabled (L2, L3) video streaming (UniCast/MultiCast)
- Automatic and variable frame rate control for video streaming
- Digital time code embedded
- Dual MPEG-4 video stream output via LAN and WAN (PPPoE supported) ports at the same time
- Isolated digital inputs and outputs supported
- Analog and digital video outputs simultaneously

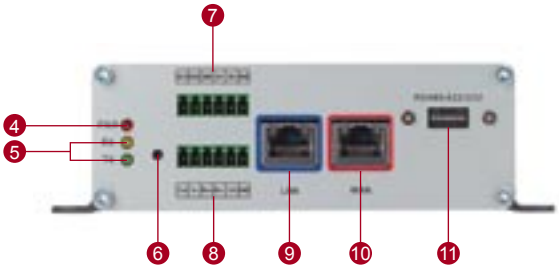
Transmit analog image into digital data with ultra high resolution

The SED-2410 / SED-2420 are high resolution, Ethernet (LAN and WAN) ready digital video/audio transmission devices. They are specially designed to meet the increasing need for high quality, high reliability, real-time video streaming used in the field of surveillance and security.

The SED-2410 / SED-2420 are based on Arm9 SoC, MPEG-4 ASP compliant compression technology to compress the video stream, and transmit video/audio via LAN and WAN. They support automatic/manual frame rate control for concurrent video stream accessing in different bandwidth. The SED-2410 / SED-2420 provide RS-232 or RS-422 or RS-485, and also provide digital I/O data transmission over Ethernet for product integrators or solution providers. With this system, users can build digital remote surveillance system easily.



1. Channel number
2. Video iuput / output
3. Audio iuput / output (SED-2420)



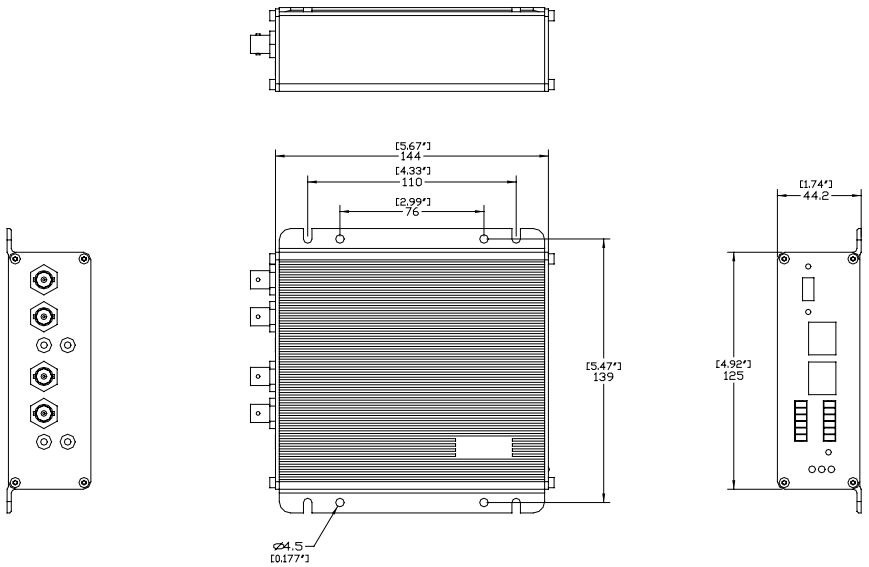
4. Power LED
5. RS-485 LED
6. Reset button
7. Digital input & digital output
8. Serial port input & power DC input
9. LAN port
10. WAN port
11. Serial port setting

SED-2410 / SED-2420

PRODUCT SPECIFICATION

Video Compression	
Compression	MPEG-4 ASP compliant hardware compression
Resolution	QCIF (160 x 112 in NTSC, 176 x 144 in PAL) CIF (352 x 240 in NTSC, 352 x 288 in PAL) Full D1 (720 x 480 in NTSC, 720 x 576 in PAL)
Image Frame Rate	30 fps at 720 x 480 resolution (NTSC) 25 fps at 720 x 576 resolution (PAL)
Audio	Bidirection 8 K mono PCM (SED-2420)
Network	
Protocol Supported	TCP, UDP, HTTP, PPPoE, DDNS, DHCP, IGMP
QoS	Layer 2, 3
I/O Interface	
WAN Port	RJ-45 x1 • 10/100base-T
LAN Port	RJ-45 x1 • 10/100base-T
Serial Port	Terminal blocks (RS-232/422/485)
Audio Input	Ear phone jack x2 (SED-2420) • 1.4 Vpp, 1.0 Vrms
Audio Output	Ear phone jack x2 (SED-2420) • 1.4 Vpp, 1.0 Vrms
Video Input	BNC connector x2 • Composite video 1 Vpp, 75Ω
Video Output	BNC connector x2 • Composite video 1 Vpp, 75Ω
Isolated Digital Output	Terminal blocks x2 • Logic Level 0: 0.1 ~ 0.6 V • Logic Level 1: 2.4 ~ 5 V
Isolated Digital Input	Terminal blocks x2 • Logic Level 0: 0 ~ 0.4 V • Logic Level 1: 3.3 ~ 30 V
Mechanical	
Dimensions (W x H x D)	139 mm x 44.2 mm x 144 mm (5.47” x 1.74” x 5.67”)
Weight	570 g (1.07 lb)
Power Requirement	12 V / 0.61 A / 7.3 W
Operation Temp	5 °C ~ 50 °C (40 °F ~ 122 °F)
Humidity	RH10 % ~ 90 %
Others	
Security	Password/username protection for restricted camera access
General Functions	• DI/O event triggered via Ethernet • Built-in Web Server and network interface
Client Software OS Supported	Win 2000, Win XP, Win 2003
Certification	CE, FCC Class B

DIMENSION DIAGRAM



Unit: mm [inch]

SED-2300Q

4-channel MPEG-4 Quad Processor Integrated Video Server

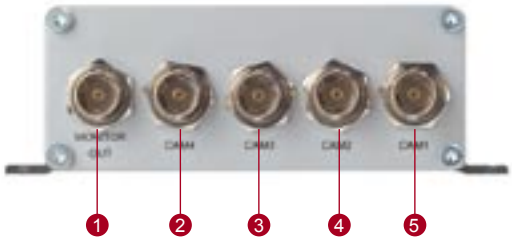
- MPEG-4 ASP compliant compression
- CIF Up to Full D1 resolution at 30/25 FPS
- QoS enabled (L2, L3) video streaming (UniCast/MultiCast)
- Real-time quad video
- Monitor output displays full-screen or quad image
- Digital time code embedded
- Dual MPEG-4 video stream output via LAN and WAN (PPPoE supported) ports at the same time
- Automatic and variable frame rate control for video streaming
- Hardware motion detection and video loss detection

Receive digital data and decode to analog image without lose quality

The SED-2300Q is a SoC base, 4 channels Quad processor integrated, video compression and streaming module. Via IP network such as LAN or WAN, the SED-2300Q supports concurrent 4 channels video tiling display in one real-time MPEG-4 streaming. With this highly integrated platform, SED-2300Q delivers a low cost advantage and reliable networking capability and it's the best solution for the increasing IP Security market.

Quad Display

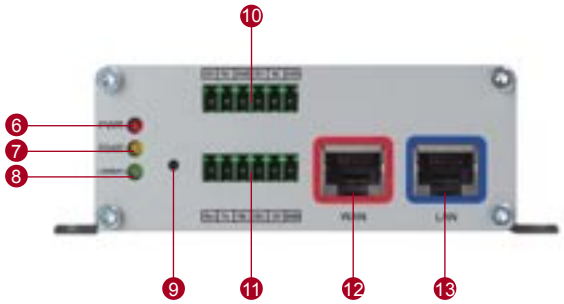
SED-2300Q supports quad display with 4-channel video at the same time.



1. Monitor out - analog output
2. CAM4 - analog iuput 4
3. CAM3 - analog iuput 3
4. CAM2 - analog iuput 2
5. CAM1 - analog iuput 1

Full-screen

SED-2300Q supports every single channel with Full D1 resolution.



6. Power LED
7. RS-485 LED
8. LAN/WAN LED
9. Reset button
10. Digital input & digital output
11. RS-485 & power DC input
12. WAN port
13. LAN port

SED-2300Q

PRODUCT SPECIFICATION

Image System	
Compression	MPEG-4 ASP compliance
Image Frame Rate	30 fps at 720 x 480 resolution (NTSC) 25 fps at 720 x 576 resolution (PAL)
Max. Resolution	Full D1
Network	
Protocol Supported	TCP, UDP, HTTP, PPPoE, DDNS, DHCP, IGMP
QoS	Layer 2, 3
I/O Interface	
WAN Port	RJ-45 x1 (10/100base-T)
LAN Port	RJ-45 x1 (10/100base-T)
Serial Port	Terminal blocks (RS-232/485)
Analog Video Input	Composite, BNC connector x4
Analog Video Output	Composite, BNC connector x1
Digital Output	Terminal blocks x1 • Logic Level 0: 0 ~ 0.5 V • Logic Level 1: 2.8 ~ 3.3 V
Digital Input	Terminal blocks x1 • Logic Level 0: 0 ~ 0.8 V • Logic Level 1: 2.31 ~ 5.3 V

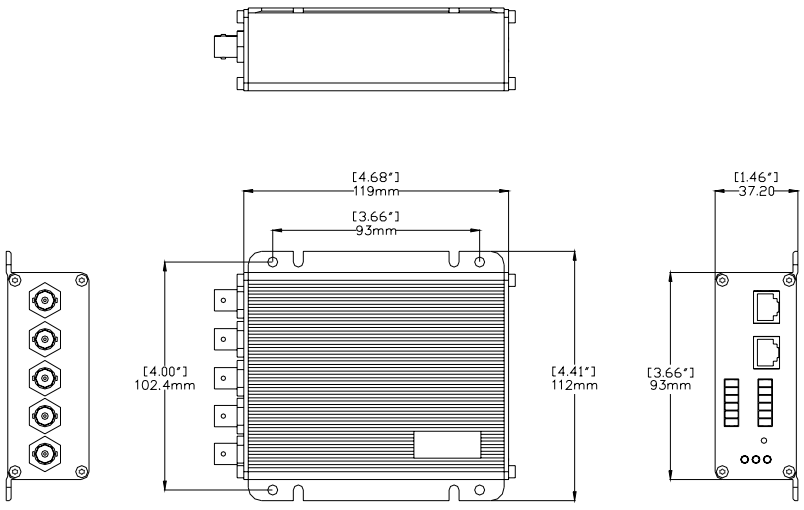
Mechanical	
Dimensions (W x H x D)	112 mm x 37.2 mm x 119 mm (4.41" x 1.46" x 4.68")
Weight	430 g (0.95 lb)
Power Requirement	12 V / 0.8 A / 9.6 W
Operation Temp.	5 °C ~ 50 °C (40 °F ~ 122 °F)
Humidity	RH10 % ~ 90 %
Others	
Security	Password/username protection for restricted camera access
General Functions	• DI/O event triggered via Ethernet • Built-in Web Server and network interface
Client Software OS Supported	Win 2000, Win XP, Win 2003
Certification	CE, FCC

ORDERING INFORMATION

Model Name	Description
SED-2300Q	4-channel MPEG-4, Quad Processor Integrated Video Server with 4 MB Flash
SED-2301Q	4-channel MPEG-4, Quad Processor Integrated Video Server with 8 MB Flash

PS. After SED-2301Q series become available, SED-2300Q series will only be produced upon request.

DIMENSION DIAGRAM



Unit: mm [inch]

SED-2200

MPEG-4 Full D1 IP Receiver

- MPEG-4 ASP compliant compression
- Up to Full D1 resolution at 30/25 FPS
- QoS enabled (L2, L3) video streaming (UniCast/MultiCast)
- Automatic and variable frame rate control for video streaming
- Built-in LAN and WAN (PPPoE supported) ports
- Zoom lens camera control
- Pelco-P command supported
- IP66 water proof
- Optical isolated alarm input, Form A type relay output

Transmit analog image into digital data with ultra high resolution

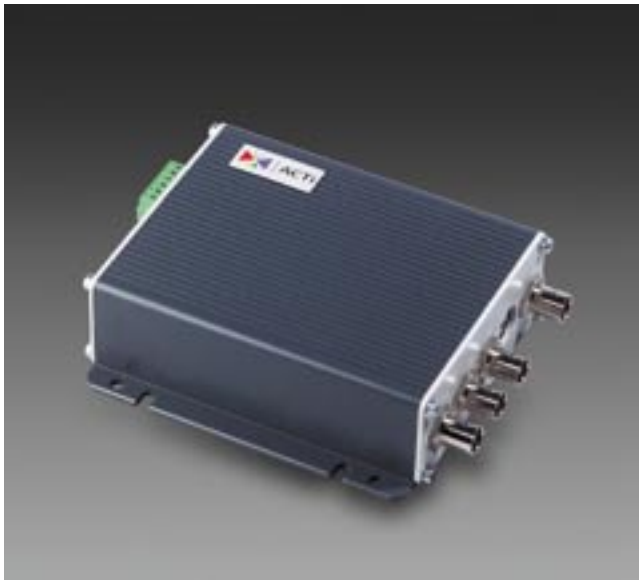
The SED-2200 is an IP based controller of heavy duty pan/tilt scanner. It is capable of auto scan, motion detection and zoom lens camera control. With additional IP network functions, it can support real-time video streaming, remote DI/O and remote RS-485 communication.
With ACTi powerful SoC design, the SED-2200 features easy remote access to all electrical and mechanical components. No additional conductors are required for optional control module. SED-2200 provides fully integrated solution for the increasing digital surveillance market.

