



MPEG-4 IP Surveillance

2006 Buyer's Guide

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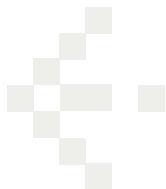


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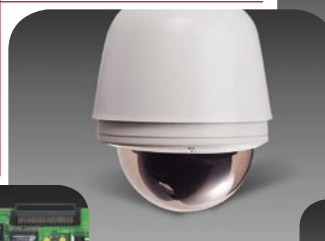
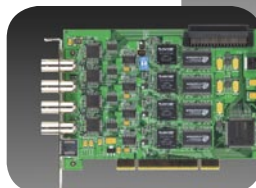
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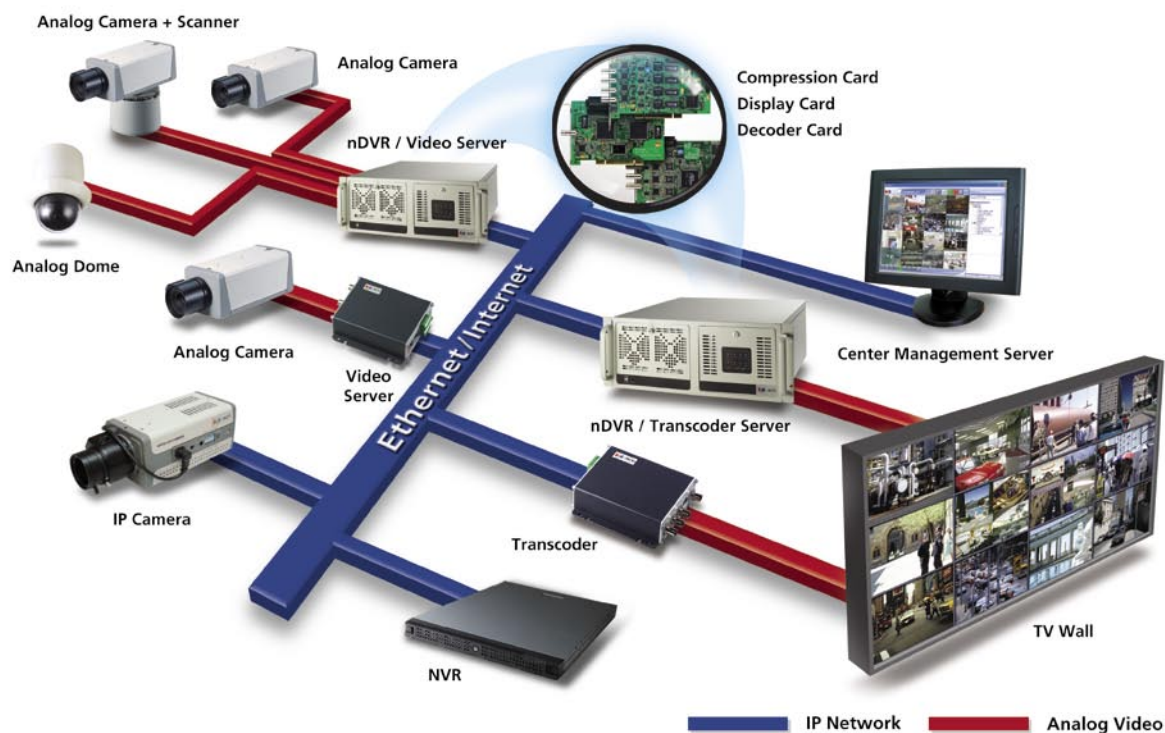
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Solution Template

Converged IP Surveillance Solution

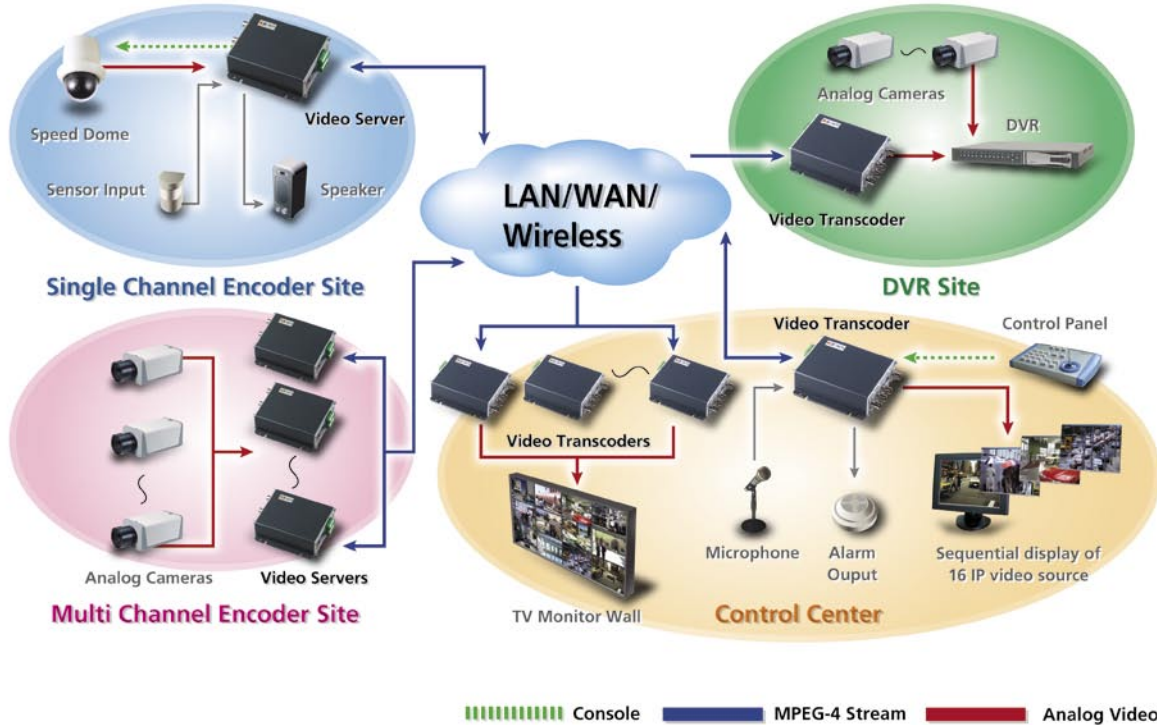


Best MPEG-4 IP Surveillance Solution

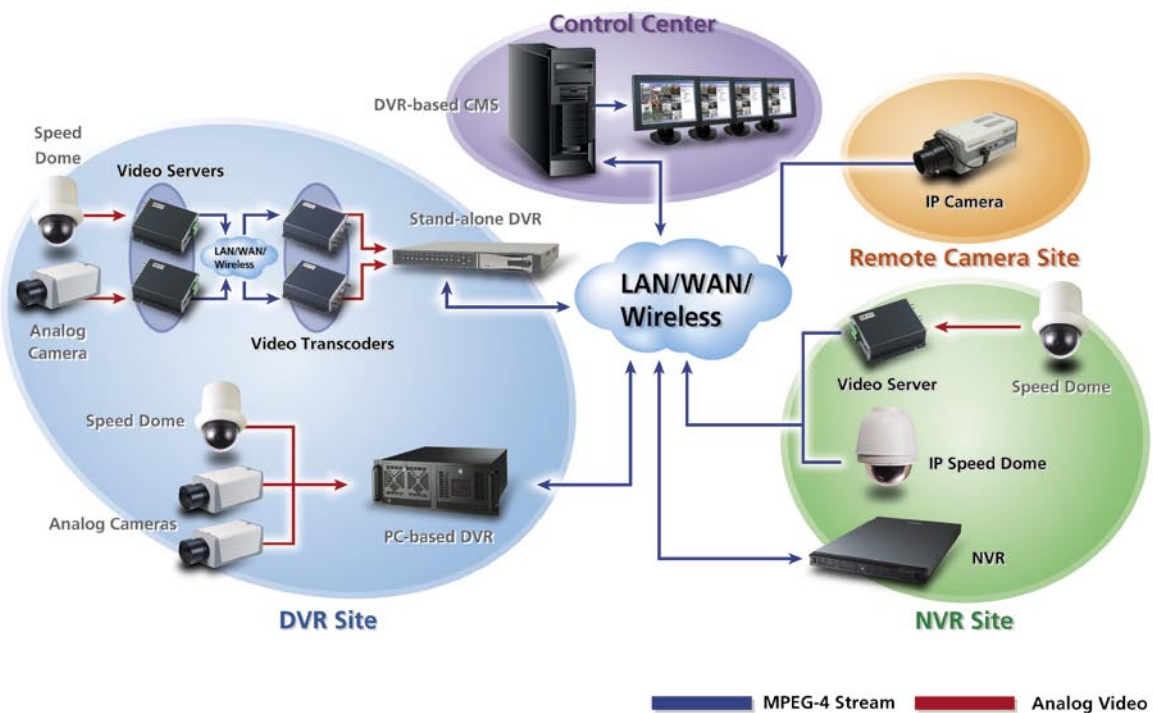


Solution Template

Hybrid Solution -- CCTV + IP



Hybrid Solution -- nDVR + IP



IP Box Camera



IP Indoor/Outdoor Box Camera

Model name		CAM-5200 Series	CAM-5220 Series	CAM-5300 Series	CAM-5320 Series	CAM-5400 series	CAM-5420 series
Type		IP indoor* camera with audio	IP indoor* D/N camera with audio	IP indoor* camera	IP indoor* D/N camera	IP indoor* camera with audio and 540 TVL	IP indoor* D/N camera with audio and 540 TVL
Compression		MPEG-4 ASP	MPEG-4 ASP	MPEG-4 ASP	MPEG-4 ASP	MPEG-4 ASP	MPEG-4 ASP
Multi-stream		Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording
FPS (NTSC/PAL)		30/25	30/25	30/25	30/25	30/25	30/25
Max. Video Resolution		720 x 480 (NTSC) 720 x 576 (PAL)	720 x 480 (NTSC) 720 x 576 (PAL)	720 x 480 (NTSC) 720 x 576 (PAL)	720 x 480 (NTSC) 720 x 576 (PAL)	720 x 480 (NTSC) 720 x 576 (PAL)	720 x 480 (NTSC) 720 x 576 (PAL)
Bit Rate		28 K ~ 3 M bps	28 K ~ 3 M bps	28 K ~ 3 M bps	28 K ~ 3 M bps	28 K ~ 3 M bps	28 K ~ 3 M bps
Image Sensor		1/3" SuperHAD	1/3" EXviewHAD	1/3" SuperHAD	1/3" EXviewHAD	1/3" SuperHAD	1/3" EXviewHAD
Horizontal Resolution		480 TVL	480 TVL	480 TVL	480 TVL	540 TVL	540 TVL
Zoom		None	None	None	None	None	None
Day/Night		None	Yes	None	Yes	None	Yes
Lens Changeable		Yes	Yes	Yes	Yes	Yes	Yes
Audio		1 way	1 way	None	None	1 way	1 way
Alarm Input/Output		1/1	1/1	1/1	1/1	1/1	1/1
Motion Detection		Yes	Yes	Yes	Yes	Yes	Yes
Min. Illumination		0.15 Lux	0.05 Lux	0.15 Lux	0.05 Lux	0.15 Lux	0.05 Lux
Analog Video Composite Output		Yes	Yes	Yes	Yes	Yes	Yes
Environmental Casing		--	--	--	--	--	--
Ethernet Networks		10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN
Failover		Yes	Yes	Yes	Yes	Yes	Yes
Protocol		TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP
Security		Password/Username protection	Password/Username protection	Password/Username protection	Password/Username protection	Password/Username protection	Password/Username protection
Power	DC 12 V	Yes (CAM-5200)	Yes (CAM-5220)	Yes (CAM-5300)	Yes (CAM-5320)	Yes (CAM-5400)	Yes (CAM-5420)
	PoE (IEEE 802.3af)	Yes (CAM-5201)	Yes (CAM-5221)	Yes (CAM-5301)	Yes (CAM-5321)	Yes (CAM-5401)	Yes (CAM-5421)
	AC 24 V	Yes (CAM-5202)	Yes (CAM-5222)	Yes (CAM-5302)	Yes (CAM-5322)	Yes (CAM-5402)	Yes (CAM-5422)

* Outdoor application requires weather-proof housing.

** Products will start to provide RTP and RTSP after September, 2006.



IP Box Camera



Preliminary



Preliminary



IP Indoor/Outdoor Box Camera

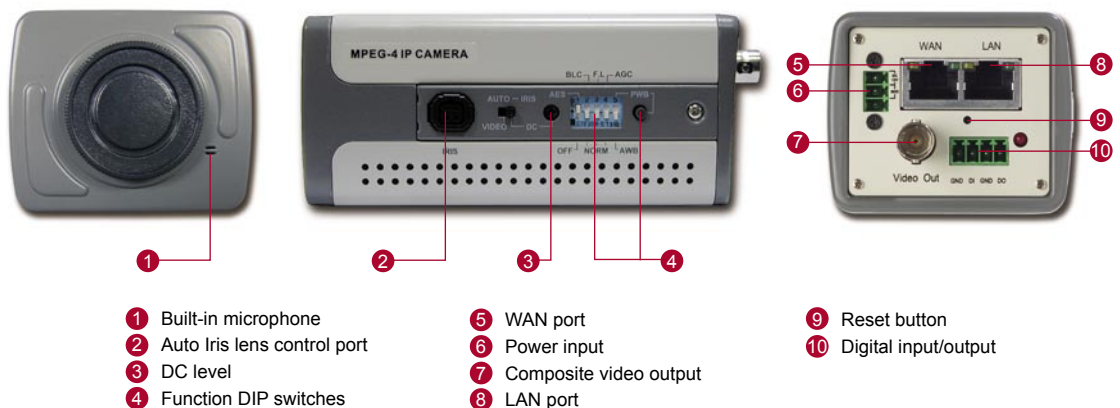
CAM-5130 series	CAM-5140 series	CAM-5150 series	CAM-5500 series	CAM-5520 series
IP indoor D/N camera with 23x zoom	IP outdoor D/N camera with 23x zoom	IP outdoor D/N camera with 23x zoom	IP indoor* camera with audio & 10x zoom	IP indoor* D/N camera with audio & 10x zoom
MPEG-4 ASP	MPEG-4 ASP	MPEG-4 ASP	MPEG-4 ASP	MPEG-4 ASP
Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording
30/25	30/25	30/25	30/25	30/25
720 x 480 (NTSC) 720 x 576 (PAL)	720 x 480 (NTSC) 720 x 576 (PAL)	720 x 480 (NTSC) 720 x 576 (PAL)	720 x 480 (NTSC) 720 x 576 (PAL)	720 x 480 (NTSC) 720 x 576 (PAL)
28 K ~ 3 M bps	28 K ~ 3 M bps	28 K ~ 3 M bps	28 K ~ 3 M bps	28 K ~ 3 M bps
1/4" SuperHAD	1/4" EXviewHAD	1/4" SuperHAD	1/3" SuperHAD	1/3" EXviewHAD
480 TVL	480 TVL	480 TVL	480 TVL	480 TVL
23x Optical; 10x Digital	23x Optical; 10x Digital	23x Optical; 10x Digital	10x Optical; 10x Digital	10x Optical; 10x Digital
Yes	Yes	Yes	None	Yes
None	None	None	None	None
None	None	None	2 way	2 way
1/1	1/1	1/1	1/1	1/1
Yes	Yes	Yes	Yes	Yes
0.01 Lux	0.002 Lux	0.01 Lux	0.15 Lux	0.01 Lux
Yes	Yes	Yes	Yes	Yes
IP-66 weatherproof casing	IP-66 weatherproof casing	IP-66 weatherproof casing	--	--
10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN
Yes	Yes	Yes	Yes	Yes
TCP, UDP, RTP**, RTSP**	TCP, UDP, RTP**, RTSP**	TCP, UDP, RTP**, RTSP**	TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP
Password/Username protection	Password/Username protection	Password/Username protection	Password/Username protection	Password/Username protection
Yes (CAM-5130)	Yes (CAM-5140)	Yes (CAM-5150)	Yes (CAM-5500)	Yes (CAM-5520)
None	None	None	Yes (CAM-5501)	Yes (CAM-5521)
Yes (CAM-5131)	Yes (CAM-5143) With heater	Yes (CAM-5153) With heater	None	None

CAM-5200 Series

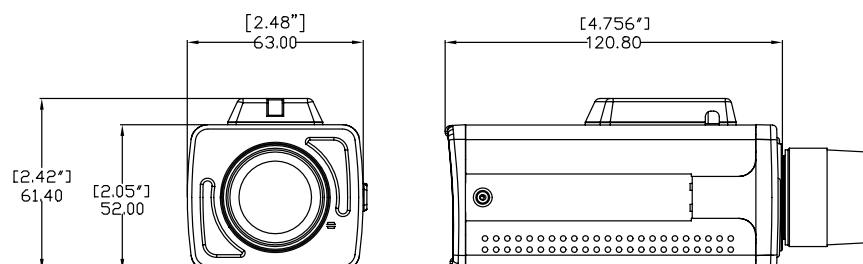


* The lens is not included.

- 1/3" SONY Super HAD / EXviewHAD with 470K/410K pixels
- Backlight Compensation, Auto Iris Control, Auto White Balance supported
- Day and night function with IR cut-filter switching mechanism (CAM-5220)
- MPEG-4 ASP compliant 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 (L3) video streaming
- One-way audio supported (built-in microphone)
- Power Over Ethernet (IEEE 802.3af) supported (CAM-5201/CAM-5221) or AC 24 V power source supported (CAM-5202/CAM-5222)



DIMENSION DIAGRAM



Unit: mm [inch]

CAM-5200 Series

PRODUCT SPECIFICATION

		CAM-5200	CAM-5220
Image	Device	Interline Transfer SONY Super HAD CCD	Interline Transfer SONY EXviewHAD CCD
	Size	1/3 inch	
	Effective Pixels (HxV)	811 x 508 (NTSC); 795 x 596 (PAL)	
	Horizontal Resolution	480 TVL / 380 TVL	480 TVL
Min. scene Illumination	Color	0.15 Lux at F1.2 (30 IRE, SAGC) (CAM-52xxH) 0.2 Lux at F1.2 (30 IRE, AGC) (CAM-52xxS)	Color mode automatically switched to B/W mode under 4 Lux
	B/W	N/A	0.05 Lux at F1.2 (30 IRE, SAGC)
	IR Sensitivity	N/A	from 700nm to 1100nm
Lens	Lens Mount	C / CS (with adaptor)	
Synchronization	Sync. System	Internal	
Day/Night Functions	Day/Night Switching	N/A	Mechanical IR Cut Filter: Auto; Colour/Monochrome
Functions	Motion Detection	Yes (3 windows)	
	Electronic Shutter	AES On: 1/60 ~ 1/100,000 sec. (NTSC); AES Off: 1/60 sec. (NTSC); AES On: 1/50 ~ 1/100,000 sec. (PAL); AES Off: 1/50 sec. (PAL)	
	BLC	On / Off (switchable)	
	AGC	On / Off (switchable)	On / Off (switchable) Turning off AGC will disable D&N function
	White Balance	AWB / PWB (switchable)	
	Flickerless	On / Off (switchable)	
	Auto Iris Control	Video / DC (switchable)	
S/N Ratio	S/N Ratio	Better than 50 dB (AGC off)	
Video (Compression)	Compression	MPEG-4 ASP compliant	
	Picture Resolution	Full D1 (720 x 480 in NTSC, 720 x 576 in PAL); CIF (352 x 240 in NTSC, 352 x 288 in PAL); QCIF (160 x 112 in NTSC, 176 x 144 in PAL)	
	Bit Rate	28 K ~ 3 M bps	
	Image Frame Rate	30 fps at full D1 resolution (NTSC); 25 fps at full D1 resolution (PAL)	
Video Output	Multi-stream	Up to 4 configurable frame rate/bit rate streams for preview and recording	
Audio Input	Composite Output	CVBS, 1.0Vp-p with 75 Ω loading, BNC connector	
	Compression	8 kHz, Mono, PCM	
Alarm	Built-in Microphone	Sensitivity : -44±5 dB (0 dB=1V/pa, 1 kHz); S/N Ratio : more than 58 dB; Directivity : omnidirectional	
External I/O	Input	1, TTL, terminal block	
	Output	1, TTL, terminal block	
Network	Reset Button	Reset button	
	LED	System status	
Software	LAN Port	Ethernet(10/100Base-T), RJ-45 connector	
	WAN Port	Ethernet(10/100Base-T), RJ-45 connector	
Operating	Protocol	TCP, UDP, IP, HTTP, DHCP, PPPoE, RTP, RTSP, FTP, SMTP	
	Web Browser	Microsoft Internet Explorer 6.0 or above	
Power	SDK	ActiveX control, C SDK	
	Security	Password Protection : configured by the administrator	
Physical	Temperature	5 °C ~ 50 °C (40 °F ~ 122 °F)	
	Power Requirement	DC 12 V ±10% (CAM-5200) PoE (IEEE802.3af) with Class 3 (CAM-5201) AC 24 V ±10% (CAM-5202)	DC12V ±10% (CAM-5220) PoE (IEEE802.3af) with Class 3 (CAM-5221) AC 24 V ±10% (CAM-5222)
Weight	Power Consumption	9 W	12 W
	Dimensions (WxHxD)	63 mm x 52 mm x 120 mm (2.48" x 2.05" x 4.76")	
Weight	Weight	450 g (0.99 lb)	

ORDERING INFORMATION

Part Number	Full D1	NTSC	PAL	480 TVL	380 TVL	DC 12 V	PoE	AC 24 V	D & N
CAM-5200HP	V		V	V		V			
CAM-5200HN	V	V		V		V			
CAM-5201HP	V		V	V			V		
CAM-5201HN	V	V		V			V		
CAM-5202HP	V		V	V				V	
CAM-5202HN	V	V		V				V	
CAM-5220HP	V		V	V		V			V
CAM-5220HN	V	V		V		V			V
CAM-5221HP	V		V	V			V		V
CAM-5221HN	V	V		V			V		V
CAM-5222HP	V		V	V				V	V
CAM-5222HN	V	V		V				V	V

ACCESSORY OPTIONS

- Lens, f3.0~8mm F1.0, CS mount, Format 1/3"
- Lens, f3.0~8.5mm F1.0, CS mount, Format 1/3"
- Camera bracket
- Outdoor housing

0690-00002-000
0690-00012-000
GL-201/GL-202
GL-606

- Lens, f5.0~55mm F1.4, CS mount, Format 1/3"
- Lens, f7.5~50mm F1.3, CS mount, Format 1/3"
- Housing bracket

0690-00004-000
0690-00013-000
GL-205N

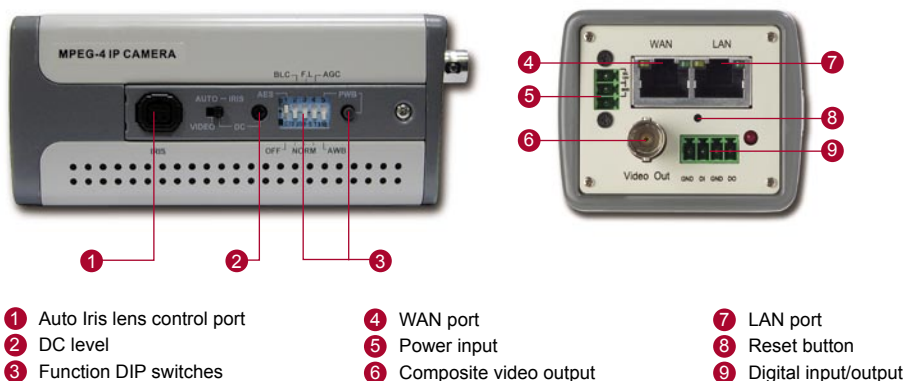
CAM-5300 Series



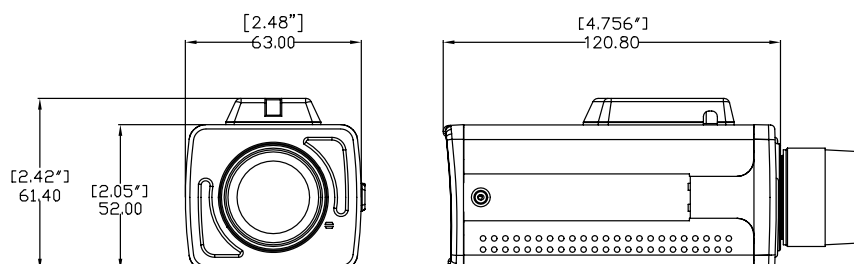
* The lens is not included.

MPEG-4 Real-time Network Streaming IP Camera

- 1/3" SONY Super HAD / EXviewHAD with 470K/410K pixels
- Backlight Compensation, Auto Iris Control, Auto White Balance supported
- Day and night function with IR cut-filter switching mechanism (CAM-5320)
- MPEG-4 ASP compliant 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 (L3) video streaming
- Power Over Ethernet (IEEE 802.3af) supported (CAM-5301/CAM-5321) or AC 24 V power source supported (CAM-5302/CAM-5322)



DIMENSION DIAGRAM



Unit: mm [inch]

CAM-5300 Series

PRODUCT SPECIFICATION

		CAM-5300	CAM-5320
Image	Device	Interline Transfer SONY Super HAD CCD	Interline Transfer SONY EXviewHAD CCD
	Size	1/3 inch	
	Effective Pixels (HxV)	811 x 508 (NTSC); 795 x 596 (PAL)	
	Horizontal Resolution	480 TVL / 380 TVL	480 TVL
Min. scene Illumination	Color	0.15 Lux at F1.2 (30 IRE, SAGC) (CAM-53xxH) 0.2 Lux at F1.2 (30 IRE, AGC) (CAM-53xxS)	Color mode automatically switched to B/W mode under 4 Lux
	B/W	N/A	0.05 Lux at F1.2 (30 IRE, SAGC)
	IR Sensitivity	N/A	from 700nm to 1100nm
Lens	Lens Mount	C / CS (with adaptor)	
Synchronization	Sync. System	Internal	
Day/Night Functions	Day/Night Switching	N/A	Mechanical IR Cut Filter: Auto; Colour/Monochrome
Functions	Motion Detection	Yes (3 windows)	
	Electronic Shutter	AES On: 1/60 ~ 1/100,000 sec. (NTSC); AES Off: 1/60 sec. (NTSC); AES On: 1/50 ~ 1/100,000 sec. (PAL); AES Off: 1/50 sec. (PAL)	
	BLC	On / Off (switchable)	
	AGC	On / Off (switchable)	On / Off (switchable) Turning off AGC will disable D&N function
	White Balance	AWB / PWB (switchable)	
	Flickerless	On / Off (switchable)	
S/N Ratio	Auto Iris Control	Video / DC (switchable)	
	S/N Ratio	Better than 50 dB (AGC off)	
Video (Compression)	Compression	MPEG-4 ASP compliant	
	Picture Resolution	Full D1 (720 x 480 in NTSC, 720 x 576 in PAL); CIF (352 x 240 in NTSC, 352 x 288 in PAL); QCIF (160 x 112 in NTSC, 176 x 144 in PAL)	
	Bit Rate	28 K ~ 3 M bps	
	Image Frame Rate	30 fps at full D1 resolution (NTSC); 25 fps at full D1 resolution (PAL)	
Video Output	Multi-stream	Up to 4 configurable frame rate/bit rate streams for preview and recording	
	Composite Output	CVBS, 1.0Vp-p with 75 Ω loading, BNC connector	
Alarm	Input	1, TTL, terminal block	
	Output	1, TTL, terminal block	
External I/O	Reset Button	Reset button	
	LED	System status	
Network	LAN Port	Ethernet(10/100Base-T), RJ-45 connector	
	WAN Port	Ethernet(10/100Base-T), RJ-45 connector	
	Protocol	TCP, UDP, IP, HTTP, DHCP, PPPoE, RTP, RTSP, FTP, SMTP	
Software	Web Browser	Microsoft Internet Explorer 6.0 or above	
	SDK	ActiveX control, C SDK	
Operating	Security	Password Protection : configured by the administrator	
	Temperature	5°C~50°C (40°F~122°F)	
Power	Power Requirement	DC 12 V $\pm$ 10% (CAM-5300) PoE (IEEE802.3af) with Class 3 (CAM-5301) AC 24 V $\pm$ 10% (CAM-5302)	DC12V $\pm$ 10% (CAM-5320) PoE (IEEE802.3af) with Class 3 (CAM-5321) AC 24 V $\pm$ 10% (CAM-5322)
	Power Consumption	9 W	12 W
	Dimensions (WxHxD)	63 mm x 52 mm x 120 mm (2.48" x 2.05" x 4.76")	
Physical	Weight	450 g (0.99 lb)	

ORDERING INFORMATION

Part Number	Full D1	CIF	NTSC	PAL	480 TVL	380 TVL	DC 12 V	PoE	AC 24 V	D & N
CAM-5300HP	V			V	V		V			
CAM-5300HN	V		V		V		V			
CAM-5300SP		V		V		V	V			
CAM-5300SN		V	V			V	V			
CAM-5301HP	V			V	V			V		
CAM-5301HN	V		V		V			V		
CAM-5302HP	V			V	V				V	
CAM-5302HN	V		V		V				V	
CAM-5320HP	V			V	V		V			V
CAM-5320HN	V		V		V		V			V
CAM-5321HP	V			V	V			V		V
CAM-5321HN	V		V		V			V		V
CAM-5322HP	V			V	V				V	V
CAM-5322HN	V		V		V				V	V

ACCESSORY OPTIONS

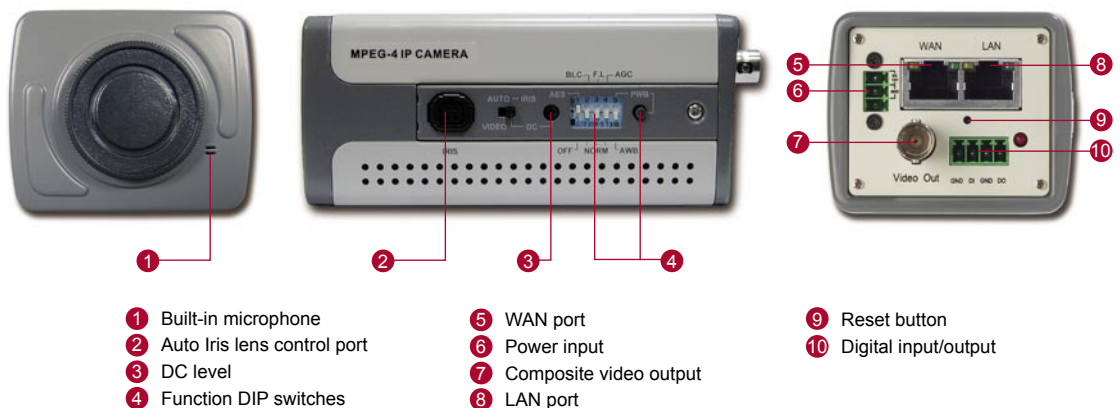
• Lens, f3.0~8mm F1.0, CS mount, Format 1/3"	0690-00002-000	• Lens, f5.0~55mm F1.4, CS mount, Format 1/3"	0690-00004-000
• Lens, f3.0~8.5mm F1.0, CS mount, Format 1/3"	0690-00012-000	• Lens, f7.5~50mm F1.3, CS mount, Format 1/3"	0690-00013-000
• Camera bracket	GL-201/GL-202	• Housing bracket	GL-205N
• Outdoor housing	GL-606		

CAM-5400 Series

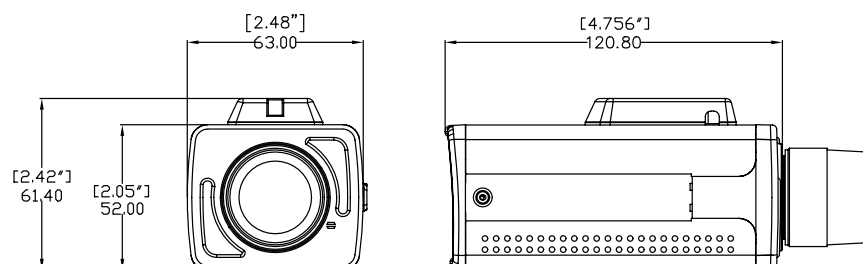
Preliminary



- 1/3" SONY Super HAD / EXviewHAD with 440K/380K pixels
- Min. 0.05 Lux at F=1.2 (30 IRE, SAGC ON)
- Backlight Compensation, Auto Iris Control, Auto White Balance supported
- Day and night function with IR cut-filter switching mechanism (CAM-5420)
- MPEG-4 ASP compliant 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 (L3) video streaming
- One-way audio supported
- Power Over Ethernet (IEEE 802.3af) supported (CAM-5401/CAM-5421) or AC 24 V power source supported (CAM-5402/5422)



DIMENSION DIAGRAM



Unit: mm [inch]

CAM-5400 Series

PRODUCT SPECIFICATION

		CAM-5400	CAM-5420
Image	Device	Interline Transfer SONY Super HAD CCD	Interline Transfer SONY EXviewHAD CCD
	Size	1/3 inch	
	Pixels - Effective	768 x 494 (NTSC); 752 x 582 (PAL)	
	Horizontal Resolution	540 TVL	
Min. Scene Illumination	Color	0.15 Lux at F1.2 (30 IRE, SAGC)	Color mode automatically switched to B/W mode under 4 Lux
	B/W	N/A	0.05 Lux at F1.2 (30 IRE, SAGC)
	IR Sensitivity	N/A	from 700nm to 1100nm
Lens	Lens Mount	C / CS (with adaptor)	
Synchronization	Sync. System	Internal	
Day/Night Functions	Day/Night Switching	N/A	Mechanical IR Cut Filter: Auto
	Motion Detection	Yes (3 Windows)	
Functions	Electronic shutter	AES On: 1/60 ~ 1/100,000 sec. (255 steps) (NTSC); 1/50 ~ 1/100,000 sec. (255 steps) (PAL); AES Off: 1/60 sec. (NTSC); 1/50 sec. (PAL)	
	BLC	On / Off (switchable)	
	AGC	On (255 steps) / Off	
	White Balance	AWB / MWB (4 Sets)	
	Flickerless	1/100 sec. (NTSC); 1/120 sec. (PAL)	
	Auto Iris Control	Video / DC (switchable)	
S/N Ratio	S/N Ratio	Better than 50 dB (AGC Off)	
	Compression	MPEG-4 ASP Compliant	
Video Compression	Picture Resolution	Full D1 (720x480 in NTSC, 720x576 in PAL); CIF (352x240 in NTSC, 352x288 in PAL); QCIF (160x112 in NTSC, 176x144 in PAL)	
	Bit Rate	28 K ~ 3 M bps	
	Image Frame Rate	30 fps at full D1 resolution (NTSC); 25 fps at full D1 resolution (PAL)	
Video Output	Multi-stream	Up to 4 configurable frame rate/bit rate streams for preview and recording	
	Composite Output	CVBS, 1.0Vp-p with 75 Ω loading, BNC connector	
Audio Input	Compression	8 kHz, Mono, PCM	
	Built-in Microphone	Sensitivity : -44 $\pm$ 5 dB (0 dB=1V/pa, 1 kHz); S/N Ratio : more than 58 dB; Directivity : omnidirectional	
Alarm	Input	1, TTL, terminal block	
	Output	1, TTL, terminal block	
External I/O	Reset Button	Factory default	
	LED	System status	
Network	LAN Port	Ethernet (10/100 Base-T), RJ-45 connector	
	WAN Port	Ethernet (10/100 Base-T), RJ-45 connector	
	Protocol	TCP, UDP, IP, HTTP, DHCP, PPPoE, RTP, RTSP, FTP, SMTP	
Software	Web Browser	Microsoft Internet Explorer 6.0 or above	
	SDK	ActiveX control, C SDK	
Operating	Security	Password protection: configured by the administrator	
	Temperature	5 ~ 50 °C (40 ~ 122 °F)	
Power	Power Requirement	DC 12 V $\pm$ 10% (CAM-5400) PoE (IEEE802.3af) with Class 3 (CAM-5401) AC 24 V $\pm$ 10% (CAM-5402)	DC 12 V $\pm$ 10% (CAM-5420) PoE (IEEE802.3af) with Class 3 (CAM-5421) AC 24 V $\pm$ 10% (CAM-5422)
	Power Consumption	9 W	
Physical	Dimensions (WxHxD)	63 mm x 52 mm x 120 mm (2.48" x 2.05" x 4.76")	
	Weight	450 g (0.99 lb)	

ORDERING INFORMATION

Model Number	NTSC	PAL	D&N	DC 12 V	DC 12 V / PoE	DC 12 V / AC 24 V
CAM-5400N	v			v		
CAM-5400P		v		v		
CAM-5401N	v				v	
CAM-5401P		v			v	
CAM-5402N	v					v
CAM-5402P		v				v
CAM-5420N	v		v	v		
CAM-5420P		v	v	v		
CAM-5421N	v		v		v	
CAM-5421P		v	v		v	
CAM-5422N	v		v			v
CAM-5422P		v	v			v

ACCESSORY OPTIONS

- Lens, f3.0~8mm F1.0, CS mount, Format 1/3"
- Lens, f3.0~8.5mm F1.0, CS mount, Format 1/3"
- Camera bracket
- Outdoor housing

0690-00002-000
0690-00012-000
GL-201/GL-202
GL-606

- Lens, f5.0~55mm F1.4, CS mount, Format 1/3"
- Lens, f7.5~50mm F1.3, CS mount, Format 1/3"
- Housing bracket

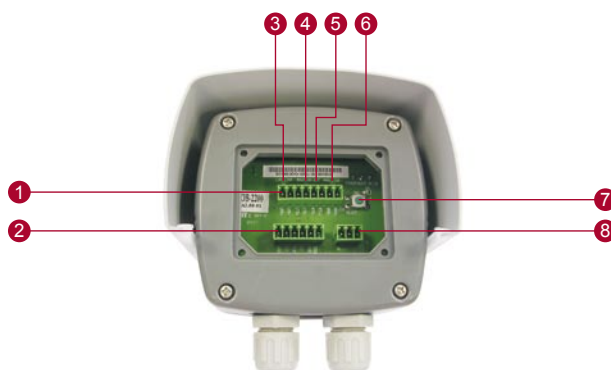
0690-00004-000
0690-00013-000
GL-205N

CAM-5130/5140/ CAM-5150 Series

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



- 1/4" SONY Super HAD / EXviewHAD CCD with 470K/410K pixels
- Built-in auto focus / auto iris / 23X optical zoom lens with 10X digital zoom
- Smart Optical Low Pass Filter (OLPF) switching mechanism
- Backlight Compensation (BLC), motion detection and masking functions
- Advanced white balance mode: ATW, AWB, MWB (level, R-Y gain, B-Y gain control)
- MPEG-4 ASP compliant 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 (L3) video streaming
- IP66 weatherproof