PRODUCT SPECIFICATION

Image System	
Compression	MPEG-4 ASP compliance
Image Frame Rate	30 fps at 720 x 480 resolution (NTSC) 25 fps at 720 x 576 resolution (PAL)
Max. Resolution	30 fps at 720 x 480 resolution (NTSC) 25 fps at 720 x 576 resolution (PAL)
Network	
Protocol Supported	TCP, UDP, HTTP, PPPoE, DDNS, DHCP, IGMP
QoS	Layer 2, 3
I/O Interface	
Analog Video Input	Terminal Block x2
Analog Video Output	Terminal Block x2
WAN Port	Terminal Block x4
LAN Port	Terminal Block x4
Digital Input	Isolation with dry contact Terminal blocks x2 • Logic Level 0: 0 ~ 0.4 V • Logic Level 1: 3.3 ~ 30 V
Digital Output	Open collector (NPN) Terminal blocks x2 • Logic Level 0: 0.1 ~ 0.6 V • Logic Level 1: 5V ~ 30 V
Zoom Camera Interface	Zoom/Focus/Iris Output voltage: DC ± 5 V
Scanner Interface	Up/Down/Left/Right/Auto Output voltage: AC 110/220 V
Environment	
Dimensions (W x H x D)	200 mm x 300 mm x 120 mm (7.87" x 11.8" x 4.72")
Weight	3.6 Kg
Power Requirement	AC 110 V/220 V (60/50 Hz)
Operation Temp.	5 °C ~ 50 °C (32 °F ~ 122 °F)
Humidity	RH10 % ~ 90 %
Others	
Security	Password/username protection for restricted camera access
General Functions	• DI/O event triggered via Ethernet • Built-in Web Server and network interface • Motion detection • Video loss detection
Client Software OS Supported	Win 2000, Win XP

SED-3200

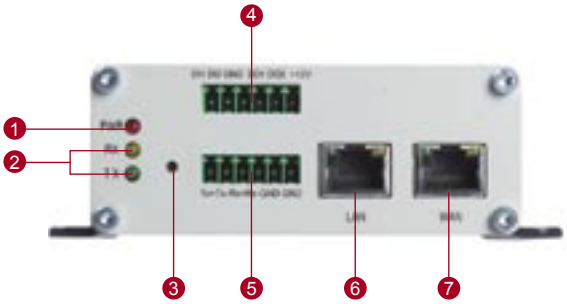
QoS-enabled Real-time MPEG-4 Video Transcoder



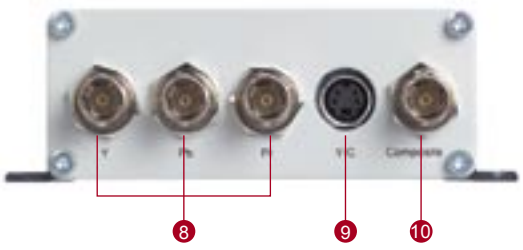
- Up to full D1 MPEG-4 video decoding at 30/25 FPS
- Supports both regular TV system and digital-TV
- QoS enabled (L2, L3) video streaming (UniCast/MultiCast)
- Digital time code retrieved
- Dual MPEG-4 video stream input via LAN or WAN (PPPoE supported) ports at the same time
- DDNS supported

Receive digital data and decode to analog image without lose quality

The SED-3200 is a high resolution, Ethernet (LAN and WAN) ready digital video transcoder. Via an Ethernet network such as LAN or WAN, the SED-3200 takes a MPEG-4 stream from a specific ACTi IP camera or video server, and converts it in real-time with high quality analog video signals. This allows analog video devices such as TV system, analog monitors or existing analog video switches to be connected to an ACTi IP-base video system.



1. Power LED
2. RS-485 LED
3. Reset button
4. Digital input & digital output
5. RS-485 & power DC input
6. LAN port
7. WAN port



8. Analog video output (YPbPr)
9. Analog video output (Y/C)
10. Analog video output (Composite)

Video Transcoder

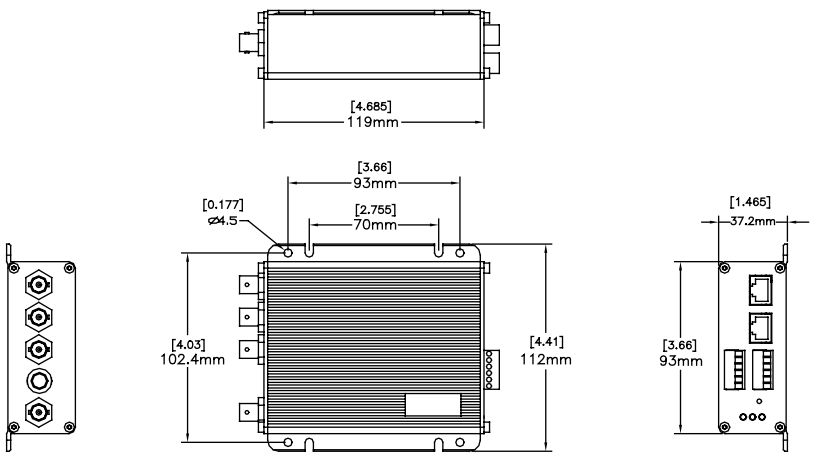
SED-3200

PRODUCT SPECIFICATION

Image System	
Compression	MPEG-4 decoding
Resolution	CIF (352 x 240 in NTSC, 352 x 288 in PAL) Full D1 (720 x 480 in NTSC, 720 x 576 in PAL)
Image Frame Rate	30 fps at full D1 resolution (NTSC) 25 fps at full D1 resolution (PAL)
Network	
Protocol Supported	TCP, UDP, HTTP, PPPoE, DDNS, DHCP, IGMP
QoS	Layer 2, 3
I/O Interface	
WAN Port	RJ-45 x1 (10/100base-T)
LAN Port	RJ-45 x1 (10/100base-T)
Serial Port	Terminal blocks (RS-232/422/485)
Analog Video Output	Composite, BNC connector x 1 Y/C, S Connector x 1 YPbPr, BNC connector x 3
Isolated Digital Output	Terminal blocks x2 • Logic Level 0: 0.1 ~ 0.6 V • Logic Level 1: 2.4 ~ 5 V
Isolated Digital Input	Terminal blocks x2 • Logic Level 0: 0 ~ 0.4 V • Logic Level 1: 3.3 ~ 30 V

Mechanical & Environment	
Dimensions (W x H x D)	112 mm x 37.2 mm x 119 mm (4.41" x 1.46" x 4.68")
Weight	350 g (0.66 lb)
Power Requirement	12 V / 0.61 A / 7.3 W
Operation Temp.	5 °C ~ 50 °C (40 °F ~ 122 °F)
Humidity	RH10 % ~ 90 %
Others	
Security	Password/username protection for restricted camera access
General Functions	• DI/O event triggered via remote Video Server • Built-in Web Server and network interface
Software OS Supported	Win 2000, Win XP, Win 2003
Certification	CE, FCC Class B

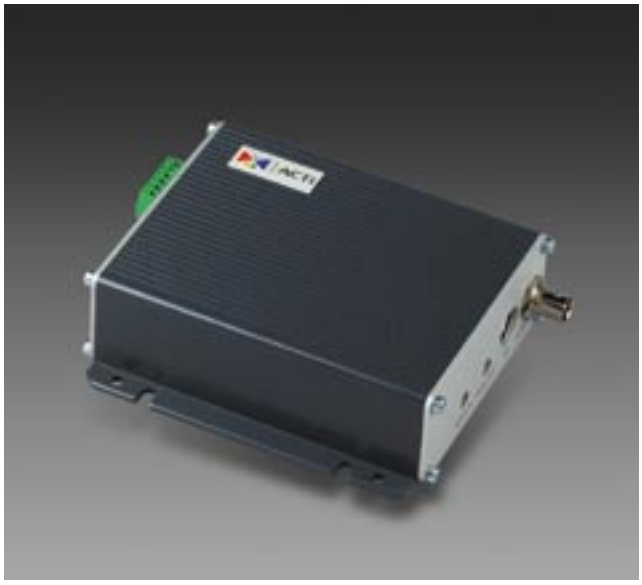
DIMENSION DIAGRAM



Unit: mm [inch]

SED-3300

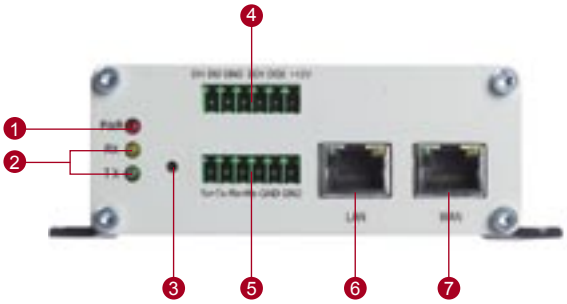
QoS-enabled Real-time MPEG-4 Video Transcoder with Audio



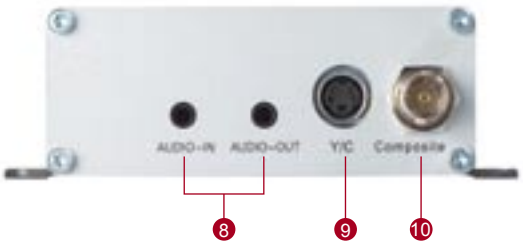
- Up to full D1 MPEG-4 video decoding at 30/25 FPS
- Supports both regular TV system and digital-TV
- QoS enabled (L2, L3) video streaming (UniCast/MultiCast)
- Digital time code retrieved
- Dual MPEG-4 video stream input via LAN or WAN (PPPoE supported) ports at the same time
- DDNS supported
- Bi-directional audio supported

Receive digital data and decode to analog image without lose quality

The SED-3300 is a high resolution, Ethernet (LAN and WAN) ready digital video transcoder with bi-directional audio supported. Via an Ethernet network such as LAN or WAN, the SED-3300 takes a MPEG-4 stream from a specific ACTi IP camera or video server, and converts it in real-time with high quality analog video signals and audio signals. This allows analog video devices such as TV system, analog monitors or existing analog video switches to be connected to an ACTi IP-base video system.



1. Power LED
2. RS-485 LED
3. Reset button
4. Digital input & digital output
5. RS-485 & power DC input
6. LAN port
7. WAN port



8. Audio In/Out
9. Analog video output (Y/C)
10. Analog video output (Composite)

Video Transcoder

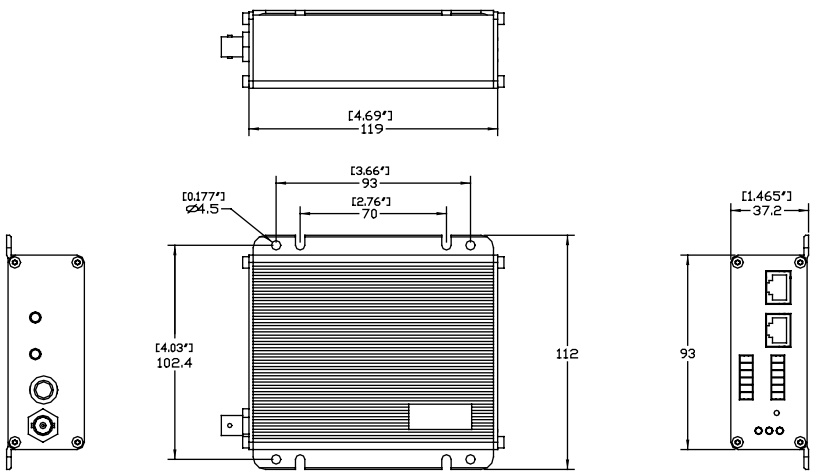
SED-3300

PRODUCT SPECIFICATION

Video Compression	
Compression	MPEG-4 decoding
Resolution	CIF (352 x 240 in NTSC, 352 x 288 in PAL) Full D1 (720 x 480 in NTSC, 720 x 576 in PAL)
Image Frame Rate	30 fps at full D1 resolution (NTSC) 25 fps at full D1 resolution (PAL)
Network	
Protocol Supported	TCP, UDP, HTTP, PPPoE, DDNS, DHCP, IGMP
QoS	Layer 2, 3
I/O Interface	
WAN Port	RJ-45 x1 • 10/100base-T
LAN Port	RJ-45 x1 • 10/100base-T
Serial Port	Terminal blocks (RS-232/422/485)
Video Output	Composite, BNC connector x 1 Y/C, S Connector x 1
Audio Input	Ear phone jack x1 • 1.4 Vpp, 1.0 Vrms
Audio Output	Ear phone jack x1 • 1.4 Vpp, 1.0 Vrms
Isolated Digital Output	Terminal blocks x2 • Logic Level 0: 0.1 ~ 0.6 V • Logic Level 1: 2.4 ~ 5 V
Isolated Digital Input	Terminal blocks x2 • Logic Level 0: 0 ~ 0.4 V • Logic Level 1: 3.3 ~ 30 V

Mechanical & Environment	
Dimensions (W x H x D)	112 mm x 37.2 mm x 119 mm (4.41" x 1.46" x 4.68")
Weight	350 g (0.66 lb)
Power Requirement	12 V / 0.61 A / 7.3 W
Operation Temp.	5 °C ~ 50 °C (40 °F ~ 122 °F)
Humidity	RH10 % ~ 90 %
Others	
Security	Password/username protection for restricted camera access
General Functions	• DI/O event triggered via remote Video Server • Built-in Web Server and network interface
Software OS Supported	Win 2000, Win XP, Win 2003
Certification	CE, FCC Class B

DIMENSION DIAGRAM



Unit: mm [inch]

NVR-4100

ACTi Network Video Recorder

- Support up to 48 channels
- Concurrent recording without preview
- MPEG-4 compliant format (ISO-14496-2)
- Time-based recording engine
- Event Recording, Schedule Recording
- 1U slim type rackmount form factor with 1 TB storage
- Dual Gigabit Ethernet
- Scalable storage architecture
- Windows Storage Server 2003 (WSS2003) ready

Concurrent recording without preview

ACTi NVR (Network Video Recorder) operates over NAS environment. it records without preview when connecting to remote video servers and IP cameras and supports up to 48 channels.