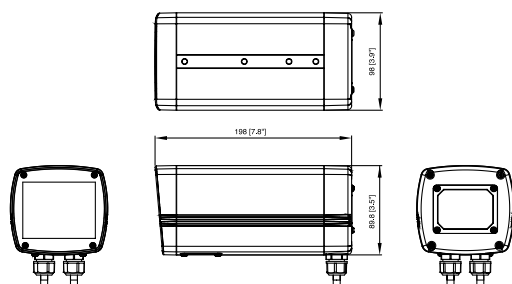


- | | |
|--------------------------------|--------------------------|
| ① LAN port & WAN port | ⑤ WAN link LED indicator |
| ② DI/O & video output | ⑥ Action LED indicator |
| ③ LAN link LED indicator | ⑦ Reset button |
| ④ LAN/WAN active LED indicator | ⑧ Power input |

DIMENSION DIAGRAM

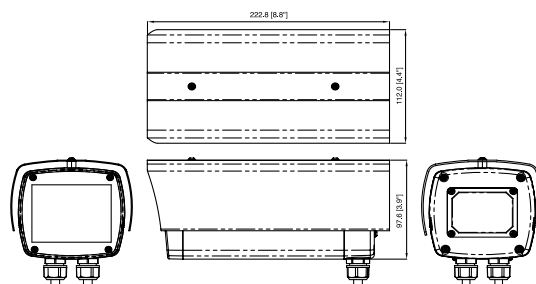
Indoor type

CAM-5130



Outdoor type

CAM-5140/CAM-5150



Unit: mm [inch]

CAM-5130/5140/5150 Series

PRODUCT SPECIFICATION

		CAM-5130	CAM-5140	CAM-5150
Image	Device	Interline Transfer SONY Super HAD CCD	Interline Transfer SONY EXviewHAD CCD	Interline Transfer SONY Super HAD CCD
	Size	1/4 inch		
	Effective Pixels (HxV)	811 x 508 (NTSC); 795 x 596 (PAL)		
	Horizontal Resolution	480 TVL		
Min. scene Illumination	Color	0.5 Lux at F1.6 (30 IRE, SAGC)	0.1 Lux at F1.6 (30 IRE, SAGC)	0.5 Lux at F1.6 (30 IRE, SAGC)
	B/W	0.1 Lux at F1.6 (30 IRE, SAGC)	0.02 Lux at F1.6 (30 IRE, SAGC)	0.1 Lux at F1.6 (30 IRE, SAGC)
		0.01 Lux at F1.6 (64x sense up, 30 IRE, SAGC)	0.002 Lux at F1.6 (64x sense up, 30 IRE, SAGC)	0.01 Lux at F1.6 (64x sense up, 30 IRE, SAGC)
	IR Sensitivity	from 700nm to 1100nm		
Lens	Focal Length	3.6 ~ 82.8 mm		
	Zoom Ratio	230x (23x optical & 10x digital zoom)		
	Aperture Ratio	F1.6 ~ 3.8		
	Sync. System	Internal		
Day/Night Functions	OLPF Removable	Internal (auto switching) / External		
	OLPF Change Level Adjustment	0.1 ~ 15 Lux adjustable	0.02 ~ 15 Lux adjustable	0.1 ~ 15 Lux adjustable
	OLPF Change Delay Time	5 ~ 8 sec.		
	Diagonal Angle	58° (W) ~ 2.8° (T)		
Functions	Zoom Speed	4.2 sec.		
	Motion Detection	Yes (48 zones, level sensitivity 10)		
	Electronic Shutter	1/60 ~ 1/100,000 sec. (NTSC); 1/50 ~ 1/100,000 sec. (PAL)		
	Fixed Shutter	1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000		
	BLC	Auto On/Off, 48 zones and weighting adjustable		
	AGC	Super AGC 0 ~ 36 dB		
	White Balance	ATW (2500°K ~ 9600°K), AWB, MWB (level, R-Y gain, B-Y gain control)		
	Camera ID	Max. 20 characters		
	Number of Privacy Zone	2		
	Digital Zoom	10x		
	Sense Up	2x ~ 64x sense up adjustable		
	Number of Preset	64 preset memory position (zoom / focus)		
	S/N Ratio	Better than 50 dB		
	Compression	MPEG-4 ASP compliant		
Video (Compression)	Picture Resolution	Full D1 (720x480 in NTSC, 720x576 in PAL); CIF (352x240 in NTSC, 352x288 in PAL); QCIF (160x112 in NTSC, 176x144 in PAL)		
	Bit Rate	28 K ~ 3 M bps		
	Image Frame Rate	30 fps at full D1 resolution (NTSC); 25 fps at full D1 resolution (PAL)		
	Multi-stream	Up to 4 configurable frame rate/bit rate streams for preview and recording		
Video Output	Composite Output	CVBS, 1.0Vp-p with 75 Ω loading, terminal block		
Alarm	Input	1, TTL, terminal block		
	Output	1, TTL, terminal block		
External I/O	Reset Button	Factory default		
	LED	System Status / Network Status		
Casing	IP66 Rated	IP-66 weatherproof casing		
	LAN Port	Ethernet(10/100 Base-T), terminal block		
Network	WAN Port	Ethernet(10/100 Base-T), terminal block		
	Protocol	TCP, UDP, IP, HTTP, DHCP, PPPoE, RTP*, RTSP*, FTP, SMTP		
Software	Web Browser	Microsoft Internet Explorer 6.0 or above		
	SDK	ActiveX Control, C SDK		
Operating	Security	Password Protection : configured by the administrator		
	Temperature	-10 ~ 50 °C (14 ~ 122 °F)		
Power	Power Requirement	DC 12 V ±10% / AC 24 V ±10%		
	Power Consumption	12 W		
Physical	Dimensions (WxHxD)	98 mm x 89.8 mm x 198 mm (3.9" x 3.5" x 7.8")	112 mm x 97.6 mm x 222.8 mm (4.4" x 3.8" x 8.8")	
	Weight	1,180 g (2.6lb)	1,280 g (2.8lb)	

* Product will start to provide RTP and RTSP after September, 2006.

ORDERING INFORMATION

Model Number	NTSC	PAL	SONY Super HAD	SONY EXviewHAD	DC 12 V	AC 24V	Heater
CAM-5130N	v		v		v		
CAM-5130P		v	v		v		
CAM-5131N	v		v			v	
CAM-5131P		v	v			v	
CAM-5140N	v			v	v		
CAM-5140P		v		v	v		
CAM-5143N	v			v		v	v
CAM-5143P		v		v		v	v
CAM-5150N	v		v		v		
CAM-5150P		v	v		v		
CAM-5153N	v		v			v	v
CAM-5153P		v	v			v	v

CAM-5500 Series

Preliminary

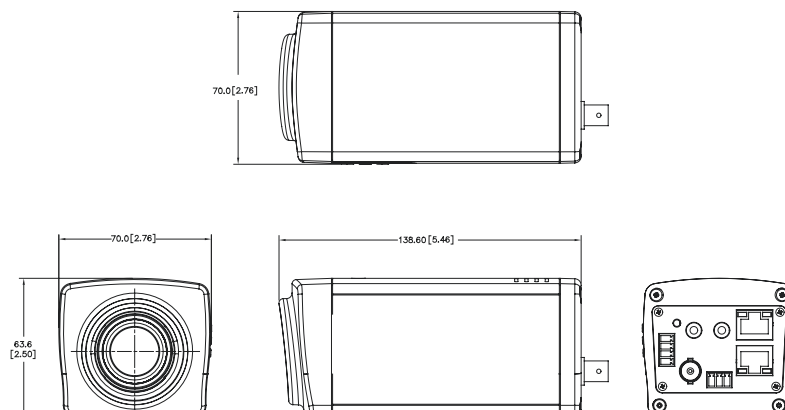


- 1/4" SONY Super HAD / EXviewHAD with 470K/410K pixels
- Built-in auto focus / auto iris / 10X optical zoom lens with 10X digital zooms
- Min. 0.01 Lux at F=1.8 (64x sense up, 30 IRE, SAGC ON)
- Backlight Compensation, Motion Detection, Masking and Auto White Balance supported
- Digital P/T/Z function
- Pictures freeze function by field or frame mode
- Auto zooming while motion detection event triggered
- MPEG-4 ASP compliant 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 (L3) video streaming
- Two-way audio supported



- | | |
|--------------------------|-----------------------|
| ① Audio input/output | ④ WAN port |
| ② Digital input/output | ⑤ LAN port |
| ③ Composite video output | ⑥ DC 12 V power input |

DIMENSION DIAGRAM



Unit: mm [inch]

CAM-5500 Series

PRODUCT SPECIFICATION

		CAM-5500	CAM-5520
Image	Device	Interline Transfer SONY Super HAD CCD	
	Size	1/4 inch	
	Effective Pixels (HxV)	811 x 508 (NTSC); 795 x 596 (PAL)	
	Horizontal Resolution	500 TVL	
Horizontal Resolution	Color	0.5 Lux at F1.8 (30 IRE, SAGC)	0.1 Lux at F1.8 (30 IRE, SAGC)
	B/W	0.1 Lux at F1.8 (30 IRE, SAGC)	0.02 Lux at F1.8 (30 IRE, SAGC)
		0.01 Lux at F1.8 (64x sense up, 30 IRE, SAGC)	0.002 Lux at F1.8 (64x sense up, 30 IRE, SAGC)
	IR Sensitivity	From 700 nm to 1100 nm	
Lens	Focal Length	4.2 ~ 42 mm	
	Zoom Ratio	100x (10x optical & 10x digital zoom)	
	Aperture Ratio	F1.8	
	Digital P/T/Z	Zoom 0~10, PAN 72° ~ -72°, Tilt 54° ~ -54°, Wide 8 ~80	
Synchronization	Sync. System	Internal / line lock	
Functions	Diagonal Angle	3.7° ~ 36° (horizontal)	
	Zoom Speed	1.6 sec.	
	Motion Detection	Yes (48 zones, level sensitivity 10)	
	Electronic Shutter	1/60 ~ 1/100,000 sec. (NTSC); 1/50 ~ 1/100,000 sec. (PAL)	
	Fixed Shutter	1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000	
	BLC	Auto ON/OFF, 48 Zones and weighting adjustable	
	AGC	Super AGC 0 ~ 24 dB	
	White Balance	ATW/AWB/Indoor/Outdoor/Manual	
	Camera ID	Max. 20 characters	
	Number of Privacy Zone	4	
	Digital Zoom	10x	
	Sense Up	2x ~ 64x sense up adjustable	
	Number of Preset	64 preset memory position (Zoom/Focus)	
S/N Ratio	S/N Ratio	Better than 50 dB	
Video (Compression)	Compression	MPEG-4 ASP compliant	
	Picture Resolution	Full D1 (720 x 480 in NTSC, 720 x 576 in PAL); CIF (352 x 240 in NTSC, 352 x 288 in PAL); QCIF (160 x 112 in NTSC, 176 x 144 in PAL)	
	Bit Rate	28 K ~ 3 M bps	
	Image Frame Rate	30 fps at full D1 resolution (NTSC); 25 fps at full D1 resolution (PAL)	
Video Output	Multi-stream	Up to 4 configurable frame rate/bit rate streams for preview and recording	
	Composite Output	CVBS, 1.0Vp-p with 75 Ω loading, BNC connector	
Audio Input	Compression	8kHz, Mono, PCM	
	Audio Line Input	Unbalanced, 1.4Vp-p, 1Vrms, 3.5 mm Jack	
Audio Output	Compression	8kHz, Mono, PCM	
	Audio Line Output	Unbalanced, 1.4Vp-p, 1Vrms, 3.5mm Jack	
Alarm	Input	1, TTL, terminal block	
	Output	1, TTL, terminal block	
External I/O	Reset Button	Factory default	
	LED	System status	
Network	LAN Port	Ethernet (10/100Base-T), RJ-45 connector	
	WAN Port	Ethernet (10/100Base-T), RJ-45 connector	
	Protocol	TCP, UDP, IP, HTTP, DHCP, PPPoE, RTP, RTSP, FTP, SMTP	
Software	Web Browser	Microsoft Internet Explorer 6.0 or above	
	SDK	ActiveX control, C SDK	
	Security	Password protection : configured by the administrator	
Operating	Temperature	5 ~ 50 °C (40 ~ 122 °F)	
Power	Power Requirement	DC 12 V ±10% (CAM-5500) PoE (IEEE802.3af) with Class 3 (CAM-5501)	DC 12 V ±10% (CAM-5520) PoE (IEEE802.3af) with Class 3 (CAM-5521)
	Power Consumption	9 W	
Physical	Dimensions (WxHxD)	70.0 mm x 63.6 mm x 138.6 mm (2.76" x 2.50" x 5.46")	
	Weight	520 g (1.2 lb)	

ORDERING INFORMATION

Model Number	NTSC	PAL	Audio	D & N	DC 12 V	DC 12 V / PoE
CAM-5500N	✓		✓		✓	
CAM-5500P		✓	✓		✓	
CAM-5501N	✓		✓			✓
CAM-5501P		✓	✓			✓
CAM-5520N	✓		✓	✓	✓	
CAM-5520P		✓	✓	✓	✓	
CAM-5521N	✓		✓	✓		✓
CAM-5521P		✓	✓	✓		✓

IP Fixed Dome



		Indoor Fixed Dome				Outdoor Fixed Dome	
Model Name		CAM-7100 Series	CAM-7120 Series	CAM-7200 Series	CAM-7220 Series	CAM-7300 Series	CAM-7320 Series
Type		IP indoor fixed dome	IP indoor D/N fixed dome	IP indoor fixed dome	IP indoor D/N fixed dome	IP outdoor fixed dome	IP outdoor fixed D/N dome
Compression		MPEG-4 ASP	MPEG-4 ASP	MPEG-4 ASP	MPEG-4 ASP	MPEG-4 ASP	MPEG-4 ASP
Multi-stream		Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording
FPS (NTSC/PAL)		30/25	30/25	30/25	30/25	30/25	30/25
Max. Video Resolution		720 x 480 (NTSC) 720 x 576 (PAL)	720 x 480 (NTSC) 720 x 576 (PAL)	720 x 480 (NTSC) 720 x 576 (PAL)	720 x 480 (NTSC) 720 x 576 (PAL)	720 x 480 (NTSC) 720 x 576 (PAL)	720 x 480 (NTSC) 720 x 576 (PAL)
Bit Rate		28 K ~ 3 M bps	28 K ~ 3 M bps	28 K ~ 3 M bps	28 K ~ 3 M bps	28 K ~ 3 M bps	28 K ~ 3 M bps
Image Sensor		1/3" Super HAD	1/3" EXviewHAD	1/3" Super HAD	1/3" EXviewHAD	1/3" Super HAD	1/3" EXviewHAD
Lens		3.5 ~ 8 mm	3.5 ~ 8 mm	3.8 ~ 9.5 mm	3.8 ~ 9.5 mm	3.8 ~ 9.5 mm	3.8 ~ 9.5 mm
Camera Angle Adjustment		X (Panning): ±180° Y (Tilting): 90° Z (Rotating): 360°	X (Panning): ±180° Y (Tilting): 90° Z (Rotating): 360°	X (Panning): ±180° Y (Tilting): 90°	X (Panning): ±180° Y (Tilting): 90°	X (Panning): ±150° Y (Tilting): 90°	X (Panning): ±150° Y (Tilting): 90°
Day/Night		None	Yes	None	Yes	None	Yes
Audio		1 way	1 way	1 way	1 way	2 way	2 way
Alarm Input/Output		1/1	1/1	1/1	1/1	1/1	1/1
Motion Detection Support		Yes	Yes	Yes	Yes	Yes	Yes
Min. Illumination		0.5 Lux	0.14 Lux	0.15 Lux	0.05 Lux	0.15 Lux	0.05 Lux
Analog Video Output		Yes	Yes	Yes	Yes	Yes	Yes
Ethernet Networks		10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN
Failover		Yes	Yes	Yes	Yes	Yes	Yes
Protocol		TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP
Casing		• Vandal proof, durability up to 702 KgF	• Vandal proof, durability up to 702 KgF	--	--	• Vandal proof, durability up to 702 KgF • IP66 weatherproof dome casing	• Vandal proof, durability up to 702 KgF • IP66 weatherproof dome casing
Mounting Options		Flush*	Flush*	Flush*/Surface/Wall	Flush*/Surface/Wall	Flush/Surface*/Wall	Flush/Surface*/Wall
Power Requirement	DC 12 V	Yes (CAM-7100)	Yes (CAM-7120)	Yes (CAM-7200)	Yes (CAM-7220)	Yes (CAM-7300)	Yes (CAM-7320)
	PoE (IEEE 802.3af)	Yes (CAM-7101)	Yes (CAM-7121)	Yes (CAM-7201)	Yes (CAM-7221)	Yes (CAM-7301)	Yes (CAM-7321)
	AC 24 V	Yes (CAM-7102)	Yes (CAM-7122)	None	None	Yes (CAM-7302)	Yes (CAM-7322)

* Flush mount is identical to in-ceiling mount.

CAM-7100 Series

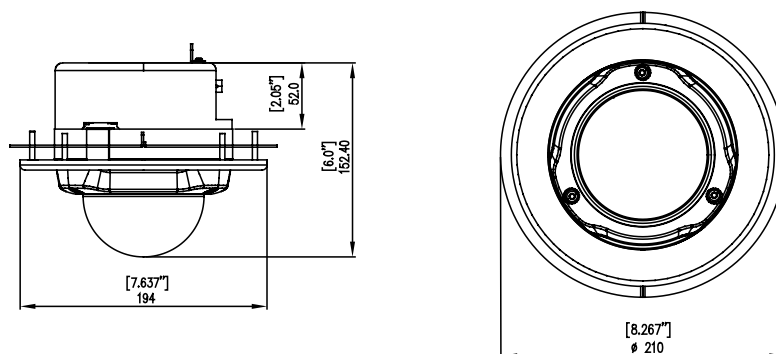


- 1/3" SONY Super HAD / EXviewHAD CCD with 440K/380K pixels
- Min. 0.14 Lux at F=1.6 (30 IRE, SAGC ON)
- Backlight Compensation, Auto Iris Control, Auto White Balance supported
- Vandal proof
- Flush mount
- MPEG-4 ASP compliant compression
- CIF up to Full D1 resolution at 30/25 FPS
- Dual MPEG-4 video stream output via LAN and WAN (PPPoE supported) ports at the same time
- QoS enabled (L3) video streaming
- One-way audio supported
- Power Over Ethernet (IEEE 802.3af) supported (CAM-7101/CAM-7121) or AC 24V power source supported (CAM-7102/CAM-7122)



- | | |
|-------------------------------|--------------------------|
| ① DC 12 V/AC 24 V power input | ④ Digital input / output |
| ② Analog video output | ⑤ LAN port |
| ③ WAN port | ⑥ Audio input |

DIMENSION DIAGRAM



Unit: mm [inch]



CAM-7100 Series

PRODUCT SPECIFICATION

		CAM-7100	CAM-7120
Image	Device	Interline Transfer SONY Super HAD CCD	Interline Transfer SONY ExviewHAD CCD
	Size	1/3 inch	
	Effective Pixels (HxV)	811 x 508 (NTSC); 795 x 596 (PAL)	
	Horizontal Resolution	480 TVL	
Min. Scene Illumination	Color	0.5 Lux at F1.2 (30 IRE, SAGC ON)	0.4 Lux at F1.6 (30 IRE, SAGC ON)
	B/W	N/A	0.14 Lux at F1.6 (30 IRE, SAGC ON)
Lens	Focal Length	3.5 ~ 8 mm	
	Lens Mount	Board lens	
Camera Angle Adjustment	X (Panning)	± 180°	
	Y (Tilting)	90°	
	Z (Rotating)	360°	
Synchronization	Sync. System	Internal / Line-lock (CAM-7102)	Internal / Line-lock (CAM-7122)
Functions	Motion Detection	Yes (3 windows)	
	Electronic Shutter	1/60 ~ 1/10,000 sec. (NTSC); 1/50 ~ 1/10,000 sec. (PAL)	
	Fixed Shutter	1/60, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10,000 sec. (NTSC) 1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10,000 sec. (PAL)	
	BLC	Auto detect ON/OFF; Histogram plus 255 area windows weight	
	AGC	Auto Gain 0 ~ 36 dB	
	White Balance	ATW (2500°K ~ 9500°K), AWB, PTL	
	Flickerless	1/100 sec. (NTSC); 1/120 ~ 1/100,000 sec. (PAL)	
	Auto iris control	1/60 sec. (NTSC); 1/50 sec. (PAL)	
	S/N Ratio	Better than 48 dB	
Video (Compression)	Compression	MPEG-4 ASP compliant	
	Picture Resolution	Full D1 (720x480 in NTSC, 720x576 in PAL); CIF (352x240 in NTSC, 352x288 in PAL); QCIF (160x112 in NTSC, 176x144 in PAL)	
	Bit Rate	28 K ~ 3 M bps	
Video Output	Multi-stream	Up to 4 configurable frame rate/bit rate streams for preview and recording	
	Composite Output	CVBS, 1.0Vp-p with 75 Ω loading, BNC connector	
Audio Input	Compression	8 kHz, Mono, PCM	
	Audio Line input	Unbalanced, 1.4 Vpp, 1Vrms, 3.5 mm Jack	
Alarm	Input	1, TTL, terminal block	
	Output	1, TTL, terminal block	
External I/O	Reset Button	Factory default	
	LED	System status	
Casing	Vandal Proof	Vandal proof supports, durability up to 702 KgF	
	Mount Types	Flush	
Network	LAN Port	Ethernet(10/100Base-T), RJ-45 connector	
	WAN Port	Ethernet(10/100Base-T), RJ-45 connector	
	Protocol	TCP, UDP, IP, HTTP, DHCP, PPPoE, RTP, RTSP, FTP, SMTP	
Software	Web Browser	Microsoft Internet Explorer 6.0 or above	
	SDK	ActiveX control, C SDK	
	Security	Password protection : configured by the administrator	
Operating	Temperature	5 ~ 50 °C (40 ~ 122 °F)	
Power	Power Requirement	DC 12 V ±10% (CAM-7100) PoE (IEEE802.3af) with Class 3 (CAM-7101) AC 24 V ±10% (CAM-7102)	DC 12 V ±10% (CAM-7120) PoE (IEEE802.3af) with Class 3 (CAM-7121) AC 24 V ±10% (CAM-7122)
	Power Consumption	9 W	
Physical	Dimensions (ØxH)	210 mm x 152.4 mm (8.27" x 6.0")	
	Weight	1,310 g (2.9lb)	

ORDERING INFORMATION

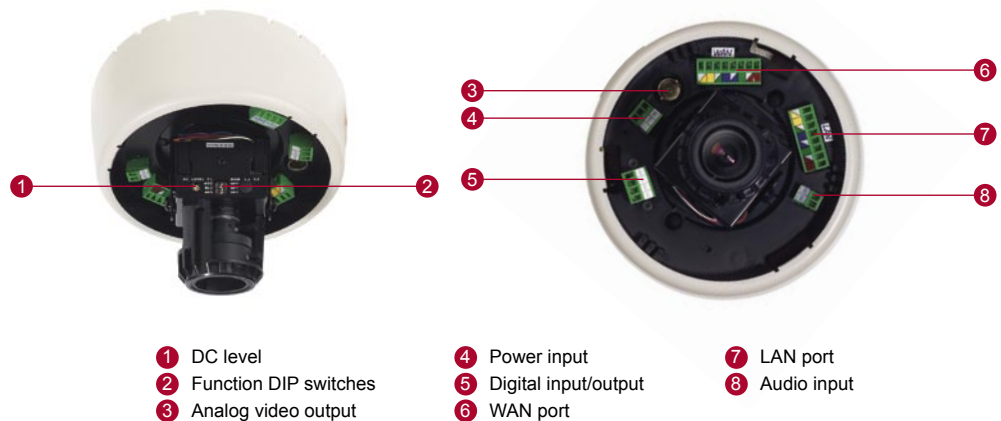
Model Name	NTSC	PAL	D&N	DC 12 V	DC 12 V / PoE	DC 12 V / AC 24 V
CAM-7100N	V			V		
CAM-7100P		V		V		
CAM-7101N	V				V	
CAM-7101P		V			V	
CAM-7102N	V					V
CAM-7102P		V				V
CAM-7120N	V		V	V		
CAM-7120P		V	V	V		
CAM-7121N	V		V		V	
CAM-7121P		V	V		V	
CAM-7122N	V		V			V
CAM-7122P		V	V			V

CAM-7200 Series

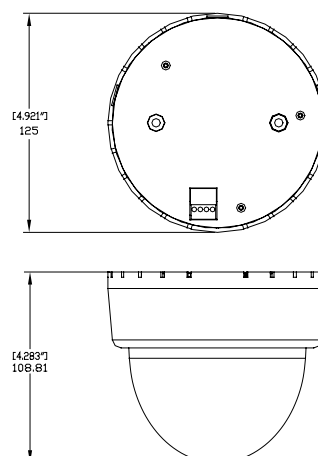
MPEG-4 Real-time Network
Streaming Indoor IP Dome



- 1/3" SONY Super HAD / EXviewHAD CCD with 470K/410K pixels
- Min. 0.05 Lux at F=1.2 (30 IRE, SAGC ON)
- Backlight Compensation, Auto Iris Control, Auto White Balance supported
- Surface, Flush and Wall mount supported
- MPEG-4 ASP compliant 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 (L3) video streaming
- One-way audio supported
- Power Over Ethernet (IEEE 802.3af) supported (CAM-7201/CAM-7221)



DIMENSION DIAGRAM



Unit: mm [inch]

CAM-7200 Series

PRODUCT SPECIFICATION

		CAM-7200	CAM-7220
Image	Device	Interline Transfer SONY Super HAD CCD	Interline Transfer SONY EXviewHAD CCD
	Size	1/3 inch	
	Effective Pixels (HxV)	811 x 508 (NTSC); 795 x 596 (PAL)	
	Horizontal Resolution	480 TVL	
Min. scene Illumination	Color	0.15 Lux at F1.2 (30 IRE, SAGC ON)	Color mode automaticall switched to B/W mode under 4 Lux
	B/W	N/A	0.05 Lux at F1.2 (30 IRE, SAGC ON)
	IR Sensitivity	N/A	from 700 nm to 1100 nm
Lens	Focal Length	3.8 ~ 9.5 mm	
	Lens Mount	Board lens	
Camera Angle Adjustment	X (Panning)	± 180°	± 180°
	Y (Tilting)	90°	90°
Synchronization	Sync. System	Internal / Line-lock	
Day/Night Functions	Day/Night Switching	N/A	Mechanical IR cut filter: auto; color / monochrome
Functions	Motion Detection	Yes (3 windows)	
	Electronic Shutter	1/60 ~ 1/100,000 sec. (NTSC); 1/50 ~ 1/100,000 sec. (PAL)	
	BLC	On / Off (Switchable)	
	AGC	On / Off (Switchable)	On / Off (Switchable) Turning off AGC wil disable D&N function
	White Balance	AWB / PWB (switchable)	
	Flickerless	On / Off (switchable)	
	Auto Iris Control	Video / DC (switchable)	
S/N Ratio	S/N Ratio	Better than 50 dB	
Video (Compression)	Compression	MPEG-4 ASP compliant	
	Picture Resolution	Full D1 (720x480 in NTSC, 720x576 in PAL); CIF (352x240 in NTSC, 352x288 in PAL); QCIF (160x112 in NTSC, 176x144 in PAL)	
	Bit Rate	28 K ~ 3 M bps	
Video Output	Multi-stream	Up to 4 Configurable frame rate/bit rate streams for preview and recording	
	Composite Output	CVBS, 1.0Vp-p with 75 Ω loading, BNC connector	
Audio Input	Compression	8 kHz, Mono, PCM	
	Audio Line Input	Unbalanced, 1.4 Vp-p, 1Vrms, 3.5 mm Jack	
Alarm	Input	1, TTL, terminal block	
	Output	1, TTL, terminal block	
External I/O	Reset Button	Factory default	
	LED	System status	
Casing	Mount Types	Surface / Flush / Wall	
Network	LAN Port	Ethernet(10/100 Base-T), terminal block	
	WAN Port	Ethernet(10/100 Base-T), terminal block	
	Protocol	TCP, UDP, IP, HTTP, DHCP, PPPoE, RTP, RTSP, FTP, SMTP	
Software	Web Browser	Microsoft Internet Explorer 6.0 or above	
	SDK	ActiveX control, C SDK	
	Security	Password Protection: configured by the administrator	
Operating	Temperature	5 ~ 50 °C (40 ~ 122 °F)	
Power	Power Requirement	DC 12 V ±10% (CAM-7200) PoE (IEEE802.3af) with Class 3 (CAM-7201)	DC 12 V ±10% (CAM-7220) PoE (IEEE802.3af) with Class 3 (CAM-7221)
	Power Consumption	7.4 W	
Physical	Dimensions (ØxH)	125 mm x 108.81 mm (4.92" x 4.28")	
	Weight	1,020 g (2.25 lb)	

ORDERING INFORMATION

Model Name	NTSC	PAL	D & N	DC 12 V	DC 12 V / POE
CAM-7200N	V			V	
CAM-7200P		V		V	
CAM-7201N	V				V
CAM-7201P		V			V
CAM-7220N	V		V	V	
CAM-7220P		V	V	V	
CAM-7221N	V		V		V
CAM-7221P		V	V		V

ACCESSORY OPTIONS

- Wall mount kit MTB-201
- Flush mount kit MTB-503



MTB-201



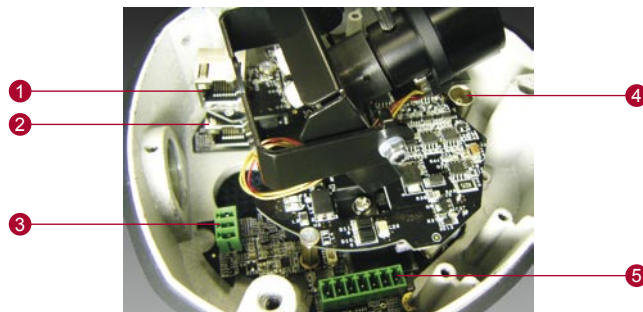
MTB-503

CAM-7300 Series

Preliminary



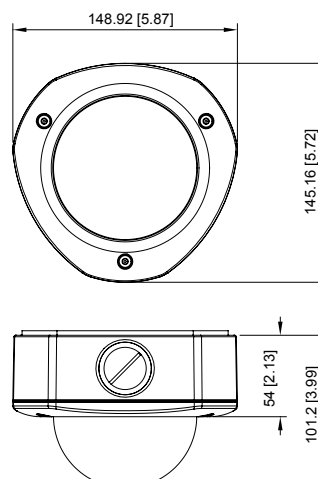
- 1/3" SONY Super HAD / EXviewHAD CCD with 440K/380K pixels
- Min. 0.05 Lux at F=1.2 (30 IRE, SAGC ON)
- Backlight Compensation, Auto Iris Control, Auto White Balance supported
- Heavy-duty, weatherproof and vandal proof with IP66 protection
- Surface, Flush and Wall mount supported
- MPEG-4 ASP compliant 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 (L3) video streaming
- Two-way audio supported
- Power Over Ethernet (IEEE 802.3af) supported (CAM-7301/CAM-7321), or AC 24 V power source supported (CAM-7302/CAM-7322)



- ① LAN port
- ② WAN port
- ③ Power input

- ④ Composite video output
- ⑤ Audio & digital input/output

DIMENSION DIAGRAM



Unit: mm [inch]

CAM-7300 Series

PRODUCT SPECIFICATION

		CAM-7300	CAM-7320
Image	Device	Interline Transfer SONY Super HAD CCD	Interline Transfer SONY EXviewHAD CCD
	Size	1/3 inch	
	Effective Pixels (HxV)	768 x 494 (NTSC); 752 x 582 (PAL)	
	Horizontal Resolution	540 TVL	
	Multi-stream	Up to 4 configurable frame rate/bit rate streams for preview and recording	
Min. Scene Illumination	Color	0.15 Lux at F1.2 (30IRE, SAGC)	Color mode automatically switched to B/W mode under 4 Lux
	B/W	N/A	0.05 Lux at F1.2 (30IRE, SAGC ON)
	IR Sensitivity	N/A	from 700nm to 1100nm
Lens	Focal Length	3.8 ~ 9.5 mm	
	Lens Mount	Board lens	
Camera Angle Adjustment	X (Panning)	± 150°	
	Y (Tilting)	90° (The adjust angle of vision 0° ~ 77°)	
Synchronization	Sync. System	Internal	
Day/Night Functions	Day/Night Switching	N/A	Internal auto switching
	Motion Detection	Yes (3 windows)	
Functions	Electronic Shutter	AES On: 1/60 ~ 1/100,000 sec. (NTSC); 1/50 ~ 1/100,000 sec. (PAL); AES Off: 1/60 sec. (NTSC); 1/50 sec. (PAL)	
	BLC	On / Off (switchable)	
	AGC	On / Off (switchable)	
	White Balance	AWB	
	Auto Iris Control	Video / DC (switchable)	
S/N Ratio	S/N Ratio	Better than 50 dB (AGC off)	
	Compression	MPEG-4 ASP compliant	
Video (Compression)	Picture Resolution	Full D1 (720x480 in NTSC, 720x576 in PAL); CIF (352x240 in NTSC, 352x288 in PAL); QCIF (160x112 in NTSC, 176x144 in PAL)	
	Bit Rate	28 K ~ 3M bps	
Video Output	Composite Output	CVBS, 1.0Vp-p with 75 Ω loading, BNC connector	
Audio Input	Compression	8kHz, Mono, PCM	
	Audio Line Input	Unbalanced, 1.4 Vp-p, 1Vrms, terminal block	
Audio Output	Compression	8kHz, Mono, PCM	
	Audio Line Input	Unbalanced, 1.4 Vp-p, 1Vrms, terminal block	
Alarm	Input	1, TTL, terminal block	
	Output	1, TTL, terminal block	
External I/O	Reset Button	Factory default	
	IP66 Rated	Weatherproof casing with IP66 standard	
Casing	Vandal Proof	Vandal proof supports, durability up to 702 KgF	
	Mount Types	Surface / Flush / Wall	
Network	LAN Port	Ethernet (10/100Base-T), RJ-45 connector	
	WAN Port	Ethernet (10/100Base-T), RJ-45 connector	
	Protocol	TCP, UDP, IP, HTTP, DHCP, PPPoE, RTP, RTSP, FTP, SMTP	
Software	Web Browser	Microsoft Internet Explorer 6.0 or above	
	SDK	ActiveX control, C SDK	
	Security	Password Protection : Configured by the administrator	
Operating	Heater	Yes	
	Temperature	-30 ~ 50 °C (-22 ~ 122 °F)	
Power	Power Requirement	DC 12 V ±10% (CAM-7300) PoE (IEEE802.3af) with Class 3 (CAM-7301) AC 24 V ±10% (CAM-7302)	DC 12 V ±10% (CAM-7320) PoE (IEEE802.3af) with Class 3 (CAM-7321) AC 24 V ±10% (CAM-7322)
	Power Consumption	9 W	
Physical	Dimensions (ØxH)	148.92 mm x 101.2 mm (5.87" x 3.99")	
	Weight	1,145 g (2.5lb)	

ORDERING INFORMATION

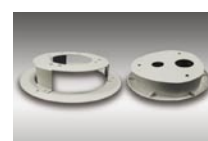
Model Name	NTSC	PAL	D&N	DC 12 V	DC 12 V / PoE	DC 12 V / AC 24 V
CAM-7300N	V			V		
CAM-7300P		V		V		
CAM-7301N	V				V	
CAM-7301P		V			V	
CAM-7302N	V					V
CAM-7302P		V				V
CAM-7320N	V		V	V		
CAM-7320P		V	V	V		
CAM-7321N	V		V		V	
CAM-7321P		V	V		V	
CAM-7322N	V		V			V
CAM-7322P		V	V			V

ACCESSORY OPTIONS

- Wall mount kit 0695-00019-000
- Flush mount kit 0695-00018-000



0695-00019-000



0695-00018-000

IP Speed Dome



Model Name	IP Indoor/Outdoor High Speed Dome		IP Indoor/Outdoor Speed Dome	
	CAM-6100	CAM-6110	CAM-6200	CAM-6220
Type	IP high speed dome	IP D/N high speed dome	IP indoor speed dome	IP D/N speed dome
Compression	MPEG-4 ASP	MPEG-4 ASP	MPEG-4 ASP	MPEG-4 ASP
Multi-stream	Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording
FPS (NTSC/PAL)	30/25	30/25	30/25	30/25
Max. Video Resolution	720 x 480(NTSC) 720 x 576(PAL)	720 x 480(NTSC) 720 x 576(PAL)	720 x 480(NTSC) 720 x 576(PAL)	720 x 480(NTSC) 720 x 576(PAL)
Bit Rate	28 K ~ 3 M bps	28 K ~ 3 M bps	28 K ~ 3 M bps	28 K ~ 3 M bps
Image Sensor	1/4" Super HAD	1/4" EXviewHAD	1/4" Super HAD	1/4" Super HAD
Zoom	18x optical; 12x digital	18x optical; 12x digital	22x optical; 16x digital	27x optical; 10x digital
PTZ Control	Yes	Yes	Yes	Yes
Tilting Range	92°	92°	90°	90°
Tilting Speed	Manual: 0.1°~45° / sec. Preset: 200° / sec.	Manual: 0.1°~45° / sec. Preset: 200° / sec.	0.5° / sec.~ 50° / sec. Vari-speed	0.5° / sec.~ 50° / sec. Vari-speed
Panning Range	360° endless	360° endless	360° endless	360° endless
Panning Speed	Manual: 0.1°~90° / sec. Turbo: 150° / sec. Preset: 300° / sec.	Manual: 0.1°~90° / sec. Turbo: 150° / sec. Preset: 300° / sec.	0.5° / sec.~ 50° / sec. Vari-speed	0.5° / sec.~ 50° / sec. Vari-speed
Absolute Position	Yes	Yes	None	None
Wide Dynamic Range	None	None	None	None
Day/Night	None	Yes	None	Yes
Audio	None	None	None	None
Serial Port	RS-485	RS-485	RS-485	RS-485
Alarm Input/Output	2/2	2/2	None	None
Motion Detection Support	Yes	Yes	Yes	Yes
Min. Illumination	1.5 Lux	0.01 Lux	1.0 Lux	0.1 Lux
Analog Video Composite Output	Yes	Yes	Yes	Yes
Casing	• IP66 weatherproof dome casing	• IP66 weatherproof dome casing	• IP66 weatherproof dome casing	• IP66 weatherproof dome casing • Vandal proof (option)
Ethernet Networks	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN
Failover	Yes	Yes	Yes	Yes
Protocol	TCP, UDP	TCP, UDP	TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP
Image Stabilizer	None	None	None	None
Mounting Options	Surface/Flush**/ Wall/Pole/Corner/Outdoor Ceiling	Surface/Flush**/ Wall/Pole/Corner/Outdoor Ceiling	Surface/ Flush**	Surface/Flush**/ Wall/Pole/Corner/Outdoor Ceiling
Power Requirement	AC 24 V	AC 24 V	DC 12 V	Outdoor: AC 110 V or AC 220 V Indoor: DC 12 V

* Only Pan/Tilt absolute position is supported.