The live video are recorded into time-based recording engine, and can be retrieved by clicking a specific time slot.

Reliable and scalable storage

ACTi NVR offers cost-effective storage solution that can offer performance, scalability and reliability. ACTi NVR may connect to an external sub-system to support up to 5.8 TB storage.

ACTi NVR delivers an integrated storage and hardware platform that can increase the dependability and security of recorded video files, reduce the cost of managing complex storage architecture and improve user productivity and organizational agility.

PRODUCT SPECIFICATION

Bundled Application Environment	
Environment Storage Server	Windows Storage Server 2003
Browser	Microsoft Internet Explorer v6.0+
Storage	
Hard Disk Drive Bay	3.5" hot-swap ATA-100 IDE drive bay x4
Maximum Storage	1000 GB (250 GB x4)
Ethernet	10/100/1000 Mbps x2
PCI Expansion Slot	64-bit PCI-X 66 MHz slot x2 (1 for low profile, 1 for half-length)
Serial Port	COM x1
Dimensions (W x H x D)	1U Rackmount 425 mm x 42 mm x 468 mm (19" x 1.8" x 22.7")
Weight	12.56 Kg (27.69 lb)
Power Supply	250 W ATX power supply
Recording	
Manual Recording	Start and stop recording manually
Background Recording	Record all channels repeatedly
Recycle Recording	Delete older files with user-defined threshold to keep certain hard disk capacity
Schedule Recording	Record video with user-defined schedule and time period
Digital Input Event Recording	Record video when digital I/O is triggered
Motion Detection Recording	Record video when motion detected
Pre-event Recording	User-defined time period to record before a certain event occurs. maximum: 30 seconds.
Post-event Recording	User-defined time period to record after a certain event occurs.
Search	
Time Sequence Search	Search video clips with date, time
Digital Input Event Search	Search video clips with digital I/O events
Motion Detection Event Search	Search video clips with motion detection events
Thumbnail image search	Search video clips with thumbnail image previews
Time-based Search Engine	Search with time-based window
Event Handling	
Event Log	Triggered event will be recorded into an event log for further management
E-Mail Notification	E-Mail notification with captured image as attachment
FTP Notification	Transfer captured image to user-defined FTP server
Remote Management	
Remote Configuration	Configure settings on a remote machine
Remote Playback	Search and playback recorded video clips on a remote machine

NAS-1500

1U Network Attached Storage Server, supports up to 1 TB

- 4 hot-swappable IDE HDDs supports max. 1 TB storage
- 1U slim type rackmount form factor
- Dual Gigabit Ethernet
- Windows Storage Server 2003 (WSS2003)
- Extendable for another 4.8 TB with a subsystem

Store even more with Windows Storage Server 2003

With the rapid growth of data sharing needs and the IT cost sensitive situation, ACTi provides NAS-1500 to help customers getting the sharing benefit in a short deployment time.

ACTi NAS-1500 provides the flexible product configuration by using ATA hard drives to fulfill all kinds of customer's request. Moreover, users can add more memory modules on memory sockets to expand the memory capacity, or use third party software to make data backup. The maximum capacity can be extended another 4.8 TB by choosing 2U SATA RAID Subsystem with a SCSI card. ACTi NAS-1500 gives you a flexible, fast and compatible network storage platform.

PRODUCT SPECIFICATION (Barebone only)

Processor System (Option)	CPU	Intel Pentium 4 processor (up to 2.8 GHz)
Memory (Option)		Max. 4 GB ECC Reg. DDR 266/333/400 un-buffer SDRAM memory in 4 DIMM sockets
Storage Device	Hard Disk Drive Bay	3.5" hot-swap ATA-100 IDE Drive Bay x4
	Max. Storage	1000 GB (250 GB x 4)
Ethernet	Interface	10/100/1000 Ethernet x2
I/O Interface	PCI Expansion Slot	64-bit PCI-X 66 MHz slot x2 (1 for low profile, 1 for half-length)
	Serial Port	Slim type x1
RAID	RAID Type	Firmware
	RAID Level	0, 1, 0+1, 5
Mechanical & Environment	Dimensions (W x H x D)	1U Rackmount 425 mm x 42 mm x 468 mm (19" x 1.8" x 22.7")
	Weight	12.56 Kg (27.69 lb)
	Power Supply	250 W ATX power supply

DAS-1510

ACCESSORY OPTIONS

- PCI SCSI card 0630-00009-000
- 2U SATA RAID subsystem DAS-1510

* NAS-1500 doesn't include CPU, memory and hard drives. CPU, memory and hard drives are all options.

PCI-4100

4-channel MPEG-4 Video Audio Compression Card

- 4 channel video/audio inputs via BNC and RCA connectors
- MPEG-4 ASP compliant hardware compression
- CIF up to full D1 resolution at 30/25 FPS per channel
- Digital time code embedded
- Windows WDM Driver (DirectShow Filter Supported)
- Video signal loss detection

MPEG-4 compression gives a high resolution image quality

The PCI-4100 adopts MPEG-4 ASP compliant compression technology which can compress video data into MPEG-4 video streaming while maintaining resolution up to full D1, 30 fps at NTSC and 25 fps at PAL. To sustain the image quality of each channel, 4 encoders are put on the board to process signals from the 4 independent image sources. Under this design, each channel can be real-time previewed and recorded as well as displayed by Full D1 resolution.

Another special feature of PCI-4100 is the embedded digital time-code. Any attempts to change the images will destroy the time code, which can be applied to identify forged images.

The PCI-4100 also supports a daughter card, DIO-1100 for DI/O functions. The DIO-1100 provides 4-ports dry/wet switch digital inputs with photo couple, and 4 relay output channels with surge protection. It supports RS-232 or RS-485 for easy integration with external devices.

Ultra extensibility to provide a 16-channel real-time solution

The additional enhancement of PCI-4100 is its extensibility of utilizing four PCI-4100 cards to connect to one PCI-6100 Real-time Display Card, thus providing a real-time solution of 16 channel video display preview on both VGA and TV monitor simultaneously.

Other features such as motion detection, blind cameras detection, multiplexer are also enabled when connecting to PCI-6100 real-time display card.

PRODUCT SPECIFICATION

Compression	MPEG-4 ASP compliant hardware compression
Resolution	QCIF (160 x 112 in NTSC, 176 x 144 in PAL) CIF (352 x 240 in NTSC, 352 x 288 in PAL) Full D1 (720 x 480 in NTSC, 720 x 576 in PAL)
Image Frame Rate	30 fps at full D1 resolution (NTSC) 25 fps at full D1 resolution (PAL)
Video Input	Composite, BNC connector x4
Audio Input	Unbalanced audio x4

PCI Interface	PCI V2.1 compliance
Device Driver	Driver supports for Windows 2000, XP
SDK	Provide SDK with sample program for software application development.
Others Supported	1. Digital time-code embedded 2. Windows WDM Driver (DirectShow Filter supported) 3. Video signal lose detection

ORDERING INFORMATION

Model Name	Description
PCI-4100	4-channel MPEG-4 video audio compression card

PCI-5100

4-channel MPEG-4 Video Decoder Card

- MPEG-4 hardware decompression supported
- CIF up to Full D1 resolution at 30/25 FPS per channel
- Windows kernel mode driver
- 4 composite video outputs
- 4 channel VPO bus outputs

MPEG-4 compression gives a high resolution image quality

The PCI -5100 is a 4-channel PCI-based decoding add-in card that provides high performance MPEG 4 decoding from a local HD, or remote ACTi video products to provide analog video signals. This allows analog video devices such as TV system, analog monitors or existing analog video switches to be connected to an ACTi IP-based video system.

Ultra extensibility to provide a 16-channel real-time solution

The PCI-5100 also provides digital video signals output via an ACTi proprietary cable connect to ACTi's PCI-6100, the real-time display PCI-based Add-in Card. This saves CPU loading when supporting a larger system.

PRODUCT SPECIFICATION

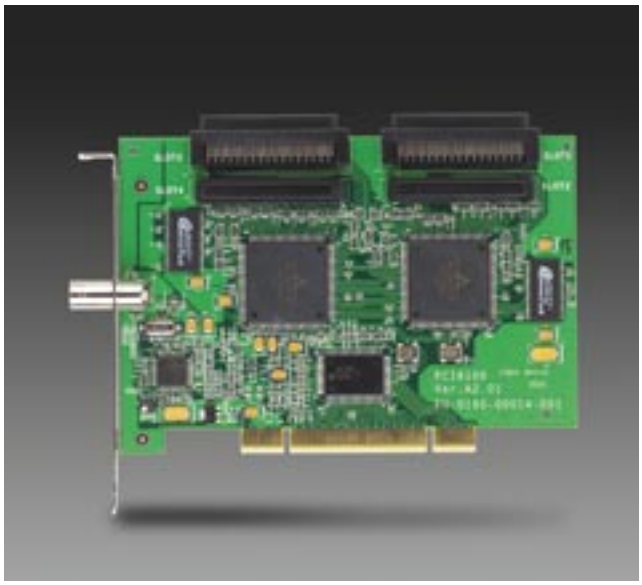
Video Decoding	MPEG-4 SP hardware decompression
Resolution	CIF (352 x 240 in NTSC, 352 x 288 in PAL) Full D1 (720 x 480 in NTSC, 720 x 576 in PAL)
Image Frame Rate	30 fps at full D1 resolution (NTSC) 25 fps at full D1 resolution (PAL))
Video Output	Composite, BNC connector x4
PCI Interface	PCI V2.1 compliance
Device Driver	Driver supports for Windows 2000, XP and 2003
SDK	Provide SDK with sample program for software application development.
Others	1. Windows Driver supported 2. Embedded digital time-code retrieved 3. Information of remote/local MPEG-4 streams collection 4. Information of remote DI/O collection 5. Information of remote motion detection collection

ORDERING INFORMATION

Model Name	Description
PCI-5100	4-channel MPEG-4 video decoder card

PCI-6100

Real-time Display Card Supports up to 16 Channels of Video Output



- 16 live video channels previewing at the same time
- Hardware motion detection
- Video loss detection
- Blind camera detection
- VGA and TV output supported

16 channels of video displaying at the same time

The PCI-6100 is a real-time display card that supports maximum 16 channels of live digital video signal from four PCI-4100 video compression cards, or four PCI-5100 video decoder cards. To decrease system loading when displaying 16 video channels simultaneously, PCI-6100 utilizes hardware computing technology to process the video display. Compared with using software computing to finish these tasks, hardware computing can share most loadings of CPU and thus can have higher system performance as well as sustain a video resolution up to Full D1.

Through the BNC connector on the PCI-6100, video data can be displayed on both TV monitor and VGA monitor at the same time without extra signal converters.

Extra features enhance the power of PCI-4100/PCI-5100

There are some additional functions of the PCI-6100 to support the PCI-4100/PCI-5100 in :

1. Motion detection : In addition to utilizing the hardware computing to lower system resource consumptions in motion detection, PCI-6100 also enables motion detection to specific areas on the screen, or settings to the sensitivity of motion upon different situations.

2. Video loss or blind images detection : The PCI-6100 can auto-detect if the video signal is lost or camera lens are covered.

3. Multiplexing : The PCI-6100 can split the TV monitor screen into different sections for multi-channel preview without any extra physical multiplexer.