** Flush mount is identical to in-ceiling mount.

IP Speed Dome



IP Indoor High Speed Dome

IP Outdoor High Speed Dome

CAM-6500	CAM-6510	CAM-6520	CAM-6600	CAM-6610	CAM-6620
IP indoor high speed dome	IP indoor D/N high speed dome	IP indoor D/N high speed dome with WDR	IP outdoor high speed dome	IP outdoor D/N high speed dome	IP outdoor D/N high speed dome with WDR
MPEG-4 ASP	MPEG-4 ASP	MPEG-4 ASP	MPEG-4 ASP	MPEG-4 ASP	MPEG-4 ASP
Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording
30/25	30/25	30/25	30/25	30/25	30/25
720 x 480(NTSC) 720 x 576(PAL)	720 x 480(NTSC) 720 x 576(PAL)	720 x 480(NTSC) 720 x 576(PAL)	720 x 480(NTSC) 720 x 576(PAL)	720 x 480(NTSC) 720 x 576(PAL)	720 x 480(NTSC) 720 x 576(PAL)
28 K ~ 3 M bps	28 K ~ 3 M bps	28 K ~ 3 M bps	28 K ~ 3 M bps	28 K ~ 3 M bps	28 K ~ 3 M bps
Progressive 1/4"	1/4" EXviewHAD	Progressive 1/4"	Progressive 1/4"	1/4" EXviewHAD	Progressive 1/4"
22x optical; 12x digital	18x optical; 12x digital	23x optical; 12x digital	22x optical; 12x digital	18x optical; 12x digital	23x optical; 12x digital
Yes	Yes	Yes	Yes	Yes	Yes
-10° ~ 100°	-10° ~ 190°	-10° ~ 190°	-10° ~ 100°	-10° ~ 190°	-10° ~ 190°
5° / sec.~ 400° / sec.	5° / sec.~ 400° / sec.	5° / sec.~ 400° / sec.	5° / sec.~ 400° / sec.	5° / sec.~ 400° / sec.	5° / sec.~ 400° / sec.
360° endless	360° endless	360° endless	360° endless	360° endless	360° endless
5° / sec.~ 400° / sec.	5° / sec.~ 400° / sec.	5° / sec.~ 400° / sec.	5° / sec.~ 400° / sec.	5° / sec.~ 400° / sec.	5° / sec.~ 400° / sec.
Yes*	Yes	Yes*	Yes*	Yes	Yes*
None	None	Yes	None	None	Yes
None	Yes	Yes	None	Yes	Yes
2 way	2 way	2 way	2 way	2 way	2 way
None	None	None	None	None	None
Yes (option)	Yes (option)	Yes (option)	Yes (option)	Yes (option)	Yes (option)
Yes	Yes	Yes	Yes	Yes	Yes
3 Lux	0.005 Lux	0.02 Lux	3 Lux	0.005 Lux	0.02 Lux
Yes	Yes	Yes	Yes	Yes	Yes
• Vandal proof cover (option)	• Vandal proof cover (option)	• Vandal proof cover (option)	• IP66 weatherproof dome casing • Vandal proof cover (option)	• IP66 weatherproof dome casing • Vandal proof cover (option)	• IP66 weatherproof dome casing • Vandal proof cover (option)
10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN
Yes	Yes	Yes	Yes	Yes	Yes
TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP
None	None	None	None	None	None
Surface/Flush**/Wall/ Pole/Corner	Surface/Flush**/Wall/ Pole/Corner	Surface/Flush**/Wall/ Pole/Corner	Wall/Pole/Corner/ Outdoor Ceiling	Wall/Pole/Corner/ Outdoor Ceiling	Wall/Pole/Corner/ Outdoor Ceiling
AC 24 V	AC 24 V	AC 24 V	AC 24 V	AC 24 V	AC 24 V



CAM-6100 Series

MPEG-4 Real-time IP High Speed Dome



- 1/4" SONY Super HAD / EXviewHAD with 440K/380K pixels
- Min. 0.05 Lux at F1.4 (30 IRE, AGC on)
- 216X zoom: 18X optical zoom and 12X digital zoom
- Day & Night (CAM-6110)
- Absolute Position
- MPEG-4 ASP compliant 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 (L3) for video streaming
- Remote Pan/Tilt/Zoom control

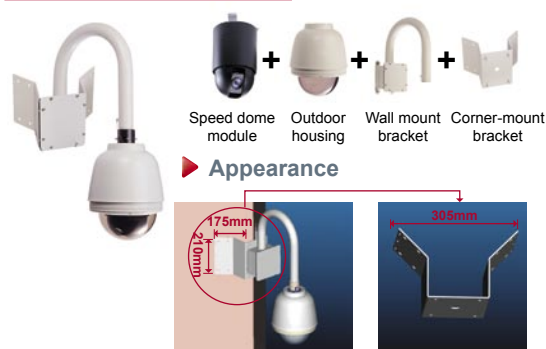
Outdoor wall mount



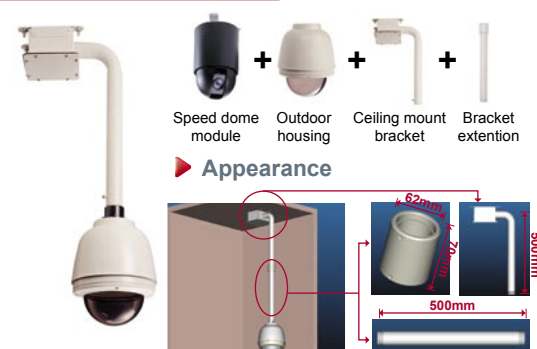
Outdoor pole mount



Outdoor corner mount



Outdoor ceiling mount



Indoor Flush mount





CAM-6100 Series

PRODUCT SPECIFICATION

		CAM-6100	CAM-6110
Image	Device	Interline Transfer SONY Super HAD CCD	
	Size	1/4 inch	
	Effective Pixels (HxV)	768 x 494 (NTSC); 720 x 576 (PAL)	
	Horizontal Resolution	480 TVL	
Min. scene Illumination	Color	1.5 Lux at F1.4 (30 IRE, AGC on)	0.7 Lux at F1.4 (30 IRE, AGC on)
	B/W	N/A	Slow shutter mode: 0.05 Lux at F1.4 (30 IRE, AGC on) Night mode: 0.01 Lux at F1.4 (30 IRE, AGC on)
Lens	Focal Length	4.1 ~ 73.8 mm	
	Zoom ratio	18X	
	Aperture Ratio	F1.4 (Wide), F3.0 (Tele)	
	Diagonal Angle	48° (W) ~ 2.8° (T)	
	Zoom Speed	7.5 sec.	
	Digital Zoom	12X (up to 216X with optical zoom)	
Synchronization	Sync. System	Internal/line lock	
Day/Night Functions	Day/Night Switching	N/A	Auto / manual
	Motion Detection	Yes (3 windows)	
	Electronic Shutter	Auto 1/60 to 1/100,000 sec. (NTSC); Auto 1/50 to 1/100,000 sec. (PAL)	
	Fixed Shutter	Manual 16 steps 1/60 to 1/10000 sec. (NTSC) Manual 16 steps 1/50 to 1/10000 sec. (PAL)	Manual 22 steps 1/1 to 1/10000 sec. (NTSC) Manual 22 steps 1/1 to 1/10000 sec. (PAL)
Functions	Auto Slow Shutter	N/A	On (max 1/1 sec.) / Off
	BLC	On / Off	
	AGC	Auto	
	Auto Exposure Control	Auto / manual / backlight compensation	
	Auto Exposure Compensation	-10.5 ~ +10.5 dB (15 steps)	
	White Balance	AWB / ATW / PWB	
	Camera ID	Max. 20 characters	
	Number of Privacy Zone	8	
	Number of Preset	64 points	
	Flickerless	1/100 sec. (NTSC); 1/120 ~ 1/100,000 sec. (PAL)	
	Auto Iris Control	Auto / manual	
	Cruise	4	
	Absolute Position	Yes	
S/N Ratio	S/N Ratio	Better than 50 dB (AGC off)	
	Compression	MPEG-4 ASP Compliant	
Video (Compression)	Picture Resolution	Full D1 (720 x 480 in NTSC, 720 x 576 in PAL); CIF (352 x 240 in NTSC, 352 x 288 in PAL); QCIF (160 x 112 in NTSC, 176 x 144 in PAL)	
	Bit Rate	28 K ~ 3 M bps	
Video Output	Multi-stream	Up to 4 configurable frame rate/bit rate streams for preview and recording	
	Composite Output	CVBS, 1.0Vp-p with 75 Ω loading, BNC connector	
Alarm	Input	2, TTL, terminal block	
	Output	2, TTL, terminal block	
External I/O	Reset Button	Factory default	
	LED	System/power status	
Network	LAN Port	Ethernet(10/100 Base-T), RJ-45 connector	
	WAN Port	Ethernet(10/100 Base-T), RJ-45 connector	
	Protocol	TCP, UDP, IP, HTTP, DHCP, PPPoE, RTP, RTSP, FTP, SMTP	
Software	Web Browser	Microsoft Internet Explorer 6.0 or above	
	SDK	ActiveX control, C SDK	
Operating	Security	Password Protection : configured by the administrator	
	Temperature	5 ~ 50 °C (40 ~ 122 °F)	
Power	Power Requirement	AC 24 V	
	Power Consumption	Outdoor: 57 W; Indoor: 20 W	
Physical	Dimensions (ØxH)	134 mm x 233.7 mm (5.3" x 9.2")	
	Weight	1,750 g (3.9 lb)	

ORDERING INFORMATION

CAM-61	□	□	□	N: Indoor Flush Mount	C: Outdoor Corner Mount
				E: Outdoor Ceiling Mount	P: Outdoor Pole Mount
				W: Outdoor Wall Mount	
	□	□	□	N: NTSC	P: PAL
				Version control 0 for now	
				0 & 1: 18X optical zoom	

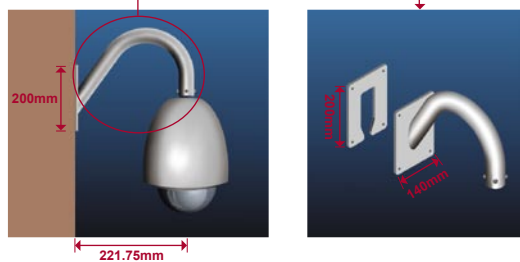
CAM-6200 Series



- 1/4" Sony Super HAD CCD sensor
- 352X zoom: 22X optical zoom and 16X digital zoom (CAM-6200)
- 270X zoom: 27X optical zoom and 10X digital zoom (CAM-6220)
- Day & Night (CAM-6220)
- 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 (L3) for video streaming
- PPPoE supported
- DDNS supported
- Remote Pan/Tilt/Zoom control
- Vandal proof housing (optional)

Outdoor wall mount

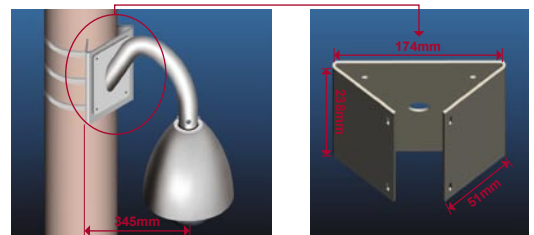
► Appearance



CAM-6220NW/CAM-6220PW

Outdoor pole mount

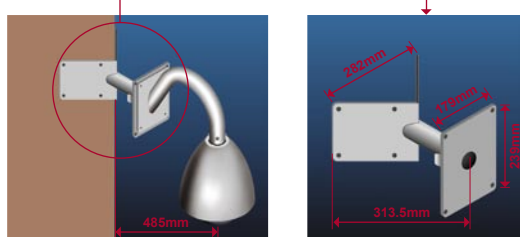
► Appearance



QA-305

Outdoor corner mount

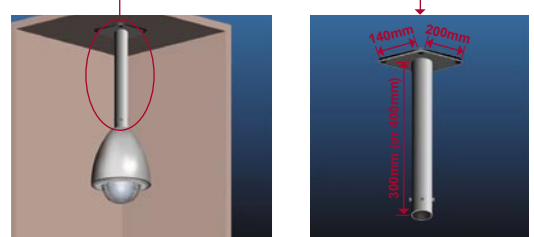
► Appearance



QA-302

Outdoor ceiling mount

► Appearance



CAM-6220NE/CAM-6220PE

Indoor flush mount

CAM-6200NN/CAM-6200PN
CAM-6220NN/CAM-6220PN



CAM-6200 Series

PRODUCT SPECIFICATION

			CAM-6200	CAM-6220
Image	Device		Super HAD CCD	
	Size		1/4 inch	
	Effective Pixels (HxV)		811 X 508 (NTSC); 795 X 596 (PAL)	
	Horizontal Resolution		More than 470 TVL	
Min. Scene Illumination	Color		1.0 Lux	
	B/W		N/A	0.1 Lux
Lens	Focal Length		3.9 ~ 85.8 mm	3.25 ~ 88 mm
	Zoom Ratio		22x	27x
	Aperture Ratio		F1.6 (Wide), F3.7 (Tele)	F1.5 (Wide), F3.6 (Tele)
	Diagonal Angle		72.19° (W) ~ 3.48° (T)	82.3° (W) ~ 3.43° (T)
	Zoom Speed		13 sec.	
	Digital Zoom		22X optical zoom; 16X digital zoom	27X optical zoom; 10X digital Zoom
Synchronization	Sync. System		Internal	
Day/Night Functions	Day/Night Switching		N/A	IR cut filter
Functions	Motion Detection		Yes (3 windows)	
	Electronic Shutter		1/60 ~ 1/100,000 sec. (NTSC); 1/50 ~ 1/100,000 sec. (PAL)	
	Fixed Shutter		Manual 27 steps, 1/125~1/10,000 sec. (NTSC); Manual 27 steps, 1/125~1/10,000 sec. (PAL)	
	BLC		On / Off	
	AGC		Auto / manual	
	Auto Exposure Control		Auto / manual / backlight compensation	
	White Balance		AWB / ATW / PWB/ Manual	
	Camera ID		Max. 10 characters	
	Number of Preset		32 points	
	Auto Iris Control		Auto / manual	
S/N Ratio	S/N Ratio		Better than 48 dB	
PAN/TILT	Manual Speed	Pan Tilt	0.5° ~ 55° / sec.	
	Preset Speed	Pan Tilt	55° / sec.	
	Preset Accuracy	Pan Tilt	55° / sec.	
	Travel Range	Pan Tilt	Approximating 1.5° per rotation	
Video (Compression)	Compression		MPEG-4 ASP compliant	
	Picture Resolution		Full D1 (720 x 480 in NTSC, 720 x 576 in PAL); CIF (352 x 240 in NTSC, 352 x 288 in PAL); QCIF (160 x 112 in NTSC, 176 x 144 in PAL)	
	Bit Rate		28 K ~ 3M bps	
	Image Frame Rate		30 fps at full D1 resolution (NTSC); 25 fps at full D1 resolution (PAL)	
	Multi-stream		Up to 4 configurable frame rate/bit rate streams for preview and recording	
Video Output	Composite Output		CVBS, 1.0Vp-p with 75 Ω loading, BNC connector	
External I/O	Reset Button		Factory default	
Network	LAN Port		Ethernet (10/100Base-T), RJ-45 connector	
	WAN Port		Ethernet (10/100Base-T), RJ-45 connector	
	Protocol		TCP, UDP, IP, HTTP, DHCP, PPPoE, RTP, RTSP, FTP, SMTP	
Software	Web Browser		Microsoft Internet Explorer 6.0 or above	
	SDK		ActiveX control, C SDK	
	Security		Password protection : configured by the administrator	
Operating	Temperature		5 ~ 40 °C (41 ~ 104 °F)	
Power	Power Requirement		Outdoor: AC 110 V or AC 220 V; Indoor: DC 12 V	
	Power Consumption		Outdoor: 52 W; Indoor: 20 W	
Physical	Dimensions (ØxH)		Outdoor: 246 mm x 376.5 mm; Indoor: 249.8 mm x 283 mm	
	Weight		Outdoor: 8 Kg (17.62 lb); Indoor: 2.5 Kg (5.51 lb)	

ORDERING INFORMATION

Part Number	NTSC	PAL	D & N	Indoor flush mount	Outdoor wall mount
CAM-6200NN	V			V	
CAM-6200PN		V		V	
CAM-6220NN	V		V	V	
CAM-6220PN		V	V	V	
CAM-6220NW	V		V		V
CAM-6220PW		V	V		V

ACCESSORY OPTIONS

• Vandal proof dome cover for CAM-62xx outdoor	0692-00017-000	• Corner mount bracket	QA-302
• Pole mount bracket	QA-305		

CAM-6500



- 1/4" SONY EXviewHAD with 440K/380K pixels
- Preset speed up to 400°/sec.
- Digital flip and high speed P/T/Z functions enhance tracking ability
- Pan driver accuracy of 0.225°
- Pan & Tilt proportional to Zoom Ratio
- Minimum illumination down to 0.005Lux under D/N function
- Digital slow shutter
- MPEG-4 ASP compliant 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 (L3) video streaming
- Remote Pan/Tilt/Zoom control
- Vandal proof (optional)

Indoor wall mount



► Appearance



Indoor pole mount



► Appearance



Indoor corner mount



► Appearance



Indoor flush mount



► Appearance



Indoor surface mount





PRODUCT SPECIFICATION

			CAM-6500	CAM-6510	CAM-6520
Image	Device		Progressive CCD	EXviewHAD CCD	Progressive CCD
	Size		1/4 inch		
	Effective Pixels (HxV)		768x494(NTSC); 752x582(PAL)		724x494(NTSC); 724x582(PAL)
	Horizontal Resolution		470 TVL (NTSC); 460 TVL (PAL)		470 TVL (NTSC); 470 TVL (PAL)
Min. scene Illumination	Color		3 Lux (F1.4, 1/60s(NTSC) or 1/50s(PAL))	0.1 Lux (F1.4, 1/4s(NTSC) or 1/3s (PAL))	0.1 Lux (F1.6, 1/60s(NTSC), 1/50s (PAL))
	B/W		N/A	0.005 Lux at F1.4	0.01 Lux or less (F1.6, 1/4sec. (NTSC) or 1/3sec. (PAL, IR ON))
Lens	Focal Length		4 ~ 88 mm	4.1 ~ 73.8 mm	3.6 ~ 82.8 mm
	Zoom Ratio		22x	18x	23x
	Aperture Ratio		F1.6(Wide), F3.8(Tele)	F1.4(Wide), F3.0(Tele)	F1.6(Wide), F3.7(Tele)
	Diagonal angle		47.3°(W)~2.2°(T)	48°(W)~2.8°(T)	54°(W)~2.5°(T)
	Zoom Speed		2.9sec(1x to 22x)	2.1sec(1x to 18x)	2.9sec(1x to 23x)
	Digital Zoom		X1 ~ X12 variable		
Synchronization	Sync. System		Internal / line lock		
Day/Night Functions	Day/Night Switching		N/A	IR cut filter	
Functions	Motion Detection		Yes (3 windows)		
	Electronic Shutter		1/2 ~ 1/4,000 sec. (NTSC) 1/1.5 ~ 1/4,000 sec. (PAL)	1/1 ~ 1/10,000 sec. (NTSC) 1/1 ~ 1/10,000 sec. (PAL)	1/2 ~ 1/4,000 sec. (NTSC) 1/1.5 ~ 1/4,000 sec. (PAL)
	Fixed Shutter		N/A	Yes	
	Auto Slow Shutter		N/A	Yes	
	BLC		On / Off		
	AGC		Auto / Manual		
	Auto Exposure Control		Auto/manual/IRIS OFFSET	Auto/manual/exposure compensation	Auto/manual/IRIS OFFSET
	Exposure Compensation		IRIS OFFSET(000~100 steps)	-10.5~+10.5dB (15steps)	IRIS OFFSET(000~100 steps)
	White Balance		Auto / Manual		
	Camera ID		Max. 20 characters		
	Number of Preset		256 points		
	Auto Iris Control		Auto / manual		
	Sequence Group		8		
	Auto Pan (patrol)		4		
	Schedule		Yes		
	Privacy Mask		N/A	24	8
	WDR		N/A	N/A	Yes
	Absolute Position		Yes	Yes*	Yes*
Cruise		1			
S/N Ratio	S/N Ratio		Better than 49 dB (AGC off)		
PAN/TILT	Manual Speed	Pan	0.6° ~ 80° / sec.		
		Tilt			
	Preset Speed	Pan	5° ~ 400° / sec		
		Tilt			
	Preset Accuracy	Pan	0.225°		
		Tilt			
Travel Range	Pan	360° endless			
	Tilt				
Video (Compression)	Compression		MPEG-4 ASP compliant		
	Picture Resolution		Full D1 (720x480 in NTSC, 720x576 in PAL); CIF (352x240 in NTSC, 352x288 in PAL); QCIF (160x112 in NTSC, 176x144 in PAL)		
	Bit Rate		28 K ~ 3 M bps		
	Multi-stream		Up to 4 configurable frame rate/bit rate streams for preview and recording		
Video Output	Composite Output		CVBS, 1.0Vp-p with 75 Ω loading, BNC connector		
Alarm	Input		8, TTL, terminal block(optional)		
	Output		1, TTL, terminal block(optional)		
Casing	Vandal Proof		Yes (cover with vandal proof option)		
Network	LAN Port		Ethernet (10/100Base-T), RJ-45 connector		
	WAN Port		Ethernet (10/100Base-T), RJ-45 connector		
	Protocol		TCP, UDP, IP, HTTP, DHCP, PPPoE, RTP, RTSP, FTP, SMTP		
Software	Web Browser		Microsoft Internet Explorer 6.0 or above		
	SDK		ActiveX control, C SDK		
	Security		Password protection : configured by the administrator		
Operating	Temperature		0 ~ 40 °C (32 ~ 104 °F)		
Power	Power Requirement		AC 24 V ±20%		
	Power Consumption		30 W		
Physical	Dimensions (ØxH)		131 mm x 226 mm (5.2" x 7.6")		
	Weight		1,600 g (3.5 lb)		

* Only Pan/Tilt absolute position is supported.

CAM-6600 Series



- 1/4" SONY EXviewHAD with 440K/380K pixels
- Preset speed up to 400°/sec.
- Digital flip and high speed P/T/Z functions enhance tracking ability
- Pan driver accuracy of 0.225°
- Minimum illumination down to 0.005Lux under D/N function
- Weather resistant housing, with IP66 certification
- MPEG-4 ASP compliant 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 (L3) video streaming
- Remote Pan/Tilt/Zoom control
- Vandal proof (optional)

Outdoor wall mount



► Appearance



Outdoor pole mount



► Appearance



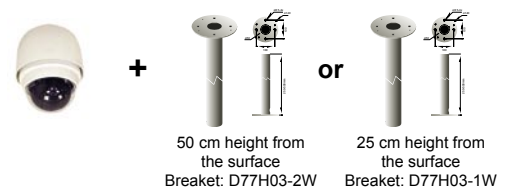
Outdoor corner mount



► Appearance



Outdoor surface mount



► Appearance





CAM-6600 Series

PRODUCT SPECIFICATION

			CAM-6600	CAM-6610	CAM-6620
Image	Device		Progressive CCD	EXviewHAD CCD	Progressive CCD
	Size		1/4 inch		
	Effective Pixels (HxV)		768x494 (NTSC); 752x582 (PAL)		
	Horizontal Resolution		470 TVL (NTSC); 460 TVL (PAL)		
Min. Scene Illumination	Color		3 Lux (F1.4, 1/60s(NTSC) or 1/50s(PAL))	0.1 Lux (F1.4, 1/4s(NTSC) or 1/3s (PAL))	0.1 Lux (F1.6, 1/60s(NTSC), 1/50s (PAL))
	B/W		N/A	0.005 Lux (F1.4, 1/1s (NTSC) or 1/1s (PAL), IR ON)	0.02 Lux or less (F1.4, 1/4s (NTSC) or 1/3s (PAL), IR ON)
Lens	Focal Length		4 ~ 88 mm	4.1 ~ 73.8 mm	3.6 ~ 82.8 mm
	Zoom Ratio		22x	18x	23x
	Aperture Ratio		F1.6(Wide), F3.8(Tele)	F1.4(Wide), F3.0(Tele)	F1.6(Wide), F3.7(Tele)
	Diagonal Angle		47.3°(W) ~ 2.2°(T)	48°(W) ~ 2.8°(T)	54°(W) ~ 2.5°(T)
	Zoom Speed		2.9 sec (1x to 22x)	2.1 sec (1x to 18x)	2.9 sec (1x to 23x)
	Digital Zoom		X1 ~ X12 variable		
Synchronization	Sync. System		Internal / Line Lock		
Day/Night Functions	Day/Night Switching		N/A	IR cut filter	
Functions	Motion Detection		Yes (3 windows)		
	Electronic Shutter		1/2 ~ 1/4,000 sec. (NTSC) 1/1.5 ~ 1/4,000 sec. (PAL)	1/1 ~ 1/10,000 sec. (NTSC) 1/1 ~ 1/10,000 sec. (PAL)	1/2 ~ 1/4,000 sec. (NTSC) 1/1.5 ~ 1/4,000 sec. (PAL)
	Fixed Shutter		N/A	Yes	
	Auto Slow Shutter		N/A	Yes	
	BLC		On / Off		
	AGC		Auto / Manual		
	Auto Exposure Control		Auto /Manual/IRIS OFFSET	Auto/Manual/Exposure Compensation	Auto /Manual/IRIS OFFSET
	Exposure Compensation		IRIS OFFSET (000~100 steps)	-10.5 ~ +10.5 dB	IRIS OFFSET (000~100 steps)
	White Balance		Auto / Manual		
	Camera ID		Max. 20 characters		
	Number of Preset		256 points		
	Auto Iris Control		Auto / Manual		
	Sequence Group		8		
	Auto Pan (Patrol)		4		
	Schedule		Yes		
	Privacy Mask		N/A	24	8
	Cruise		1		
Absolute Position		Yes*	Yes	Yes*	
Wide Dynamic Range		N/A	N/A	Yes	
S/N Ration	S/N Ratio		Better than 49dB (AGC off)		
PAN/TILT	Manual Speed	Pan Tilt	0.6° ~ 80°/sec.		
	Bit Rate	Pan Tilt	5° ~ 400°/sec.		
	Preset Accuracy	Pan Tilt	0.225° 0.45°		
		Travel Range	Pan Tilt	360° endless	
			0° ~ 100°	0° ~ 100° (190° in Image Flip mode)	
Video (Compression)	Compression		MPEG-4 ASP compliant		
	Picture Resolution		Full D1 (720x480 in NTSC, 720x576 in PAL); CIF (352x240 in NTSC, 352x288 in PAL); QCIF (160x112 in NTSC, 176x144 in PAL)		
	Bit Rate		28K ~ 3M bps		
	Image Frame Rate		30fps at full D1 resolution (NTSC); 25fps at full D1 resolution (PAL)		
Video Output	Multi-stream		Up to 4 configurable frame rate/bit rate streams for preview and recording		
Audio Input	Composite Output		CVBS, 1.0Vp-p with 75 Ω loading, BNC connector		
	Compression		8kHz, Mono, PCM		
Audio Output	Audio Line Input		Unbalanced, 1.4Vp-p, 1Vrms, 3.5mm Jack		
	Compression		8kHz, Mono, PCM		
Alarm	Audio Line Output		Unbalanced, 1.4Vp-p, 1Vrms, 3.5mm Jack		
	Input		8, TTL, terminal block (option)		
	Output		1, TTL, terminal block (option)		
Casing	IP66 Rated		Weatherproof housing with IP66 certification		
	Vandal Proof		Yes (cover with vandal proof option)		
Network	LAN Port		Ethernet(10/100Base-T), RJ-45 connector		
	WAN Port		Ethernet(10/100Base-T), RJ-45 connector		
	Protocol		TCP, UDP, IP, HTTP, DHCP, PPPoE, RTP, RTSP, FTP, SMTP		
Software	Web Browser		Microsoft Internet Explorer 6.0 or above		
	SDK		ActiveX control, C SDK		
	Security		Password Protection: configured by the administrator		
Operating	Temperature		-20 ~ 50 °C (-4 ~ 122 °F)		
Power	Power Requirement		AC 24 V		
	Power Consumption		50 W		
Physical	Dimensions (ØxH)		172 mm x 302.5 mm (6.7" x 11.9"); 190 mm x 302.5 mm (7.5" x 11.9") with sunshield		
	Weight		5,800 g (12.9 lb)		

* Only Pan/Tilt absolute position is supported.

Video Server



	1-channel Video Server			Quad Video Server	
Model name	SED-2100	SED-2120	SED-2140	SED-2310Q	SED-2320Q
Channel	1	1	1	4	4
Compression	MPEG-4 ASP	MPEG-4 ASP	MPEG-4 ASP	MPEG-4 ASP	MPEG-4 ASP
Multi-stream	Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording	Up to 4 configurable frame rate/bit rate streams for preview and recording
FPS (NTSC/PAL)	30/25	30/25	30/25	30/25	30/25
Bit Rate	28 K ~ 3 M bps	28 K ~ 3 M bps	28 K ~ 3 M bps	28 K ~ 3 M bps	28 K ~ 3 M bps
PTZ *	Yes	Yes	Yes	Yes	Yes
Max. Video Resolution	720 x 480 (NTSC) 720 x 576 (PAL)	720 x 480 (NTSC) 720 x 576 (PAL)	720 x 480 (NTSC) 720 x 576 (PAL)	1 Channel: 720 x 480 (NTSC) 720 x 576 (PAL) 2-4 Channel: 352 x 240 (NTSC) 352 x 288 (PAL)	1 Channel: 720 x 480 (NTSC) 720 x 576 (PAL) 2-4 Channel: 352 x 240 (NTSC) 352 x 288 (PAL)
Video Input	Composite x1	Composite x1	Composite x1	Composite x4	Composite x4
Video Output	Composite x1	Composite x1	Composite x1	Composite x1	Composite x1
Audio	None	None	2 way	None	2 way
Serial Port	RS-485/422/232	RS-485/422/232	RS-485/422/232	RS-485/422/232	RS-485/422/232
Alarm Input/Output	2/2	2/2	2/2	2/2	2/2
Motion Detection	Yes	Yes	Yes	Yes	Yes
Failover	Yes	Yes	Yes	Yes	Yes
Protocol	TCP, UDP	TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP
Security	Password/Username protection	Password/Username protection	Password/Username protection	Password/Username protection	Password/Username protection
Rack Solution	RMK-1000	RMK-2000	RMK-2000	RMK-2000	RMK-2000
Ethernet Networks	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN

* Requires additional third-party PTZ device.

Video Server

Preliminary

Preliminary



2-channel Video Server

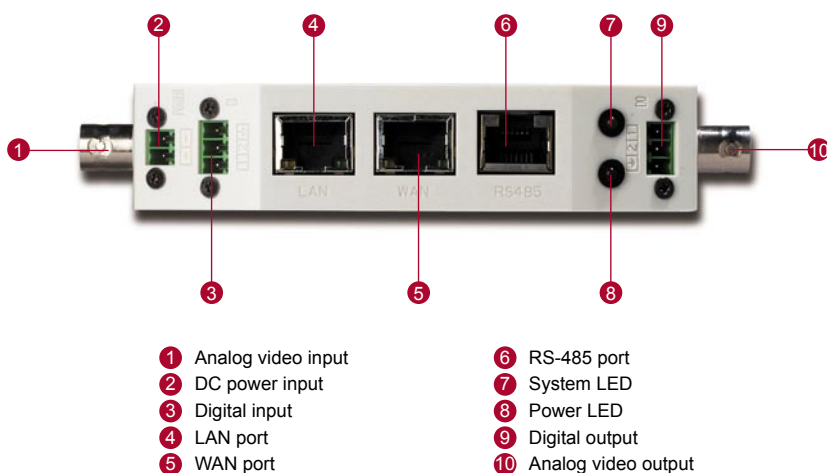
SED-2410	SED-2420	SED-2600	SED-2610
2	2	8	8
MPEG-4 ASP	MPEG-4 ASP	MPEG-4 ASP	MPEG-4 ASP
Up to 4 configurable frame rate/bit rate streams for preview and recording (per channel)	Up to 4 configurable frame rate/bit rate streams for preview and recording (per channel)	Up to 4 configurable frame rate/bit rate streams for preview and recording (per channel)	Up to 4 configurable frame rate/bit rate streams for preview and recording (per channel)
30/25 (per channel)	30/25 (per channel)	30/25 (per channel)	30/25 (per channel)
28 K ~ 3 M bps (per channel)	28 K ~ 3 M bps (per channel)	28 K ~ 3 M bps (per channel)	28 K ~ 3 M bps (per channel)
Yes	Yes	Yes	Yes
720 x 480 (NTSC) 720 x 576 (PAL) (per channel)	720 x 480 (NTSC) 720 x 576 (PAL) (per channel)	720 x 480 (NTSC) 720 x 576 (PAL) (per channel)	720 x 480 (NTSC) 720 x 576 (PAL) (per channel)
Composite x2	Composite x2	Composite x8	Composite x8
Composite x2	Composite x2	None	None
None	2 way (per channel)	None	2 way (per channel)
RS-485/422/232	RS-485/422/232	RS-485/422/232 (per channel)	RS-485/422/232 (per channel)
2/2	2/2	2/2 (per channel)	2/2 (per channel)
Yes	Yes	Yes	Yes
Yes	Yes	None	None
TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP
Password/Username protection	Password/Username protection	Password/Username protection	Password/Username protection
RMK-2000	RMK-2000	Yes	Yes
10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN	10/100 Base-T x1	10/100 Base-T x1

SED-2100

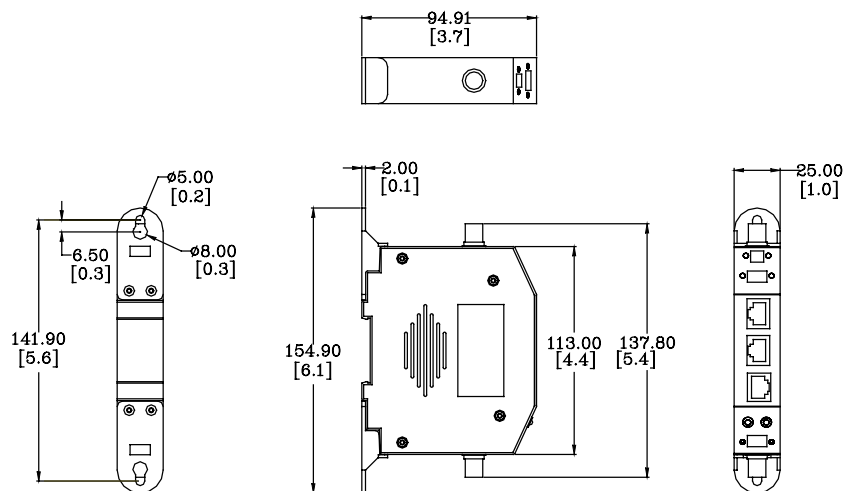
DIN Rail Type MPEG-4 Video Server



- MPEG-4 ASP compliant 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 (L3) video streaming (UniCast/MultiCast)
- Digital time code embedded
- Motion detection



DIMENSION DIAGRAM



Unit: mm [inch]



PRODUCT SPECIFICATION

Video (Compression)

Compression	MPEG-4 ASP compliant compression
Resolution	Full D1 (720 x 480 in NTSC, 720 x 576 in PAL) CIF (352 x 240 in NTSC, 352 x 288 in PAL) QCIF (160 x 112 in NTSC, 176 x 144 in PAL)
Bit Rate	28 K ~ 3 M bps
Image Frame Rate	30 fps at full D1 resolution (NTSC) 25 fps at full D1 resolution (PAL)
Multi-stream	Up to 4 configurable frame rate/bit rate streams for preview and recording

Video Input

Composite Input	CVBS, 1.0Vp-p with 75 Ω loading, BNC connector
-----------------	---

Video Output

Composite Output	CVBS, 1.0Vp-p with 75 Ω loading, BNC connector
------------------	---

Alarm

Input	2, TTL, terminal block
Output	2, TTL, terminal block

Remote Control

Serial Port	RS-485: half duplex, RJ-45
-------------	----------------------------

External I/O

Reset Button	Factory default
LED	System / power status

Network

LAN Port	Ethernet (10/100Base-T), RJ-45 connector
WAN Port	Ethernet (10/100Base-T), RJ-45 connector
Protocol	TCP, UDP, IP, HTTP, DHCP, PPPoE, FTP, SMTP

Software

Web Browser	Microsoft Internet Explorer 6.0 or above
SDK	ActiveX control, C SDK

PTZ Protocol*	Pelco-P_type1, Pelco-P_type2, Pelco-D, Dynacolor, Samsung, VCL, Videotrek, Kampro-V1, Kampro-V2
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Security	Password protection : configured by the administrator
----------	---

Operating

Temperature	5 ~ 50 °C (40 ~ 122 °F)
-------------	-------------------------

Power

Power Requirement	DC 12 V $\pm$ 10%
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Power Consumption	7.5 W
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Physical

Dimensions (WxHxD)	25 mm x 113 mm x 95 mm (0.98" x 4.45" x 3.74")
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Weight	200 g (0.44 lb)
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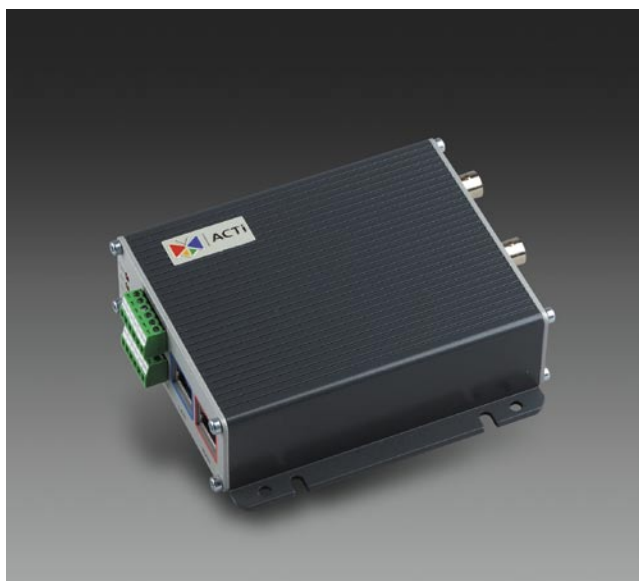
* These PTZ protocols are supported in ACTi Streaming Activator and Streaming Explorer.