PRODUCT SPECIFICATION

Max. Channels Supported	Display 16 live videos at 30 fps (NTSC) or 25 fps (PAL)
Video Output	Composite, BNC connector x1
PCI Interface	PCI V2.1 compliance
Device Driver	Driver supports for Windows 2000, XP and 2003

SDK	Provide SDK with demo program for software application development
Others	1. Motion detection 2. Video loss and blind camera detection supported 3. VGA and TV output supported

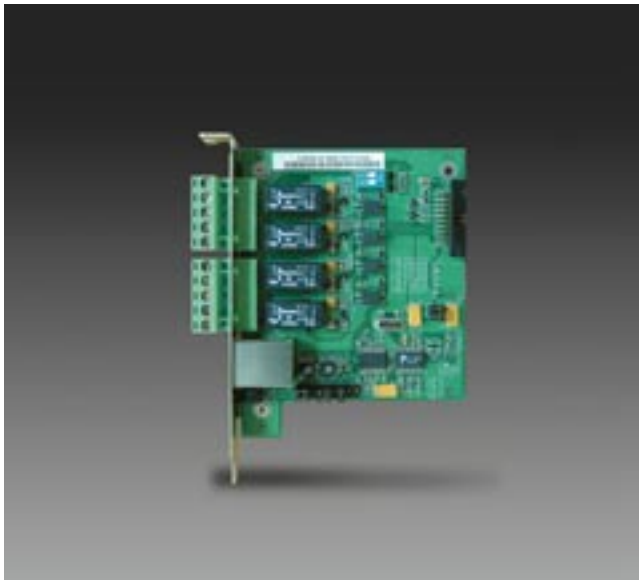
* [Must be installed with PCI-4100/PCI-5100]

ORDERING INFORMATION

Model Name	Description
PCI-6100	Real-time display card with 16-channel video outputs

DIO-1100

Digital Input/Output Card



- 4 isolated digital inputs with photo couple
- 4 relay output channels with surge protection
- RS-232/485 supported

The DIO-1100 isolated DI/O card is a daughter card of PCI-4100 4-channel MPEG-4 Video Compression Card.

It provides 4-ports dry/wet switch digital inputs with photo couple, and also 4 relay output channels with surge protection. For easy integration, the DIO-1100 also provides RS-232 or RS-485 for connecting to external devices.

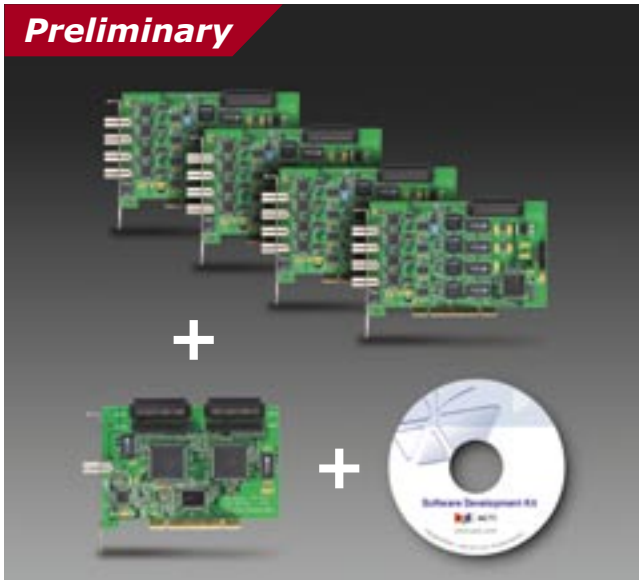
PRODUCT SPECIFICATION

Relay Output	
Relay Type	Normal open
Contact Rating	220 VDC @ 0.24 A-60 W 250 VDC @ 0.25 A-62.5 W
Relay On/Off Time	50 operations/sec.
MTBF - Electrical With Load (1) 150 V / 0.2 A-30 W (2) 24 V / 1.25 A-30 W	(1) min. 2.0 x 10^5 operations (2) min. 2.0 x 10^5 operations
MTBF - Electrical Without Load	Typical 10^8 operations
Digital Input	
Input Type	Isolation with dry contact or command ground
On Voltage Level	2.0 V
Off Voltage Level	0.8 V
Power Input	0 V DC ~ 35 V DC
Input Current	1 mA
Input Independence	(1) WET-CONTACT Normal State is high (input floating) (2) DRY-CONTACT Normal State is low (input floating)
Isolation Voltage	5000 Vrms

Serial Port	
RS-232	Baud rate 1200 bps ~ 115200 bps
RS-485	Full-duplex
Others	
Device Driver	Driver supports for Windows 2000, XP
SDK	Provides SDK with sample program for software application development

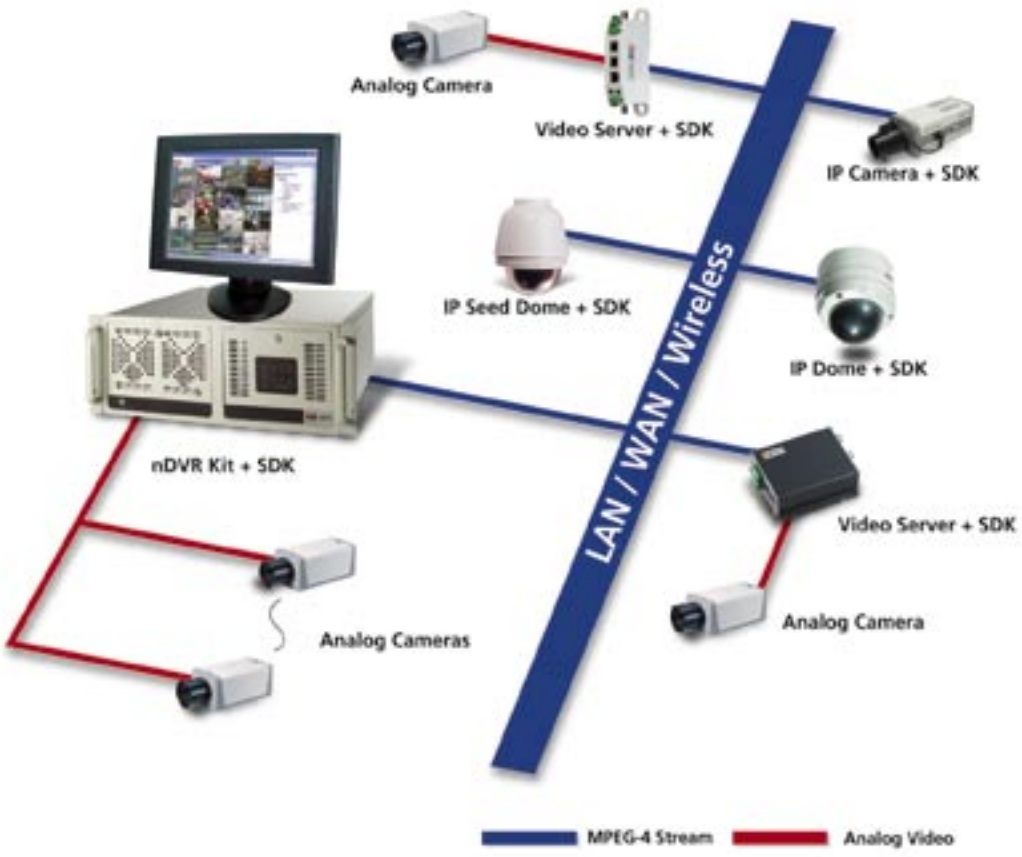
nDVR Development Kit for Hybrid nDVR Solution

nDVR Development Kit



- Easy to integrate into video surveillance applications
- Visual C, C++, Visual BASIC and JavaScript support
- ActiveX control edition
- Maximum 16-channel video and audio inputs
- Maximum 16-channel live preview at the same time
- MPEG-4 ASP compliant hardware compression
- CIF up to D1 resolution per channel
- Digital time code embedded
- Windows WDM driver (DirectShow Filter Supported)
- Video signal lose detection
- Hardware motion detection
- Blind camera detection

nDVR Solution



nDVR Development Kit

PRODUCT SPECIFICATION

Compression	MPEG-4 ASP compliant hardware compression
Resolution	QCIF (NTSC: 160 x 112, PAL: 176 x 144) CIF (NTSC: 352 x 240, PAL: 352 x 288) Full D1 (NTSC: 720 x 480 , PAL: 720 x 576)
Image Frame Rate	30 fps at full D1 resolution (NTSC) 25 fps at full D1 resolution (PAL)
Video Input	Composite, BNC connector
Video Output	Composite, BNC connector x1
Audio Output	Unbalance audio, RCA connector
PCI Interface	PCI 2.1 compliant
Device Driver	Driver supports Windows 2000, Windows XP and Windows 2003
Programming Languages	Visual C++ v6.0, Visual Studio.Net, Visual Studio.Net 2003, Visual BASIC v6.0, Visual BASIC.Net, HTML + JavaSript
Live Preview	Streaming and decode MPEG-4 information

Recording	Background recording, alarm recording, pre-event and post-event recording
Playback	MPEG-4 decoding and display
Motion Detection	Callback function supported when a motion detected
Digital I/O Event	Callback function supported when a digital input is triggered
Serial Port Function	Sends serial port command
PTZ Function	Pelco-P and Pelco-D protocol sample code included
Others	1. Digital time-code embedded 2. Windows WDM Driver (DirectShow Filter supported) 3. Video signal lose detection 4. Motion detection 5. Video loss and blind camera detection 6. VGA and TV output support

System Requirement

CPU	Pentium IV 2.8 GHz and above
PCI Slots	5 (32bit/33Mhz PCI slot) for maximum load (PCI-4100 x4 + PCI-6100 x1)
System Memory	512 MB
Network Connection	1 Gbps Ethernet

Display	AGP 8X with 64 MB memory and above
Hard Disk	40 GB and above
Power Supply	ATX 300 W

* Detail qualified vender list is provided upon request. Please conact your sales representatives for more detial informaiton.

Integration Test

- Power Push-Button (Manual-mode ; count = 50)
- PCI-4100 Video-in Plug-in / Pull-out (Manual-mode ; count = 50)
- Reset Functional (Manual-mode ; count = 50)
- Network Connection: 1 Gbps Ethernet
- NTSC Video-in (BNC-type) Interface Functional Test
- PAL Video-in (BNC-type) Interface Functional Test
- Digital I/O Interface Connector Functional Test

* Detail stress test report is provided upon request. Please conact your sales representatives for more detial informaiton.

nDVR Kit Content

PCI-4100	4-channel MPEG-4 Video Audio Compression Card
PCI-6100	16-channels Real time Video Output Display Card (optional)
SDK-4100 / SDK-6100	nDVR SDK for PCI-4100 and PCI-6100

ACCESSORY OPTIONS

- Digital I/O board (4-in, 4-out) DIO-1100
- Industrial-grade nDVR Chassis XCP-4010

SEM-1010

MPEG-4 Encoder Module with DC 5 V Power

- MPEG-4 ASP to deliver DVD resolution video at low data rates and small file sizes
- The intelligent network System on a Chip (SoC) solution delivers high performance and QoS (802.1pQ) for ensuring a stable and high quality video streaming via IP multicast and IGMP (Internet Group Management Protocol)
- Digital time code embedded
- Dual MPEG-4 video stream output via LAN and WAN (PPPoE supported) ports at the same time
- DDNS supported
- Simultaneously analog and digital outputs

Transmit analog image into digital data with ultra high resolution

The SEM-1010 is a module device for a system OEM to incorporate into a final system device. The SEM-1010 is a SoC based, fully integrated video compression module that has a low cost advantage and reliable networking capable for meeting IP environment of Security Market. The SEM-1010 offers the highest compression rate on the market via MPEG-4 technology for real images and faster on-line image transmission.
The SEM-1010 also serves as a 5 V DC powered device.

Reference kits are ready for customer evaluation

1 EVK-1000

2 EVB-2000

3 EVK-1100

4 IOK-1000

PRODUCT SPECIFICATION

Image System	
Compression	MPEG-4 ASP compliance
Image Frame Rate	30 fps at 720 x 480 resolution (NTSC) 25 fps at 720 x 576 resolution (PAL)
Max. Resolution	Full D1
Network	
Protocol Supported	TCP, UDP, HTTP, PPPoE, DDNS, DHCP, IGMP
QoS	Layer 2, 3

Connector Pin Assignments

Pin #	Signal	Pin #	Signal
1	WAN RXOP	2	WAN TXIP
3	WAN RXON	4	WAN TXIN
5	GND	6	GND
7	LAN TXIN	8	LAN RXON
9	LAN TXIP	10	LAN RXOP
11	GND	12	GND
13	RS-485 D-	14	RS-485 D+
15	GND	16	GND
17	NC	18	DC +5V INPUT
19	System Reset	20	DC +5V INPUT
21	Bootup OK/ RS-485/ Reset Status LED	22	WAN/LAN Link/ACT Status LED
23	Digital Output 1	24	Digital Output 2
25	Digital Input 1	26	Digital Input 2
27	Video Input GND	28	Video Output GND
29	Video CVBS Input	30	Video CVBS Output

Environment & Mechanical	
Dimensions (W x H x D)	59 mm x 20.3 mm x 93 mm (2/3" x 0.8" x 3.7 ")
Material	Aluminum
Weight	140 g
Power Requirement	DC 5 V
Operation Temp.	0 °C ~ 50 °C (32 °F ~ 122 °F)
Humidity	RH10 % ~ 90 %
Others	
Security	Password/username protection for restricted camera access
General Functions	• DI/O event triggered via Ethernet • Built-in Web Server and network interface
Client Software OS Supported	Win 2000, Win XP, Win 2003
Certification	CE, FCC

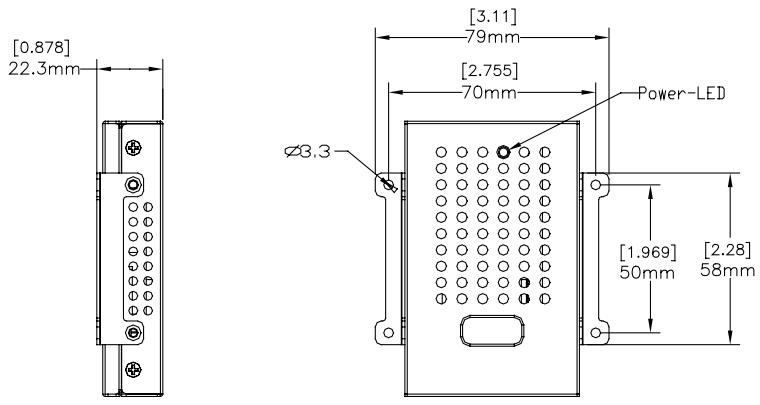
ORDERING INFORMATION

Model Number	DC 5V in	D1	CIF	4 MB Flash	8 MB Flash
SEM-1010	V	V		V	
SEM-1011	V	V			V
SEM-1010S	V		V	V	
SEM-1011S	V		V		V

OPTIONAL LIST

Model Number	Description
EVB-2000	5 V / 12 V in I/O board
IOK-1000	I/O cable kit

DIMENSION DIAGRAM



Unit: mm [inch]

SEM-1020

MPEG-4 Encoder Module with DC 12 V Power

- MPEG-4 ASP to deliver DVD resolution video at low data rates and small file sizes
- The intelligent network System on a Chip (SoC) solution delivers high performance and QoS (802.1pQ) for ensuring a stable and high quality video streaming via IP multicast and IGMP (Internet Group Management Protocol)
- Digital time code embedded
- Dual MPEG-4 video stream output via LAN and WAN (PPPoE supported) ports at the same time
- DDNS supported
- Simultaneously analog and digital outputs

Transmit analog image into digital data with ultra high resolution

The SEM-1020 is a module device for a system OEM to incorporate into a final system device. The SEM-1020 is a SoC based, fully integrated video compression module that has a low cost advantage and reliable networking capable for meeting IP environment of Security Market. The SEM-1020 offers the highest compression rate on the market via MPEG-4 technology for real images and faster on-line image transmission.
The SEM-1020 serves both as a 12 V DC powered device and power source device.

Reference kits are ready for customer evaluation

1 EVK-1000

2 EVB-2000

3 EVK-1100

4 IOK-1100

PRODUCT SPECIFICATION

Image System	
Compression	MPEG-4 ASP compliance
Image Frame Rate	30 fps at 720 x 480 resolution (NTSC) 25 fps at 720 x 576 resolution (PAL)
Max. Resolution	Full D1
Network	
Protocol Supported	TCP, UDP, HTTP, PPPoE, DDNS, DHCP, IGMP
QoS	Layer 2, 3

Connector Pin Assignments

Pin #	Signal	Pin #	Signal
1	WAN RXOP	2	WAN TXIP
3	WAN RXON	4	WAN TXIN
5	GND	6	GND
7	LAN TXIN	8	LAN RXON
9	LAN TXIP	10	LAN RXOP
11	GND	12	GND
13	RS-485 D-	14	RS-485 D+
15	GND	16	GND
17	DC +12V OUTPUT	18	DC +12V INPUT
19	System Reset	20	DC +12V INPUT
21	Bootup OK/ RS-485/ Reset Status LED	22	WAN/LAN Link/ACT Status LED
23	Digital Output 1	24	Digital Output 2
25	Digital Input 1	26	Digital Input 2
27	Video Input GND	28	Video Output GND
29	Video CVBS Input	30	Video CVBS Output

Environment & Mechanical	
Dimensions (W x H x D)	59 mm x 20.3 mm x 93 mm (2/3" x 0.8" x 3.7 ")
Material	Aluminum
Weight	140 g
Power Requirement	DC 12 V
Power Out	DC 12 V
Operation Temp.	0 °C ~ 50 °C (32 °F ~ 122 °F)
Humidity	RH10 % ~ 90 %
Others	
Security	Password/username protection for restricted camera access
General Functions	• DI/O event triggered via Ethernet • Built-in Web Server and network interface
Client Software OS Supported	Win 2000, Win XP, Win 2003
Certification	CE, FCC

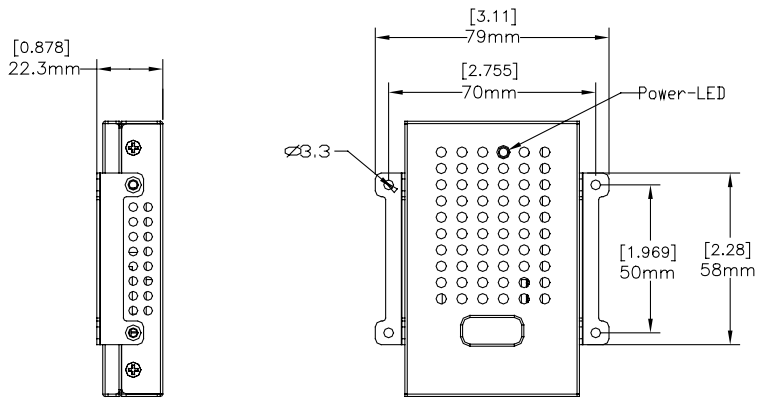
ORDERING INFORMATION

Model Number	DC 12V in	D1	CIF	4 MB Flash	8 MB Flash
SEM-1020	V	V		V	
SEM-1021	V	V			V
SEM-1020S	V		V	V	
SEM-1021S	V		V		V

OPTIONAL LIST

Model Number	Description
EVB-2000	5 V / 12 V I/O board
IOK-1000	I/O cable kit

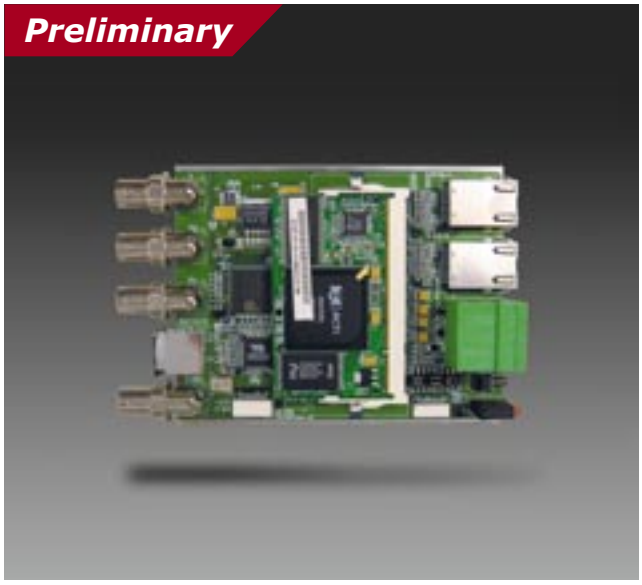
DIMENSION DIAGRAM



Unit: mm [inch]

SEM-2010

QoS-enabled Real-time MPEG-4 Video Transcoder Module



- Up to full D1 MPEG-4 video decoding at 30/25 FPS
- Supports both regular TV system and digital-TV
- QoS enabled (L2, L3) video streaming (UniCast/MultiCast)
- Digital time code retrieved
- DDNS supported

Receive digital data and decode to analog image without loss of quality

The SEM-2010 is a high resolution, Ethernet (LAN and WAN) ready digital video decoding module. Via an Ethernet network such as LAN or WAN, the SEM-2010 takes a MPEG-4 stream from a specific ACTi network camera or video server, and converts it into real-time, high quality analog video signals. This allows analog video devices such as TV system, analog monitors or existing analog video switches to be connected to an ACTi IP-base video system.

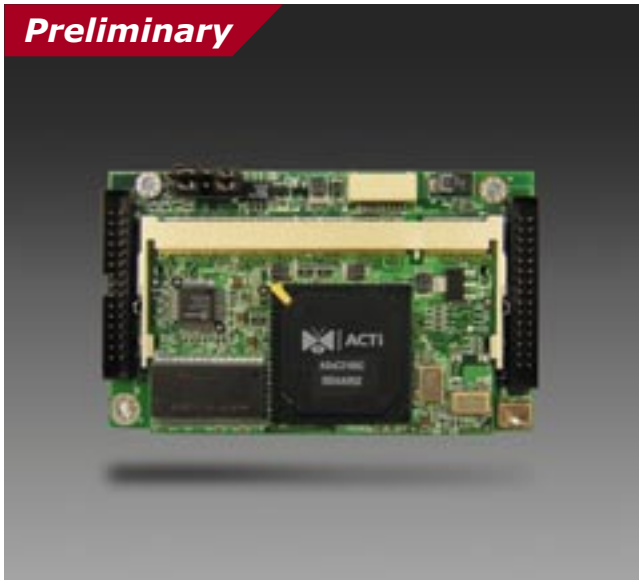
PRODUCT SPECIFICATION

Image System	
Compression	MPEG-4 decoding
Resolution	CIF (352 x 240 in NTSC, 352 x 288 in PAL) Full D1 (720 x 480 in NTSC, 720 x 576 in PAL)
Image Frame Rate	30 fps at full D1 resolution (NTSC) 25 fps at full D1 resolution (PAL)
Network	
Protocol Supported	TCP, UDP, HTTP, PPPoE, DDNS,DHCP, IGMP
QoS	Layer 2, 3
I/O Interface	
WAN Port	RJ-45 x1 (10/100base-T)
LAN Port	RJ-45 x1 (10/100base-T)
Serial Port	RJ-45 x1 (10/100base-T)
Analog Video Output	Composite, BNC connector x1 Y/C, S connector x 1 YPbPr, BNC connector x 3
Isolated Digital Output	Isolation with dry contact Terminal blocks x 2 • Logic Level 0: 0.1 ~ 0.6 V • Logic Level 1: 2.4 ~ 5 V
Isolated Digital Input	Terminal blocks x 2 • Logic Level 0: 0 ~ 0.4 V • Logic Level 1: 3.3 ~ 30 V

Environment	
Dimensions (W x H x D)	26.1 mm x 131 mm x 88 mm (1.03" x 5.16" x 3.46")
Weight	350 g (0.66 lb)
Power Requirement	12 V / 0.61 A / 7.3 W
Operation Temp.	5 °C ~ 50 °C (32 °F ~ 122 °F)
Humidity	RH10 % ~ 90 %
Others	
Security	Password/username protection for restricted camera access
General Functions	• DI/O event triggered via remote Video Server • Built-in Web Server and network interface
Client Software OS Supported	Win 2000, Win XP, Win 2003
Certification	CE, FCC Class B

SEM-2110

SoM-based QoS-enabled Real-time MPEG-4 Video Transcoder Module



- Up to full D1 MPEG-4 video decoding at 30/25 FPS
- Supports both regular TV system and digital-TV
- QoS enabled (L2, L3) video streaming (UniCast/MultiCast)
- Digital time code retrieved
- DDNS supported

Receive digital data and decode to analog image without loss of quality

The SEM-2110 is a high resolution, Ethernet (LAN and WAN) ready digital video decoding module. Via an Ethernet network such as LAN or WAN, the SEM-2110 takes a MPEG-4 stream from a specific ACTi network camera or video server, and converts it into real-time, high quality analog video signals. This allows analog video devices such as TV system, analog monitors or existing analog video switches to be connected to an ACTi IP-base video system.