ORDERING INFORMATION

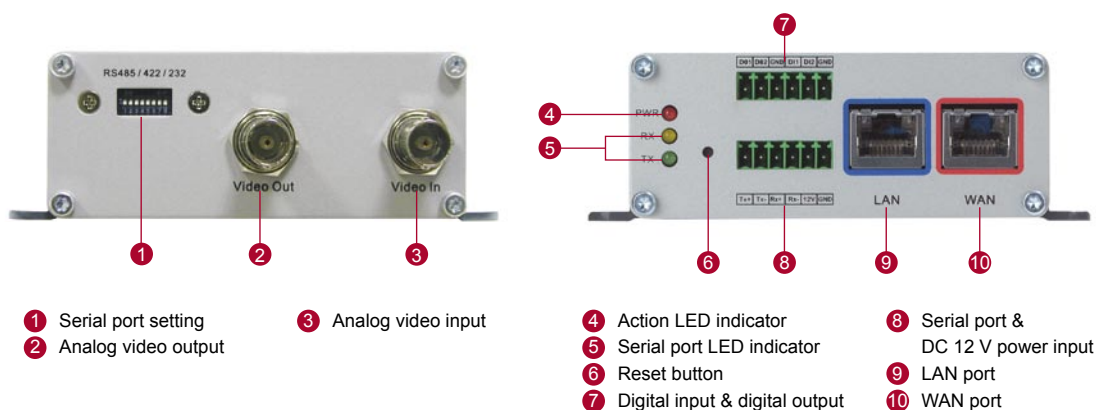
Model Name	Full D1	CIF	4 MB Flash
SED-2100R	V		V
SED-2100S		V	V

SED-2120

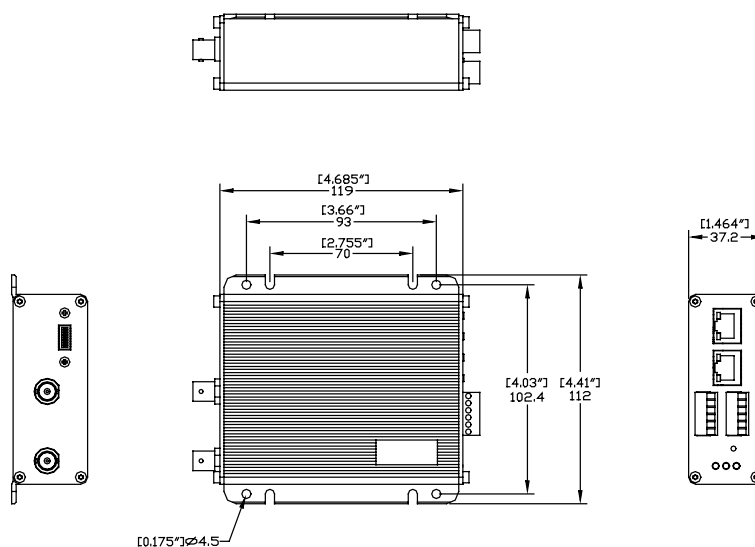
Wallmount Type MPEG-4 Video Server with Extended Temperature Option



- MPEG-4 ASP compliant 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 (L3) video streaming
- Digital time code embedded
- Motion detection
- Isolated digital input and output supported



DIMENSION DIAGRAM



Unit: mm [inch]



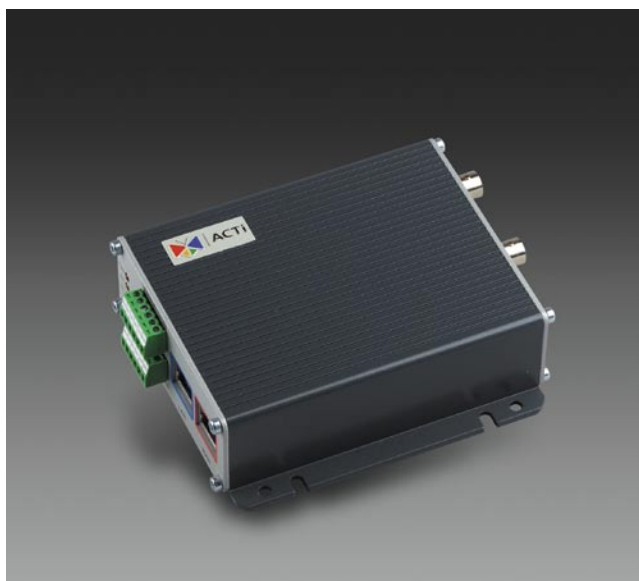
PRODUCT SPECIFICATION

Video (Compression)		Network	
Compression	MPEG-4 ASP compliant compression	LAN Port	Ethernet (10/100Base-T), RJ-45 connector
Resolution	Full D1 (720 x 480 in NTSC, 720 x 576 in PAL) CIF (352 x 240 in NTSC, 352 x 288 in PAL) QCIF (160 x 112 in NTSC, 176 x 144 in PAL)	WAN Port	Ethernet (10/100Base-T), RJ-45 connector
Bit Rate	28 K ~ 3 M bps	Protocol	TCP, UDP, IP, HTTP, DHCP, PPPoE, RTP, RTSP, FTP, SMTP
Image Frame Rate	30 fps at full D1 resolution (NTSC) 25 fps at full D1 resolution (PAL)	Software	
Multi-stream	Up to 4 configurable frame rate/bit rate streams for preview and recording	Web Browser	Microsoft Internet Explorer 6.0 or above
Video Input		SDK	ActiveX control, C SDK
Composite Input	CVBS, 1.0Vp-p with 75 Ω loading, BNC connector	PTZ Protocol*	Pelco-P_type1, Pelco-P_type2, Pelco-D, Dynacolor, Samsung, VCL, Videotrek, Kampro-V1, Kampro-V2
Video Output		Security	Password protection : configured by the administrator
Composite Output	CVBS, 1.0Vp-p with 75 Ω loading, BNC connector	Operating	
Alarm		Temperature	5 ~ 50 °C (40 ~ 122 °F), SED-2120 -30 ~ 70 °C (-22 ~ 158 °F), SED-2120T
Input	2, TTL, terminal block	Power	
Output	2, TTL, terminal block	Power Requirement	DC 12 V $\pm$ 10%
Remote Control		Power Consumption	7.5 W
Serial Port	RS-485: half duplex, terminal block RS-422: full duplex, terminal block RS-232: full duplex, terminal block	Physical	
External I/O		Dimensions (WxHxD)	112 mm x 37.2 mm x 119 mm (4.41" x 1.46" x 4.68")
Reset Button	Factory default	Weight	350 g (0.66 lb)
LED	System status	* These PTZ protocols are supported in ACTi Streaming Activator and Streaming Explorer.	

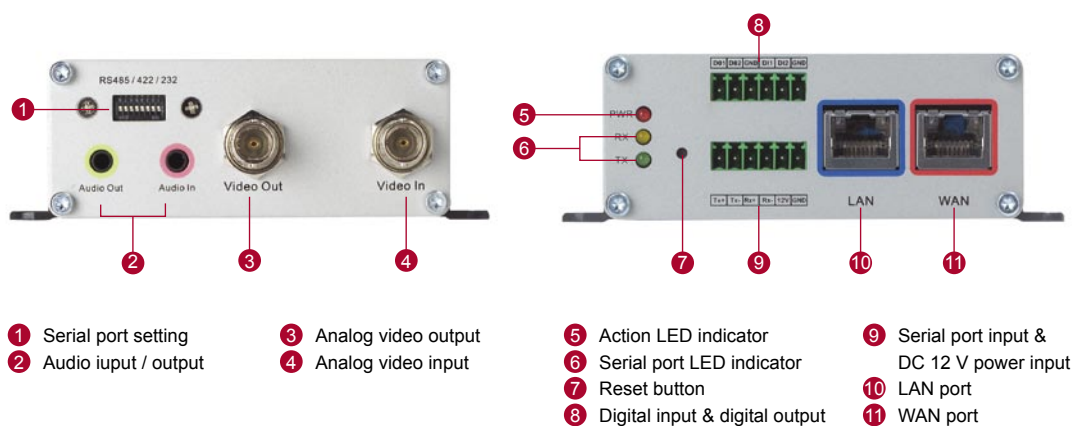
ORDERING INFORMATION

Model Name	Full D1	CIF	Extended Temperature
SED-2120	V		
SED-2120S		V	
SED-2120T	V		V

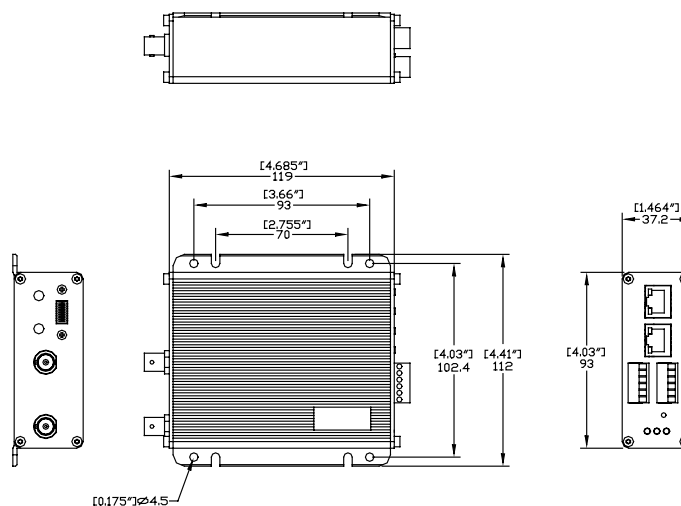
SED-2140



- MPEG-4 ASP compliant 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 (L3) video streaming
- Digital time code embedded
- Motion detection
- Two way audio supported
- Isolated digital input and output supported



DIMENSION DIAGRAM



Unit: mm [inch]



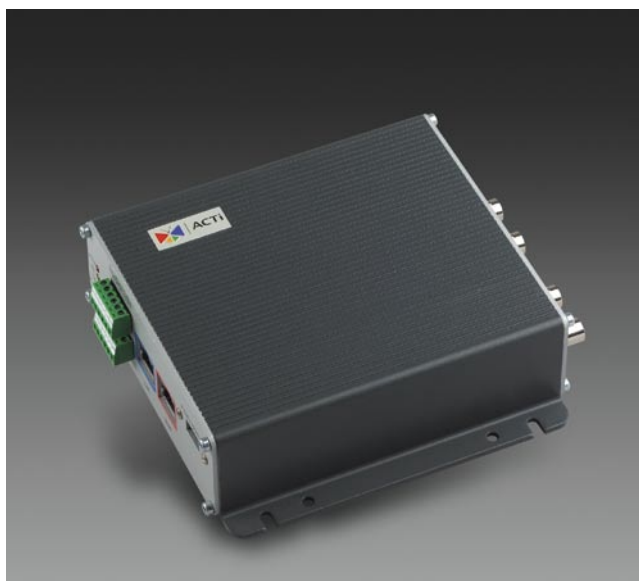
PRODUCT SPECIFICATION

Video (Compression)		External I/O	
Compression	MPEG-4 ASP compliant compression	Reset Button	Factory default
Resolution	Full D1 (720 x 480 in NTSC, 720 x 576 in PAL) CIF (352 x 240 in NTSC, 352 x 288 in PAL) QCIF (160 x 112 in NTSC, 176 x 144 in PAL)	LED	System status
Bit Rate	28 K ~ 3 M bps	Network	
Image Frame Rate	30 fps at full D1 resolution (NTSC) 25 fps at full D1 resolution (PAL)	LAN Port	Ethernet (10/100Base-T), RJ-45 connector
Multi-stream	Up to 4 configurable frame rate/bit rate for preview and recording	WAN Port	Ethernet (10/100Base-T), RJ-45 connector
Video Input		Protocol	TCP, UDP, IP, HTTP, DHCP, PPPoE, RTP, RTSP, FTP, SMTP
Composite Input	CVBS, 1.0Vp-p with 75 Ω loading, BNC connector	Software	
Video Output		Web Browser	Microsoft Internet Explorer 6.0 or above
Composite Output	CVBS, 1.0Vp-p with 75 Ω loading, BNC connector	SDK	ActiveX control, C SDK
Audio Input		PTZ Protocol	Pelco-P_type1, Pelco-P_type2, Pelco-D, Dynacolor, Samsung, VCL, Videotrek, Kampro-V1, Kampro-V2
Compression	8 kHz, Mono, PCM	Security	Password protection : configured by the administrator
Audio Line Input	Unbalanced, 1.0 Vpp, 1 Vrms, 3.5 mm Jack	Operating	
Audio Output		Temperature	5 ~ 50 °C (40 ~ 122 °F), SED-2140; -30 ~ 70 °C (-22 ~ 158 °F), SED-2140T
Compression	8 kHz, Mono, PCM	Power	
Audio Line Output	Unbalanced, 1.0 Vpp, 1 Vrms, 3.5 mm Jack	Power Requirement	DC 12 V $\pm$ 10%
Alarm		Power Consumption	7.5 W
Input	2, TTL, terminal block	Physical	
Output	2, TTL, terminal block	Dimensions (WxHxD)	112 mm x 37.2 mm x 119 mm (4.41" x 1.46" x 4.68")
Remote Control		Weight	350 g (0.66 lb)
Serial Port	RS-485: half duplex, terminal block RS-422: full duplex, terminal block RS-232: full duplex, terminal block		

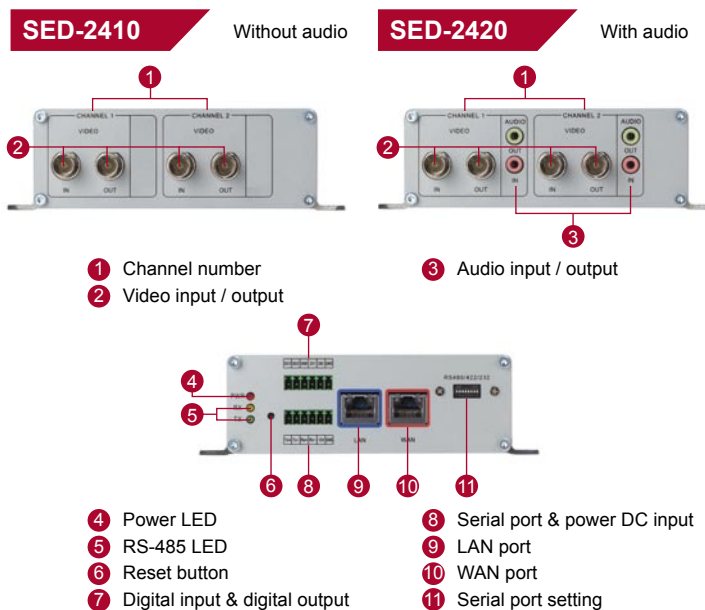
ORDERING INFORMATION

Model Name	Full D1	CIF	Extended Temperature
SED-2140	V		
SED-2140S		V	
SED-2140T	V		V

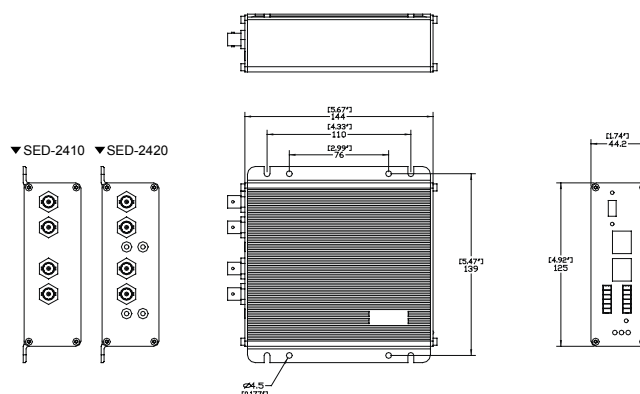
SED-2410/2420



- MPEG-4 ASP compliant 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 (L3) video streaming
- Digital time code embedded
- Motion detection
- Two way audio supported (SED-2420)
- Isolated digital input and output supported



DIMENSION DIAGRAM





PRODUCT SPECIFICATION

		SED-2410	SED-2420
Video (Compression)	Compression	MPEG-4 ASP compliant	
	Picture Resolution	Full D1 (720 x 480 in NTSC, 720 x 576 in PAL); CIF (352 x 240 in NTSC, 352 x 288 in PAL) QCIF (160 x 112 in NTSC, 176 x 144 in PAL) (per channel)	
	Bit Rate	28 K ~ 3M bps (per channel)	
	Image Frame Rate	30 fps at full D1 resolution (NTSC); 25 fps at full D1 resolution (PAL) (per channel)	
	Multi-stream	Up to 4 configurable frame rate/bit rate streams for preview and recording (per channel)	
Video input	Composite Input	2, CVBS, 1.0Vp-p with 75 Ω loading, BNC connector	
Video Output	Composite Output	2, CVBS, 1.0Vp-p with 75 Ω loading, BNC connector	
Audio Input	Compression	N/A	8 kHz, Mono, PCM
	Audio Line Input	N/A	Unbalanced, 1.4 Vp-p, 1Vrms, 3.5 mm Jack
Audio Output	Compression	N/A	8 kHz, Mono, PCM
	Audio Line Output	N/A	Unbalanced, 1.4 Vp-p, 1Vrms, 3.5 mm Jack
Alarm	Input	2, TTL, terminal block	
	Output	2, TTL, terminal block	
Remote Control	Serial Port	RS-485: half duplex, terminal block; RS-422: full duplex, terminal block; RS-232: full duplex, terminal block	
External I/O	Reset Button	Factory default	
	LED	System status	
Network	LAN Port	Ethernet(10/100 Base-T), RJ-45 connector	
	WAN Port	Ethernet(10/100 Base-T), RJ-45 connector	
	Protocol	TCP, UDP, IP, HTTP, DHCP, PPPoE, RTP, RTSP, FTP, SMTP	
Software	Web Browser	Microsoft Internet Explorer 6.0 or above	
	SDK	ActiveX control, C SDK	
	PTZ Protocol*	Pelco-P_type1, Pelco-P_type2, Pelco-D, Dynacolor, Samsung, VCL, Videotrek, Kampro-V1, Kampro-V2	
	Security	Password Protection : configured by the administrator	
Operating	Temperature	5 ~ 50 °C (40 ~ 122 °F)	
Power	Power Requirement	DC 12 V $\pm$ 10%	
	Power Consumption	7.5 W	
Physical	Dimensions (WxHxD)	139 mm x 44.2 mm x 144 mm (5.47" x 1.74" x 5.67")	
	Weight	570 g (1.07 lb)	

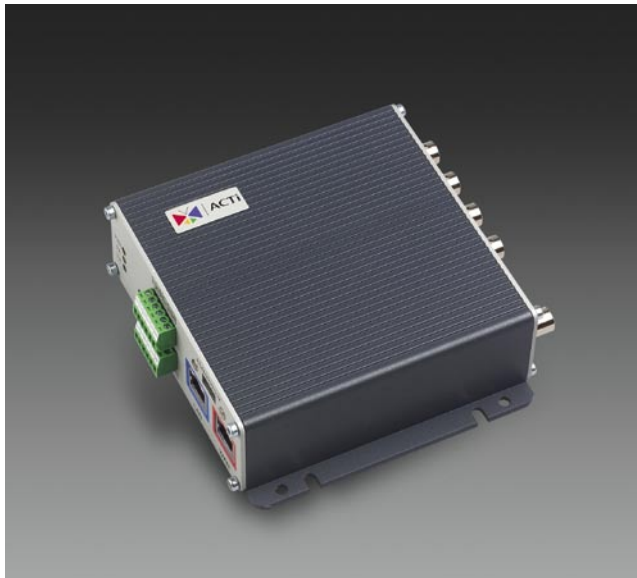
* These PTZ protocols are supported in ACTi Streaming Activator and Streaming Explorer.