PRODUCT SPECIFICATION

Image System

Compression	MPEG-4 decoding
Resolution	CIF (352 x 240 in NTSC, 352 x 288 in PAL) Full D1 (720 x 480 in NTSC, 720 x 576 in PAL)
Image Frame Rate	30 fps at full D1 resolution (NTSC) 25 fps at full D1 resolution (PAL)

Network

Protocol Supported	TCP, UDP, HTTP, PPPoE, DDNS,DHCP, IGMP
QoS	Layer 2, 3

Connector 1

Pin #	Signal	Pin #	Signal
1	DC-12V-IN	2	DC-12V-IN
3	GND	4	GND
5	485 RX/TX LED	6	PWR LED
7	GND	8	GND
9	485 TX D+	10	485 TX D-
11	GND	12	485 RX D+
13	485 RX D-	14	GND
15	LAN GND	16	LAN TX OP
17	LAN TX ON	18	LAN GND
19	LAN RX IP	20	LAN RX IN
21	LAN GND	22	WAN TX OP
23	WAN TX ON	24	WAN GND
25	WAN RX IP	26	WAN RX IN
27	WAN GND	28	GND
29	WAN LINK/ACT LED	30	LAN LINK/ACTLED
31	NC	32	NC
33	NC	34	Empty

Connector 2

Pin #	Signal	Pin #	Signal
1	DI - 1	2	DI - 2
3	GND	4	RESET
5	GND	6	DO - 1
7	GND	8	DO - 2
9	GND	10	NC
11	GND	12	NC
13	A GND_Video	14	CVBS OUT
15	A GND_Video	16	Y / Y OUT
17	A GND_Video	18	Pr / C OUT
19	A GND_Video	20	Pb OUT
21	A GND_Video	22	A GND
23	A GND_PCM	24	MIC - IN
25	A GND_PCM	26	SPK -OUT
27	GND	28	WAN 10/100 LED
29	GND	30	LAN 10/100 LED
31	Empty	32	NC
33	NC	34	NC

Environment

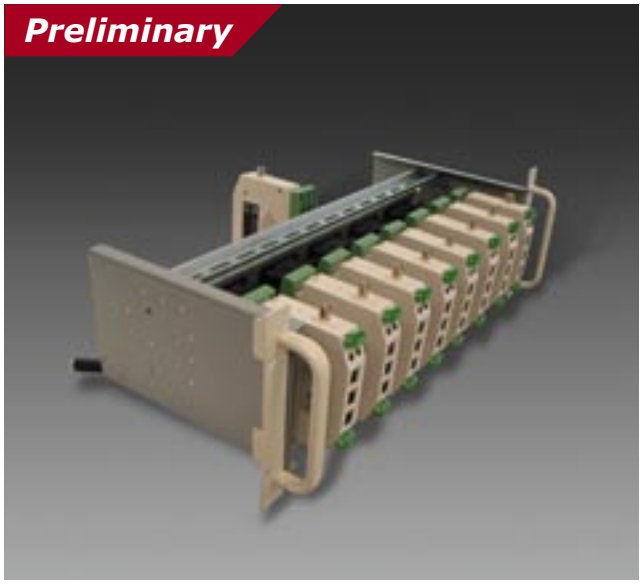
Dimensions (W x H x D)	26.1 mm x 131 mm x 88 mm (1.03" x 5.16" x 3.46")
Weight	350 g (0.66 lb)
Power Requirement	12 V / 0.61 A / 7.3 W
Operation Temp.	5 °C ~ 50 °C (32 °F ~ 122 °F)
Humidity	RH10 % ~ 90 %

Others

Security	Password/username protection for restricted camera access
General Functions	• DI/O event triggered via remote Video Server • Built-in Web Server and network interface
Client Software OS Supported	Win 2000, Win XP, Win 2003

RMK-1000

Rackmount Kit for Din-rail Type Devices



- 19-inch 3U Rackmount Din-rail design
- Standard 35 x 7.5 mm DIN rail
- 4 separate DIN rail mounting planes
- Dedicate fan for cooling ventilation
- Better and fast access for installation and maintenance
- Flexible mounting environment
- Minimal setup cost

The RMK-1000 is a 3U high 19-inch rackmount DIN Rail designed for easy access and install for those devices with the DIN Rail design such as ACTi's SED-210X video server. The RMK-1000 provides the space efficiency required in applications that need the central management for high volume of DIN Rail devices.

The RMK-1000 also provides a set of 5 fans cooling method for best ventilation. Each of the fans is replaceable if it reaches its end of life or by customer's request for higher CFM of air flow or lower dBA of noise.

For installing the ACTi's SED-210X, a DIN-rail mounting bracket is needed, It is recommended that a max. of 16 pieces of the SED-210X are installed for the best ventilation; there are 8 pieces in each side.

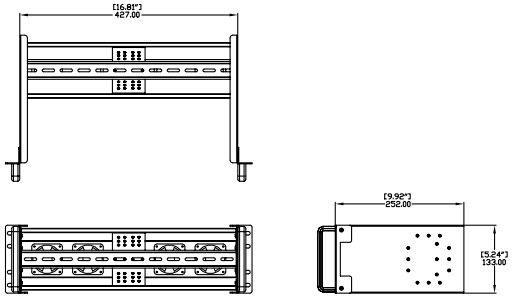
PRODUCT SPECIFICATION

Construction	Heavy-duty steel
Din Rail	4 (35 mm x 7.5 mm)
Applied Devices for RMK-1000	SED-210X
Max. Supported Device Quantity	16
Cooling Fan	5 (60 mm x 60 mm x 25 mm)
Power for FAN	Input : 100-240 Vac AC-DC adapter Output: 12 Vdc / 1.5 A
Color	Beige
Dimension (W x D X H)	427 mm x 133 mm x 252 mm (16.8" x 5.24" x 9.92")

ACCESSORY OPTIONS

- Adapter AX13-SL15A212-U 2pin (USA/Japan)
  0961-00005-000
- Adapter AX21-SL15A212-E 2pin (Europe)
  0691-00006-000
- Adapter AX31-SL15A212-B 2pin (U.K.)
  0691-00007-000
- Adapter AX51-SL15A212-C 2pin (China)
  0691-00008-000

DIMENSION DIAGRAM



Unit: mm [inch]

RMK-2000

Rackmount Kit for Wallmount Type Devices

- 19-inch 4U Rackmount Kit
- Dedicate FAN for cooling ventilation
- Better and fast access for installation and maintenance
- Flexible mounting environment
- Minimal setup cost
- Support up to 8 devices

The RMK-2000 is a 4U high 19-inch rackmount Kit designed for easy access and install for ACTi MPEG-4 IP Surveillance products in wallmount types. The RMK-2000 provides the space efficiency required in applications that need the central management for high volume of ACTi MPEG-4 IP Surveillance devices.

The RMK-2000 also provides a set of 8 fans cooling method for best ventilation, each of the fans is replaceable if it reaches its end of life or by customer's request for higher CFM of air flow or lower dBA of noise.

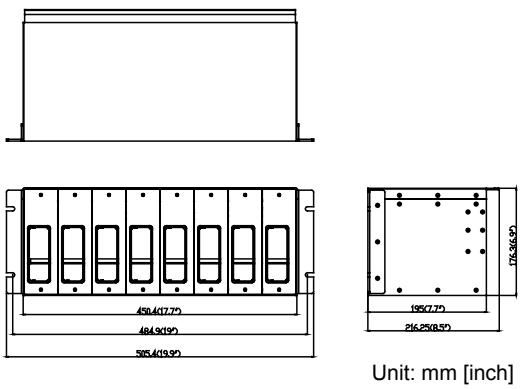
PRODUCT SPECIFICATION

Construction	Heavy-duty steel
Applied Devices for RMK-2000	SED-212X/SED-23XXQ/SED-24XX/SED-32XX/SED-33XX
Max. Supported Device Quantity	8
Cooling Fan	8 (60 mm x 60 mm x 25 mm)
Power for FAN	Input : 100-240 Vac AC-DC adapter Output: 12 Vdc / 1.5 A
Color	Black
Dimension (W x D X H)	505.4 mm x 216.25 mm x 176.3 mm (19.9" x 8.5" x 6.9")

ACCESSORY OPTIONS

- Adapter AX13-SL15A212-U 2pin (USA/Japan)
  0961-00005-000
- Adapter AX21-SL15A212-E 2pin (Europe)
  0691-00006-000
- Adapter AX31-SL15A212-B 2pin (U.K.)
  0691-00007-000
- Adapter AX51-SL15A212-C 2pin (China)
  0691-00008-000

DIMENSION DIAGRAM



Unit: mm [inch]

IP Integration Products

PoE

POE-150S

PoE Splitter
- Comply with IEEE802.3af, Power over Ethernet, IEEE802.3/802.3u 10/100Base-TX
- Receives 48V DC power over RJ-45 Ethernet cable to device with Ethernet port
- Distance up to 100 meters
- Work with EIA568, category 5, 4-pair cables for 10Base-T or 100Base-TX
- Supports 12 V DC, 1 A max.

POE-150

PoE Injector
- Comply with IEEE802.3af, Power over Ethernet, IEEE802.3/802.3u 10/100Base-TX
- Provides 48V DC power over RJ-45 Ethernet cable to device with Ethernet port
- Distance up to 100 meters
- Work with EIA568, category 5, 4-pair cables for 10Base-T or 100Base-TX
- Support POE-150S

POE-1200

MidSpan Switch
- 12-port 802.3af in-line mid-span power injector box
- Comply with IEEE802.3, IEEE802.3u, 10/100Base-TX
- Comply with IEEE802.3af, 48VDC power over unused twisted-pair wires
- Full power support for per POE port
- Circuit protection to prevent power interference between ports
- Support POE-150S

FGSW-2402PVS

PoE Switch
- Complies with the IEEE802.3, IEEE802.3u, IEEE802.3z and IEEE802.3ab Gigabit Ethernet standard, IEEE802.3af Power over Ethernet standard
- 24-Port 10/100 Mbps Fast Ethernet ports with PoE support
- 2 open slots for 10/100Base-TX, 1000Base-T and 100Base-FX, 1000Base-SX/LX fiber-optic interface connection varied by media and distance
- Support POE-150S

Wireless (Outdoor)

AAP-5801a

Broadband Wireless Bridge Solutions (1 Master to 4 Salves in maximum)
- Standard: IEEE 802.11a
- Output Power: 20 dBm
- Operation Mode: Bridge only (1 Master to 4 Slaves)
- Turbo Function to 108 Mbps
- Operation Temperature: -30 ~ 70 Celsius degree
- Accessories: CAT5 Cable, DC Injector, Power Adaptor

AAP-2401

Broadband Wireless AP/Bridge Solutions
- Standard: IEEE 802.11b
- Output Power: 23 dBm
- Operation Mode: Bridge/AP/WEC/WWB
- Operation Temperature: -30 ~ 70 Celsius degree
- Combined Antenna: 18 dBi Panel
- Accessories: CAT5 Cable, DC Injector, Power Adaptor, Antenna Lightning Protector

AAP-24005g

Broadband Wireless Access Solutions (AP/Bridge)
- Standard: IEEE 802.11b, IEEE 802.11g, IEEE802.3, IEEE802.3u
- Output Power: 23 dBm
- Operation Mode: 802.11b: 70 mW 18 dBm 802.11g: 35 mW 14 dBm 802.11g+1W Booster: 30 dBm
- Operation Temperature: -30 ~ 70 Celsius degree
- Combined Antenna: 18 dBi Panel

Wireless (Indoor)

WL-699C

802.11g Wireless Ethernet Adapter
- IEEE 802.11b/g standard compliant with data rate of up to 54Mpbs
- Enable consumer electronic devices with LAN port operate wirelessly
- WEP&WPA Encryption security
- Easy-to-setup and easy-to-operate

WX-6800GS

108Mbps Wireless 11g Multi-Function AP
- Dual mode capability protects your 802.11b wireless investment and has you ready for the 802.11g
- WDS extends the wireless coverage Enhance the user network security
- WPA dynamic key provides better data security than traditional static key
- Intuitive Web-based management makes easy configuration and maintenance

Accessories

Outdoor Housing

GL-606

Outdoor Housing
- Construction: Aluminum (Beige Baked Enamel)
- Mounting: From Bottom
- Dimension (W x H x D): 113 mm x 106 mm x 410 mm
- Weight: 2.7 Kg
- Heater & Blower (Option)
- IP66, CE

GL-605

Outdoor Housing
- Construction: Aluminum (Beige Baked Enamel)
- Mounting: From Bottom
- Dimension (W x H x D): 142 mm x 115 mm x 390 mm
- Weight: 2.5 Kg
- Heater & Blower (Option)

Bracket

GL-210

Housing Bracket
- Construction: Aluminum (Beige Baked Enamel)
- Maximum Load: 10 Kg
- Swivel Angle: 90°
- Dimension (L): 226 mm
- Weight: 450 g

GL-205A

Housing Bracket
- Construction: Aluminum (Beige Baked Enamel)
- Maximum Load: 10 Kg
- Swivel Angle: 90°
- Dimension (L): 285 mm
- Weight: 750 g

GL-202 / GL-201

Bracket
- Construction: Plastic / Ivory Color
- Maximum Load: 3.5 Kg
- Swivel Angle: 360°
- Dimension (L x Baseplate): GL-202: 155 mm x 100 mm GL-201: 175 mm x 89 mm
- Weight: 160 g

Pan/Tilt

GL-305

Pan/Tilt (Indoor)
- Construction: Plastic / Beige Color
- Maximum Load: 7 Kg
- Pan / Tilt: 350° / 90°
- Dimension: 117 mm x 118 mm
- Weight: 9.4 Kg

GL-301

Pan/Tilt (Outdoor)
- Construction: Aluminum / Siver-Gray
- Maximum Load: 38 Kg
- Pan / Tilt: 350° / UP-30° DOWN-40°
- Dimension: 277 mm x 196 mm
- Weight: 17 Kg

Pan/Tilt Controller

GL-301D

Pan/Tilt Controller
- Control: Auto/Off/Manual, Left/Right, Up/Down
- Pan: 110 V AC/110 V AC/220 V AC
- Tilt: 24 V AC/110 V AC/220 V AC
- Dimension (L x W x H): 195 mm x 150 mm x 43 mm
- Weight: 16.4 Kg

Accessories

Adapter

0691-00001-000

0691-00002-000

0691-00005-000

0691-00006-000

0691-00007-000

0691-00008-000

Model No.	Description
0691-00001-000	Adapter for CAM-5100 / CAM-5120, 12 V Load 0.1 A ~ 1.5 A, 120 mV (USA/Japan)
0691-00002-000	Adapter for CAM-5100 / CAM-5120, 12 V Load 0.1 A ~ 1.5 A, 120 mV (Europe)
0691-00003-000	Adapter for CAM-5100 / CAM-5120, 12 V Load 0.1 A ~ 1.5 A, 120 mV (U.K.)
0691-00004-000	Adapter for CAM-5100 / CAM-5120, 12 V Load 0.1 A ~ 1.5 A, 120 mV (China)
0691-00025-000	Adapter for CAM-5100 / CAM-5120, 12 V Load 0.1 A~1.5 A, 120 mV (Australia)
0691-00005-000	Adapter for SED-2100, 12 V Load 0.1 A ~ 1.5 A, 120 mV (USA/Japan)
0691-00006-000	Adapter for SED-2100, 12 V Load 0.1 A ~ 1.5 A, 120 mV (Europe)
0691-00007-000	Adapter for SED-2100, 12 V Load 0.1 A ~ 1.5 A, 120 mV (U.K.)
0691-00008-000	Adapter for SED-2100, 12 V Load 0.1 A ~ 1.5 A, 120 mV (China)
0691-00024-000	Adapter for SED-2100, 12 V Load 0.1 A~1.5 A, 120 mV (Australia)
0691-00020-002	Adapter for SED-3200, 12 V Load 0.1 A~1.5 A, 120 mV (USA/Japan)
0691-00021-002	Adapter for SED-3200, 12 V Load 0.1 A~1.5 A, 120 mV (Europe)
0691-00022-002	Adapter for SED-3200, 12 V Load 0.1 A~1.5 A, 120 mV (UK)
0691-00023-002	Adapter for SED-3200, 12 V Load 0.1 A~1.5 A, 120 mV (China)
0691-00024-002	Adapter for SED-3200, 12 V Load 0.1 A~1.5 A, 120 mV (Australia)
0691-00020-003	Adapter for SED-2300Q, 12 V Load 0.1 A~1.5 A, 120 mV (USA/Japan)
0691-00021-003	Adapter for SED-2300Q, 12 V Load 0.1 A~1.5 A, 120 mV (Europe)
0691-00022-003	Adapter for SED-2300Q, 12 V Load 0.1 A~1.5 A, 120 mV (UK)
0691-00023-003	Adapter for SED-2300Q, 12 V Load 0.1 A~1.5 A, 120 mV (China)
0691-00024-003	Adapter for SED-2300Q, 12 V Load 0.1 A~1.5 A, 120 mV (Australia)

CCTV Lens

0690-00002-000

0690-00003-000

0690-00004-000

Model No.	Focus (mm)	Aperture (F)	Mount	Format	Angle of View (Horizontal)		M.O.D. (M)	Remark	Support Devices
					1/2"	1/3"			
0690-00002-000	3.0-8	1.0	CS	1/3"	-	-	-	Auto DC Iris	CAM-5100 / CAM-5200
0690-00003-000	6.0-18.0	1.2	CS	1/3"	-	45°-16°	0.1	Auto DC Iris	CAM-5100 / CAM-5200
0690-00004-000	5.0-55	1.4	CS	1/3"	-	61°-5°	0.15	Auto DC Iris	CAM-5100 / CAM-5200
0690-00012-000	3.0-8.5	1.0	CS	1/3"	-	90.5°-33.6°	-	IR DC Auto Iris	CAM-5120
0690-00013-000	7.5-50	1.3	CS	1/3"	-	27.5°-20.4°	-	IR DC	CAM-5120

SDK-2000

ACTi SDK-2000

- Easy to integrate into video surveillance application
- Simple calls to support preview/record/playback
- Visual C, C++, Visual BASIC and JavaScript supported
- Sample codes included
- C Library edition
- ActiveX Control edition
- URL Command edition
- May decode with XViD, FFMPEG

Versatile support on industry-standard programming languages

ACTi SDK-2000 offers a complete set of function calls to enable quick cost-effective development of IP surveillance application under various developing environment such as Windows API, COM+, AciveX Control and URL command. User may implement video surveillance system using Visual C++, Visual BASIC and Browser Script programming language (HTML + JavaScript). Sample codes (in Visual C++, Visual BASIC and HTML + Java Script) are included. User may use XViD, FFMPEG or other ISO-14496-2 compliant MPEG-4 software decoder to decode ACTi's MPEG-4 raw data stream.

Software modules

ACTi Streaming SDK modules include User Interface, Media, PTZ, Network, Video Motion Detection and Digital I/O modules. User may program with these modules through supported programming languages.

Decodes with Xvid, FFMPEG

Developers may get MPEG-4 raw stream with a simple function, then decodes with XViD, FFMPEG or other MPEG-4 compliant software decoders. Users may manipulate these MPEG-4 raw data by themselves, or decode them into RGB buffer and process them as a series of pictures, in this way, you can treat the decoded RGB buffer as if they are MJPEG streams. Sample codes are included.

Sample implementation codes

To implement a video surveillance system with ActiveX Control, the codes is listed as follow:

```
;; preview
objMedia.MediaSource = "192.168.1.1"
objMedia.Account = "root"
objMedia.Password = "password"
objMedia.Play()
```

```
;; recording
objMedia.Record("C:\\TEST.AVI")
;; playback
objMedia.MediaSource = "C:\\TEST.AVI"
objMedia.Play()
```

PRODUCT SPECIFICATION

Development Environment	
Environment	Win 2000, Win XP, Win 2003
Programming Language	Visual C++ v6.0, Visual Studio.Net, Visual Studio.Net 2003, Visual BASIC v6.0, Visual BASIC.Net, HTML + JavaScript
Functionality	
Live Preview	Streaming and decode MPEG-4 information
Recording	Background recording, alarm recording, pre-event and post-event recording
Playback	MPEG-4 decoding and display
Motion Detection	Callback function supported when a motion detected
Digital I/O Event	Callback function supported when a digital input is triggered
Serial Port Function	Sends serial port command
PTZ Function	Pelco-P and Pelco-D protocol sample code included
MPEG-4 Streaming Management	Callback function to get MPEG-4 raw data directly
Standard MPEG-4 Decoding	User may decodes ACTi's MPEG-4 raw data using FFMPEG, XVid or other standard ISO-14496 compliant MPEG-4 software decoder libraries.
MJPEG Function Calls	Provides function calls to convert ACTi's MPEG-4 stream to a series of RGB buffer.

SDK-3000

ACTi SDK-3000

- Easy to integrate into video surveillance application
- Simple calls to link video server and decoding
- Visual C, C++, Visual BASIC and JavaScript Supported
- Sample codes included
- C Library edition
- ActiveX Control edition
- URL Command edition

Versatile support on industry-standard programming languages

ACTi SDK-3000 offers a simple but flexible way to enable quick and cost-effective development of Transcoder management functions with various development environments, such as Windows API, COM+, ActiveX Control and URL commands. User may implement video surveillance system using Visual C++, Visual BASIC and browser script programming language (HTML + JavaScript). Sample codes (in Visual C++, Visual BASIC and HTML + JavaScript) are included.

Software modules

ACTi Streaming SDK modules include Search, Manage, Add and Delete modules. User may program with these modules through supported programming languages

Sample implementation codes

To implement a video surveillance system with ActiveX Control, the codes are listed as follow:

```
;; link video server
objMedia.DirectConnect(  “192.168.1.100”, “root”, “password”, “10060” )
;; play on the transcoder
objMedia.DirectPlay( “192.168.1.1”, “Guest”, “Guest”, 99 )
```

PRODUCT SPECIFICATION

Development Environment	
Environment	Win 2000, Win XP, Win 2003
Programming Language	Visual C++ v6.0, Visual Studio.Net, Visual Studio.Net 2003, Visual BASIC v6.0, Visual BASIC.Net, HTML + JavaScript
Functionality	
Add Media Source	Link transcoder with video server or other media source on the network
Delete Media Source	Remove the link between transcoder and the media source
Digital I/O Event	Handles digital I/O events
Serial Port Function	Handles serial port command passed from media source on the network
OSD Function	Manage and display OSD information

SDK-4000

ACTi SDK-4000

- Easy to integrate into video surveillance application
- Simple calls to implement DVR functions
- Visual C, C++, Visual BASIC and JavaScript Supported
- Sample codes included
- C Library edition
- ActiveX Control edition
- Supports GraphEdit and DirectShow Filter
- May decode with XviD, FFMPEG

Versatile support on industry-standard programming languages

ACTi SDK-4000 offers a simple but flexible way to enable quick and cost-effective development of capture card management functions with various development environments, such as Windows API, COM+, ActiveX Control and URL commands. User may implement video surveillance system using Visual C++, Visual BASIC and browser script programming language (HTML + JavaScript). Sample codes (in Visual C++, Visual BASIC and HTML + JavaScript) are included. User may use XViD, FFMPEG or other ISO-14496-2 compliant MPEG-4 software decoder to decode ACTi's MPEG-4 raw data stream.

Software modules

ACTi Streaming SDK modules include User Interface, Media, PTZ, Network, Video Motion Detection and Digital I/O modules. User may program with these modules through supported programming.

Decodes with Xvid, FFMPEG

Developers may get MPEG-4 raw stream with a simple function, then decodes with XViD, FFMPEG or other MPEG-4 compliant software decoders. Users may manipulate these MPEG-4 raw data by themselves, or decode them into RGB buffer and process them as a series of pictures, in this way, you can treat the decoded RGB buffer as if they are MJPEG streams. Sample codes are included.

Sample implementation codes

To implement a video surveillance system with ActiveX Control, the codes is listed as follow:

```
;; preview on board 1, channel 1
objMedia.MediaSource = "1"
objMedia.Account = "root"
objMedia.Password = "password"
objMedia.Play()
```

```
;; recording
objMedia.Record("C:\\TEST.AVI")
;; playback
objMedia.MediaSource = "C:\\TEST.AVI"
objMedia.Play()
```

PRODUCT SPECIFICATION

Development Environment	
Environment	Win 2000, Win XP, Win 2003
Programming Language	Visual C++ v6.0, Visual Studio.Net, Visual Studio.Net 2003, Visual BASIC v6.0, Visual BASIC.Net, HTML + JavaScript
Functionality	
Live Preview	Streaming and decode MPEG-4 information
Recording	Background recording, alarm recording, pre-event and post-event recording
Playback	MPEG-4 decoding and display
Motion Detection	Callback function supported when a motion detected
Digital I/O Event	Callback function supported when a digital input is triggered
Serial Port Function	Sends serial port command
PTZ Function	Pelco-P and Pelco-D protocol sample code included
Standard MPEG-4 Decoding	User may decodes ACTi's MPEG-4 raw data using FFMPEG, XVid or other standard ISO-14496 compliant MPEG-4 software decoder libraries.
MJPEG Function Calls	Provides function calls to convert ACTi's MPEG-4 stream to a series of RGB buffer.

SDK-5000

ACTi SDK-5000

- Easy to integrate into video surveillance application
- Simple calls to link video server and decoding
- Visual C, C++, Visual BASIC and JavaScript Supported
- Sample codes included
- C Library edition
- ActiveX Control edition
- URL Command edition

Versatile support on industry-standard programming languages

ACTi SDK-5000 offers a simple but flexible way to enable quick and cost-effective development of Transcoder management functions with various development environments, such as Windows API, COM+, ActiveX Control and URL commands. User may implement video surveillance system using Visual C++, Visual BASIC and browser script programming language (HTML + JavaScript). Sample codes (in Visual C++, Visual BASIC and HTML + JavaScript) are included.

Software modules

ACTi Streaming SDK modules include Search, Manage, Add and Delete modules. User may program with these modules through supported programming languages

Sample implementation codes

To implement a video surveillance system with ActiveX Control, the codes are listed as follow:

```
;; link video server
objMedia.DirectConnect( “192.168.1.100”, “root”, “password”, “10060” )
;; play on the decoder board
objMedia.Play()
```

PRODUCT SPECIFICATION

Development Environment	
Environment	Win 2000, Win XP, Win 2003
Programming Language	Visual C++ v6.0, Visual Studio.Net, Visual Studio.Net 2003, Visual BASIC v6.0, Visual BASIC.Net, HTML + JavaScript
Functionality	
Add Media Source	Link decoder card with video server or other media source on the network
Delete Media Source	Remove the link between decoder card and the media source
OSD Function	Manage and display OSD information

SDK-6000

ACTi SDK-6000

- Easy to integrate into video surveillance application
- Simple calls to implement multiplexing and motion detection functions
- Visual C, C++, Visual BASIC and JavaScript Supported
- Sample codes included
- C Library edition
- ActiveX Control edition

Versatile support on industry-standard programming languages

ACTi Streaming SDK offers a simple but flexible way to enable quick and cost-effective development of Transcoder management functions with various development environments, such as Windows API, COM+, ActiveX Control and URL commands. User may implement video surveillance system using Visual C++, Visual BASIC and browser script programming language (HTML + JavaScript). Sample codes (in Visual C++, Visual BASIC and HTML + JavaScript) are included.

Software modules

ACTi SDK-6000 include multiplexing and motion detection modules. User may program with these modules through supported programming languages.

Sample implementation codes

To implement a video surveillance system with ActiveX Control, the codes are listed as follow:

```
;; multiplexing on 4-window, 9-window
objMedia.DisplayMode = 4 ; 4-window layout
objMedia.SetMappingChannel(1, 1)
objMedia.SetMappingChannel(2, 2)
objMedia.Connect()
objMedia.Play()
```

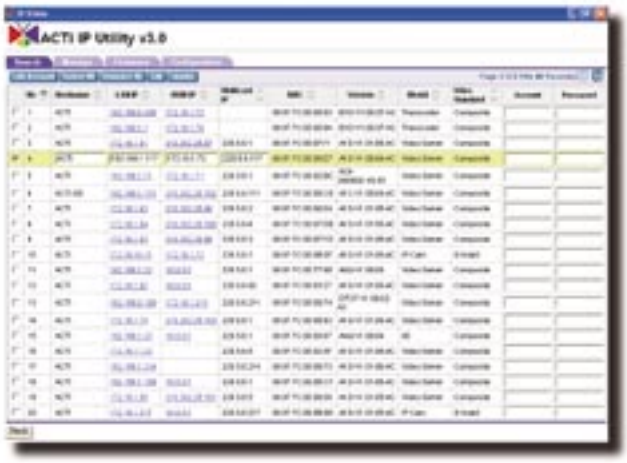
```
;; motion detection enabling
;; on channel 1, grid (3, 5) to (6, 8)
;; with sensitivity 80
objMedia.EnableMD(1, 3, 5, 6, 8, 80)
```

PRODUCT SPECIFICATION

Development Environment	
Environment	Win 2000, Win XP, Win 2003
Programming Language	Visual C++ v6.0, Visual Studio.Net, Visual Studio.Net 2003, Visual BASIC v6.0, Visual BASIC.Net, HTML + JavaScript
Functionality	
Multiplexing	Supports various mode of window layout, including 1, 4, 6, 7, 9, 10, 13, 16 window layout
Motion Detection	Enable motion detection

IP Utility v3.0

IP Network Utility And Management Tool



- Search and locate ACTi IP Surveillance products
- Search and report firmware version of the IP devices on the network
- Manages IP devices on-the-fly
- Upgrade firmware to multiple devices at the same time
- Update configuration to multiple devices at the same time

Search and locate IP devices on the network

ACTi IP utility searches and locates ACTi's IP devices on the network, including video server, Transcoder IP camera and IP speed dome.

This utility is useful when the administrator forgets the IP address assigned; it also reports all camera names, LAN IP address, WAN IP address, Multicast IP address, MAC address, device type and firmware version of the devices on the network.

Manage IP devices on the network

Administrator may manage IP devices on the network on following functions:
- Modify device name
- Modify LAN/WAN IP address
- Modify multicast setting

Global firmware upgrades

Manages multiple devices at the same time:
- Upgrade firmware to multiple devices
- Update configuration to multiple devices

PRODUCT SPECIFICATION

Supported IP Devices	
Video Server	SED-2000 video server series
Transcoder	SED-3000 Transcoder series
IP Camera	CAM-5000 IP Camera Series
IP Speed Dome	CAM-6000 IP Speed Dome Series
IP Dome	CAM-7000 IP Dome series
Search and Locate IP Devices	
Name	Camera Name
LAN IP	LAN IP address
WAN IP	WAN IP address
Multicast IP	Multicast IP address
MAC	MAC address
Type	IP Device Type
Firmware	Firmware version
Manage IP Devices	
Device Name	Modify device name
Network Setting	Modify LAN / WAN / Multicast IP address
Global Updates	
Firmware Upgrade	Upgrade firmware to multiple devices at the same time
Configuration Updates	Update configuration to multiple devices at the same time

Explorer v1.0

ACTi Streaming Explorer v1.0

- Web-enabled application under Microsoft Internet Explorer
- Live video display
- Support PTZ operations
- Support multiple PTZ protocols
- Speed Dome Configuration
- Web OSD Configuration

Web-enabled application

ACTi Streaming Explorer is a web-enabled application running under Microsoft Internet Explorer.

PTZ protocols supported

ACTi Streaming Explorer supports PTZ protocols of ACTi CAM-5000 (IP Camera), CAM-6000 (IP Speed Dome) and CAM-7000 (IP Dome) series products. This products also comes with multiple PTZ protocols, including Pelco-P, Pelco-D, Lilin, Dynacolor, TOA, Kampro, etc.

User may add new PTZ protocols by themselves or download latest PTZ protocols from ACTi web site

Web OSD function

With ACTi Streaming Explorer, user may further configure ACTi IP Camera, IP Dome, IP Speed Dome OSD functions, including OSD, Patrol, Preset Position, Pattern, Mask, etc.

PRODUCT SPECIFICATION

Functionalities	
Format	ActiveX Control
Authentication	Certified by Verisign
Capture Screenshot	Capture screenshot on the fly
PTZ Protocols Supported	
Supported Protocols	Pelco-P, Pelco-D, Lilin, Dynacolor, TOA, Kampro, Eyeview, VideoTrec
Supported Devices	ACTi CAM-5000 Series, CAM-6000, CAM-7000 Series
Expandible PTZ Commands	User may create the PTZ commands themselves or download new PTZ protocols from ACTi web site

Web OSD Configuration	
OSD	On-screen display function. User may use this button to do all kinds of configuration in supported IP camera, IP dome and IP speed dome.
Preset	Setup preset position
Preset Tour	Configure and operate a preset tour
Pattern Tour	Configure and operate a pattern tour
Auto Scan	Perform and operate an auto scan
Day-n-night Switch	Quick button to configure day and night switch

Activator

IP Edition

Bundled Application
ACTi Streaming Activator - IP Edition

- Manages up to 16 cameras
- Supports 1, 4, 6, 8, 9, 10, 16 preview window layout
- Customizable logo and user interface
- Preview / Record / Playback functions
- Create snapshot images and export video clips
- Background / Recycle / Schedule recordings
- Hardware motion detection
- Digital I/O event handling
- Maximum 30 seconds pre-event recording
- Expandible PTZ commands
- Search video clips by date, time and event

Digital video surveillance functions

ACTi Streaming Activator manages 16 cameras at the same time and supports various type of preview window layout with patrol operation. Each camera can record Full D1 with 30 FPS (NTSC) or 25 FPS (PAL) simultaneously.

User may use background recording, schedule recording or manual recording according to their deployment plan. Recycle recording cleans older files when a hard disk capacity threshold reached.

Video clips can be searched with date, time and event index; users may operate these video clips with play, pause, stop, reverse play, fast forward, fast rewind and frame-by-frame functions in an user-friendly interface.

Expandible PTZ command

ACTi Streaming Activator supports various PTZ protocols, including Pelco-P, Pelco-D, Lilin, Dynacolor, TOA, Kampro, EyeView, VideoTrec, etc.

User may add new PTZ protocols by themselves or download the PTZ protocols from ACTi web site.

Hardware motion detection and digital I/O control

Hardware and regional motion detection is supported and can be set for individual cameras. It will be triggered when a motion detection event occurs.

Digital I/O functions can get or set for external devices or sensors. A callback function will be triggered when a digital I/O event occurs.

Maximum 30 seconds pre-event recording time can be set prior to a motion-detection or digital I/O event occurs.

Customizable user interface – create your own Streaming Activator

ACTi Streaming Activator provides several ways for users to customize and create their own application.

User may change logo, title bar, about us dialog box and icon; furthermore, the color scheme, look and feel, layout and event can be customized.

Client Application

Activator IP Edition

PRODUCT SPECIFICATION

Bundled Application Environment	
Operating System	Win 2000, Win XP, Win 2003
Prerequisite	Microsoft DirectX v9.0c FFDShow
Browser	Microsoft Internet Explorer v6.0+
Preview	
Maximum Number of Camera	16
Preview Window	1, 4, 6, 8, 9, 10, 16
Web Client	Microsoft Internet Explorer v6.0 remote video preview
Patrol Mode	Switches and rotates each preview window accordingly
Create Snapshots	Create snapshot images on-the-fly and as an event index for search later on
Advanced Preview Mode	16-channel preview at the same time with different frame rate adjusted automatically
Recording	
Manual Recording	Start and stop manually
Repeat Recording	Record video repeatedly and erase aged video files with user-defined maximum video file size.
Schedule Recording	Record video with user-defined schedule and time period
Digital I/O Event Recording	Record video when an event is triggered
Motion Detection Recording	Record video when motion detected
Pre-event Recording	User-defined time period to record before a certain event occurs. Maximum 30 seconds.
Post-event Recording	User-defined time period to record after a certain event occurs.
Watermark *	Digital time code embedded from hardware
Playback	
Mode	Play, Pause, Stop, Fast Forward, Fast Rewind
Advanced Mode	Play backward, frame-by-frame display
Multiple-window Playback	Multiple channel playback at the same time
Play Multiple Files *	Play multiple files in sequence for a period of time
Create Snapshots	Create snapshot images on-the-fly and can be searched as an event
Export Video *	Export multiple video files in one AVI file.
Synchronous Playback *	4-channel synchronous playback at the same time

Search	
Time Sequence Search	Search video clips with date, time
Digital I/O Event Search	Search video clips with digital I/O events
Motion Detection Event Search	Search video clips with motion detection events
Thumbnail Image Search	Search video clips with thumbnail image previews
Video Loss Event Search	Search video clips with video lost events
Digital I/O Control	
Digital I/O Control	Callback functions to handle digital input and digital output
PTZ Control	
PTZ Management	Manages pan, tilt, zoom operation with speed control
Protocol Supported	Pelco-P, Pelco-D protocol supported
Preset Position	Goto, set, clear preset positions
Maximum Preset Position Number	8
Expandable PTZ Command	User-defined PTZ command to support additional PTZ protocols
Event Handling	
Trigger Digital Output	Triggers digital output when a certain event (digital I/O or motion detection) occurs
Activate and Enlarge Preview Window	Activate and enlarge preview window with the event triggered.
Event Log *	Triggered event will be recorded into a event log
Regional Motion Detection Event	Advanced motion detection with 3 user-defined region for monitoring
E-Mail Notification	E-Mail notification with captured image
Video Lost Event	Video lost event handling
eMap *	
eMap Manager *	eMap configuration and management
eMap Monitor *	Creates alarm when an event occurs on a certain camera in eMap
Permission Control	
3-level Permission	Administrator, Standard User, Guest levels
Security	Account/password defined with associated permission control

* The features will be implemented in later released bundled application

Hybrid nDVR

Application Software
ACTi Hybrid nDVR - nDVR + IP Edition

Preliminary

- Hybrid solution to support analog and IP cameras
- Manage up to 25 cameras (16 analog + 9 IP)
- Supports 1, 4, 9, 16, 25 preview windows
- Client-server infrastructure
- eMap management
- Advanced remote monitoring
- Scalable to enterprise-level manageability

All-in-one surveillance solution

Traditional surveillance systems that include independent video monitoring, anti-intrusion, fire alarm, and entrance control systems, are subject to poor performance and high maintenance costs. ACTi Hybrid nDVR breaks all these limitations and provides a seamless integration for diverse surveillance devices.

Advanced remote monitoring

ACTi Hybrid nDVR gives you full access to your cameras and security devices through web-based user interface. You can control PTZ (Pan/Tilt/Zoom) cameras and security devices such as alarms, lights and door locks etc. through the internet. Motion detected intrusion and alarm notifications to emails and phones are also available.

Hybrid solution to support analog and digital cameras

ACTi Hybrid nDVR supports both analog cameras and digital cameras. The hybrid solution provides a migration path to leverage your existing investment as well as to upgrade it to a new generation IP surveillance solution.

Scalable to Enterprise-level manageability

ACTi Hybrid nDVR works independently. Multiple ACTi Hybrid nDVR's can be integrated through ACTi Hybrid nDVR Server system. With the system's cascaded management technology, you have the full flexibility to fulfill your strategic surveillance requirements by integrating multiple stations supporting the number of surveillance devices that you need.

Hybrid nDVR

PRODUCT SPECIFICATION

System Infrastructure		
Server-client	1 server + unlimited clients	
Video Input		
Analog Camera	16 channels	
IP Camera	Maximum 9 channels	
Video Processing		
Compression	MPEG-4 ASP hardware compression	
Resolution	Full D1 720 x 480 in NTSC Full D1 720 x 576 in PAL	
Max Frame Rate	30fps at Full D1 resolution(NTSC) 25fps at Full D1 resolution(PAL)	
Frame Rate	Preview	• 30/25 fps at full screen and 4 split screen • 1fps at 9, 16, 25 split screen
	Recording	30/25 fps for each channel
	Playback	30/25 fps for each channel
Administration Management		
User Management	Add user	
	Group configuration	
eMap	Add area	
	eMap uploading	
Camera Setting	Basic setting	
	Image quality	
	Image rotation	
	Motion detection schedule recording	
	Alarm breach (alarm chain reaction)	
	Allocate to eMap	
	Edit video gateway	
	Edit IP camera	
System Management	E-Mail notification	
	SMS notification	
	DNS setting	
	Schedule recording	
	Repeat recording	
	Camera patrol	
	System breach (alarm chain reaction)	

Monitoring	
Preview Window	1, 4, 9, 16, 25
PTZ Control	Zoom
	Auto pan/tilt
	Auto patrol
	Preset position
Local Recording Management	Local recording
	Local playback
Alarm Management	Alarm log
	Alarm query
	Alarm playback
	Alarm On/Off
	eMap popup
Server Playback	Yes
Relay	On/Off
IE Browsing	Yes

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