ORDERING INFORMATION

Model Name	w/ Audio	w/o Audio
SED-2410		V
SED-2420	V	

Unit: mm [inch]

SED-2310Q/2320Q



- MPEG-4 ASP compliant 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 (L3) video streaming
- Real-time quad video
- Monitor output displays full-screen or quad image
- Digital time code embedded
- Motion detection
- Two way audio supported (for SED-2320Q only)
- Isolated digital input and output supported
- Up to 4 analog video inputs blended into one digital MPEG-4 output stream

Quad Display



Full-screen



Number of Video Input	Total Stream Output	Full-screen Display (resolution)	Quad Tiling Display (resolution of each channel)
1	1 D1 stream	D1	CIF
2	1 D1 stream	D1	CIF
3	1 D1 stream	D1	CIF
4	1 D1 stream	D1	CIF

SED-2310Q Without audio

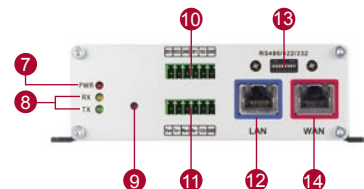


- 1 Video output
- 2 Audio input/output
- 3 CAM4 - analog input 4

SED-2320Q With audio

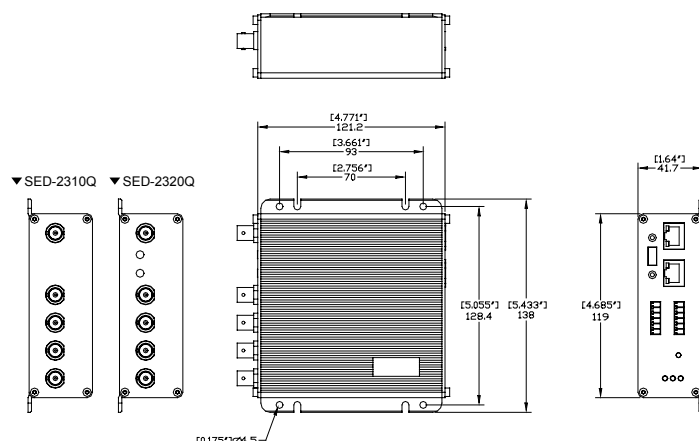


- 4 CAM3 - analog input 3
- 5 CAM2 - analog input 2
- 6 CAM1 - analog input 1



- 7 Action LED indicator
- 8 Serial port LED indicator
- 9 Reset button
- 10 Digital input & digital output
- 11 Serial port & DC 12 V power input
- 12 LAN port
- 13 Serial port setting
- 14 WAN port

DIMENSION DIAGRAM



**PRODUCT SPECIFICATION**

		SED-2310Q	SED-2320Q
Video (Compression)	Compression	MPEG-4 ASP Compliant Compression	
	Picture Resolution	1 channel : Full D1 (720 x 480 in NTSC, 720 x 576 in PAL) 2 channel : CIF (352 x 240 in NTSC, 352 x 288 in PAL) 3 channel : CIF (352 x 240 in NTSC, 352 x 288 in PAL) 4 channel : CIF (352 x 240 in NTSC, 352 x 288 in PAL)	
	Bit Rate	28 K ~ 3 M bps	
	Image Frame Rate	30 fps at full D1 resolution (NTSC); 25 fps at full D1 resolution (PAL)	
	Multi-stream	Up to 4 configurable frame rate/bit rate streams for preview and recording	
Video input	Composite Input	4, CVBS, 1.0Vp-p with 75 Ω loading, BNC connector	
Video Output	Composite Output	1, CVBS, 1.0Vp-p with 75 Ω loading, BNC connector	
Audio Input	Compression	N/A	8 kHz, Mono, PCM
	Audio Line input	N/A	Unbalanced, 1.4 Vp-p, 1Vrms, 3.5 mm Jack
Audio Output	Compression	N/A	8 kHz, Mono, PCM
	Audio Line output	N/A	Unbalanced, 1.4 Vp-p, 1Vrms, 3.5 mm Jack
Alarm	Input	1 TTL, terminal block	
	Output	1 TTL, terminal block	
Remote Control	Serial Port	RS-485: half duplex, terminal block; RS-422: full duplex, terminal block; RS-232: full duplex, terminal block	
External I/O	Reset Button	Factory Default	
	LED	Power / serial port / network status	
Network	LAN Port	Ethernet (10/100Base-T), RJ-45 connector	
	WAN Port	Ethernet (10/100Base-T), RJ-45 connector	
	Protocol	TCP, UDP, IP, HTTP, DHCP, PPPoE, RTP, RTSP, FTP, SMTP	
Software	Web Browser	Microsoft Internet Explorer 6.0 or above	
	SDK	ActiveX control, C SDK	
	PTZ Protocol*	Pelco-P_type1, Pelco-P_type2, Pelco-D, Dynacolor, Samsung, VCL, Videotrek, Kampro-V1, Kampro-V2	
	Security	Password protection : configured by the administrator	
Operating	Temperature	5 ~ 50 °C (40 ~ 122 °F), SED-2310Q/SED-2320Q; -30 ~ 70 °C (-22 ~ 158 °F), SED-2310QT/SED-2320QT	
Power	Power Requirement	DC 12 V ±10%	
	Power Consumption	9.6 W	
Physical	Dimensions (WxHxD)	119 x 41.7 x 122 mm (4.69" x 1.65" x 4.81")	
	Weight	470 g (1.04 lb)	

* These PTZ protocols are supported in ACTi Streaming Activator and Streaming Explorer.

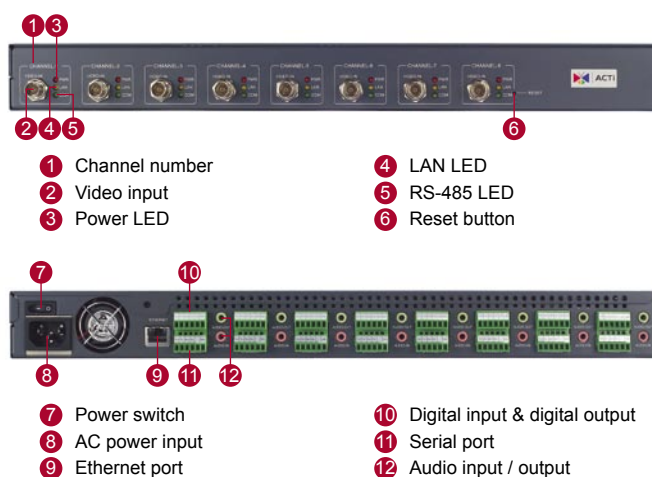
ORDERING INFORMATION

Model Name	w/ Audio	Extended Temperature
SED-2310Q		
SED-2310QT		V
SED-2320Q	V	
SED-2320QT	V	V

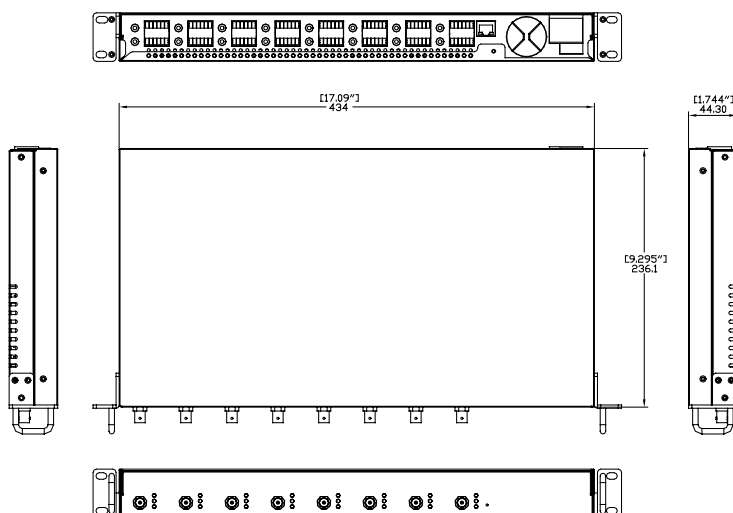
SED-2600/2610



- 8 independent channels with 8 isolated video inputs
- MPEG-4 ASP compliant compression
- CIF up to Full D1 resolution at 25/30 fps per channel
- QoS enabled (L3) video streaming
- Digital time code embedded for each channel
- Isolated digital input and output pairs for each channel
- Isolated serial ports (RS-485 or RS-232 or RS-422) for each channel
- Isolated two way audio ports for each channel (SED-2610)
- 1U form factor for rackmount



DIMENSION DIAGRAM



Unit: mm [inch]

**PRODUCT SPECIFICATION**

		SED-2600	SED-2610
Video Compression	Compression	MPEG-4 ASP Compliant	
	Picture Resolution	Full D1 (720x480 in NTSC, 720x576 in PAL); CIF (352x240 in NTSC, 352x288 in PAL); QCIF (160x112 in NTSC, 176x144 in PAL) (per channel)	
	Bit Rate	28K ~ 3M bps (per channel)	
	Image Frame Rate	30fps at full D1 resolution (NTSC); 25fps at full D1 resolution (PAL) (per channel)	
	Multi-stream	Up to 4 configurable frame rate/bit rate streams for preview and recording (per channel)	
Video Input	Composite Input	8, CVBS, 1.0Vp-p with 75Ω loading, BNC connector	
Video Output	Composite Output	N/A	
Audio Input	Compression	N/A	8kHz, Mono, PCM
	Audio Line Input	N/A	8, Unbalanced, 1.4 Vpp, 1Vrms, 3.5 mm Jack
Audio Output	Compression	N/A	8kHz, Mono, PCM
	Audio Line Output	N/A	8, Unbalanced, 1.0 Vpp, 1Vrms, 3.5 mm Jack
Alarm	Input	2, TTL, terminal block (per channel)	
	Output	2, TTL, terminal block (per channel)	
Remote Control	Serial Port	RS-485: half duplex, terminal block; RS-422: full duplex, terminal block; RS-232: full duplex, terminal block (per channel)	
External I/O	Reset Button	Factory default	
	LED	System status (per channel)	
Network	Ethernet	Ethernet (10/100Base-T), RJ-45 connector	
	Protocol	TCP, UDP, IP, HTTP, DHCP, PPPoE, RTP, RTSP, FTP, SMTP	
Software	Web Browser	Microsoft Internet Explorer 6.0 or above	
	SDK	ActiveX control, C SDK	
	PTZ Protocol	Pelco-P_type1, Pelco-P_type2, Pelco-D, Dynacolor, Samsung, VCL, Videotrek, Kampro-V1, Kampro-V2	
	Security	Password Protection: configured by the administrator	
Operating	Temperature	5 ~ 50 °C (40 ~ 122 °F)	
Power	Power Requirement	AC 100 - 240 V 50/60 Hz	
	Power Consumption	300 W	
Physical	Dimensions	434 mm x 236 mm x 44.3 mm (17.09" x 9.295" x 1.744")	
	Weight	4.2 Kg	

ORDERING INFORMATION

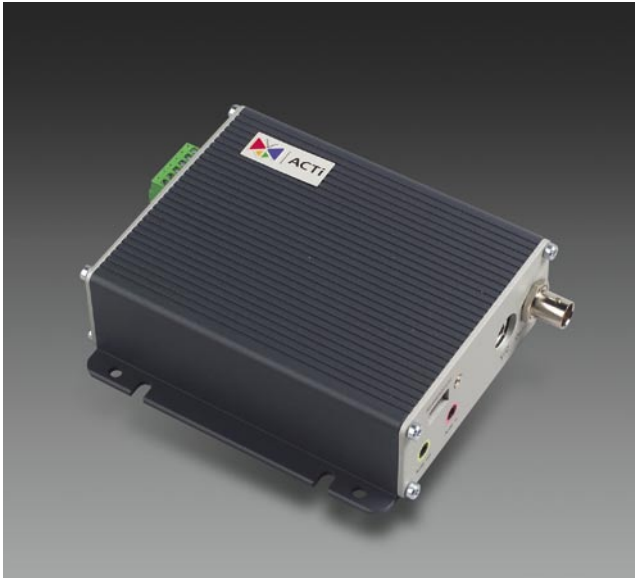
Model Name	w/ Audio	w/o Audio
SED-2600		V
SED-2610	V	

Video Transcoder

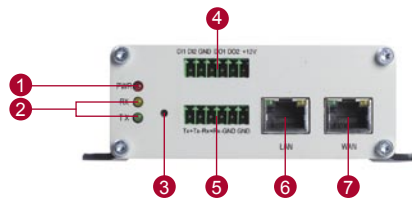


Model Name	SED-3300	SED-3320
Channel	1	1
Compression	MPEG-4 ASP	MPEG-4 ASP
FPS (NTSC/PAL)	30/25	30/25
Max. Video Resolution	720 x 480(NTSC) 720 x 576(PAL)	720 x 480(NTSC) 720 x 576(PAL)
Bit Rate	28 K ~ 3 M bps	28 K ~ 3 M bps
Video Connector	Composite x1; Y/C x1	Composite x1; Y/C x1
Audio	None	2 way
Serial Port	RS-485/422/232	RS-485/422/232
Alarm Input/Output	2/2	2/2
Protocol	TCP, UDP, RTP, RTSP	TCP, UDP, RTP, RTSP
Security	Password/Username protection	Password/Username protection
Rack Solution	RMK-2000	RMK-2000
Ethernet Networks	10/100Base-T x2 for LAN/WAN	10/100Base-T x2 for LAN/WAN

SED-3300/3320



- Up to full D1 MPEG-4 video decoding at 30/25 FPS
- QoS enabled (L3) video streaming
- Dual MPEG-4 video stream input via LAN or WAN (PPPoE supported) ports at the same time
- Digital time code retrieved
- Analog image decoded from up to 16 different ACTi devices can be displayed or set for patrol
- Two way audio supported (for SED-3320 only)



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

SED-3300 Without audio



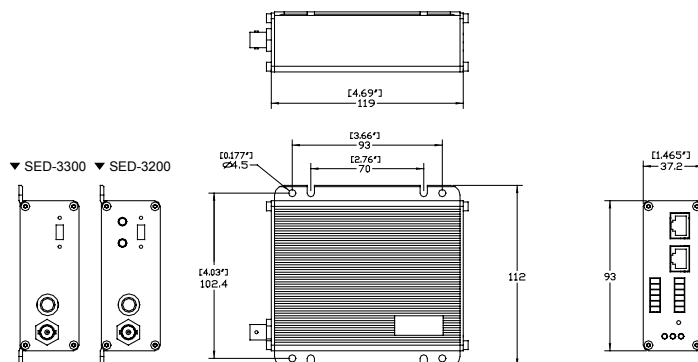
- ⑧ Serial port setting
- ⑨ Audio input / output
- ⑩ Analog video output (Y/C)
- ⑪ Analog video output (Composite)

SED-3320 With audio



- ⑧ Serial port setting
- ⑨ Audio input / output
- ⑩ Analog video output (Y/C)
- ⑪ Analog video output (Composite)

DIMENSION DIAGRAM



Unit: mm [inch]

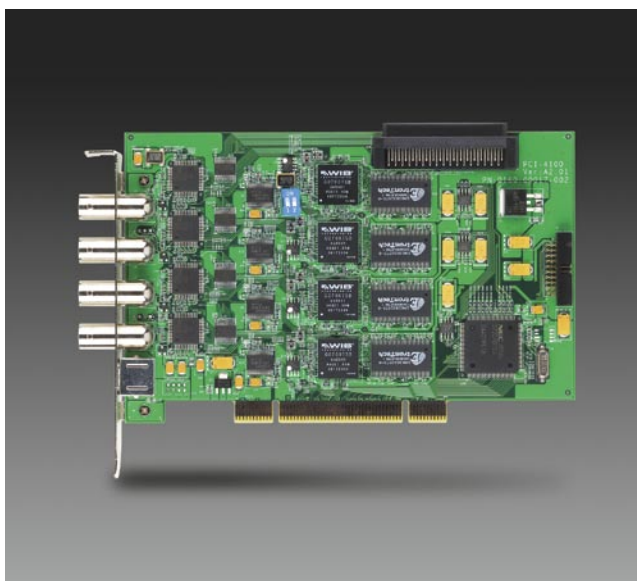
**PRODUCT SPECIFICATION**

		SED-3300	SED-3320
Video (Compression)	Compression	MPEG-4 ASP decoding	
	Picture Resolution	Full D1 (720 x 480 in NTSC, 720 x 576 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)	
Video Output	Composite Output	CVBS, 1.0Vp-p with 75 Ω loading, BNC connector; Y/C, 1.0Vp-p with 75 Ω loading/0.286Vp-p with 75 Ω loading, S connector	
Audio Input	Compression	N/A	8 kHz, Mono, PCM
	Audio Line Input	N/A	Unbalanced, 1.4 Vp-p, 1Vrms, 3.5 mm Jack
Audio Output	Compression	N/A	8 kHz, Mono, PCM
	Audio Line Output	N/A	Unbalanced, 1.4Vp-p, 1Vrms, 3.5 mm Jack
Alarm	Input	2, TTL, terminal block	
	Output	2, TTL, terminal block	
Remote Control	Serial Port	RS-485: half duplex, terminal block; RS-422: full duplex, terminal block; RS-232: full duplex, terminal block	
External I/O	Reset Button	Factory default	
	LED	System status	
Network	LAN Port	Ethernet(10/100 Base-T), RJ-45 connector	
	WAN Port	Ethernet(10/100 Base-T), RJ-45 connector	
	Protocol	TCP, UDP, IP, HTTP, DHCP, PPPoE, RTP, RTSP, FTP, SMTP	
Software	Web Browser	Microsoft Internet Explorer 6.0 or above	
	SDK	ActiveX control, C SDK	
	Security	Password Protection : configured by the administrator	
Operating	Temperature	5 ~ 50 °C (40 ~ 122 °F)	
Power	Power Requirement	DC 12 V $\pm$ 10%	
	Power Consumption	7.5 W	
Physical	Dimensions (WxHxD)	112 mm x 37.2 mm x 119 mm (4.41" x 1.46" x 4.68")	
	Weight-Net	350 g (0.66lb)	

ORDERING INFORMATION

Model Name	w/ Audio	w/o Audio
SED-3300		V
SED-3320	V	

PCI-4100



- 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, RS-422 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 compression	Compression	8 kHz, Mono, PCM
Picture Resolution	Full D1 (720x480 in NTSC, 720x576 in PAL) CIF (352x240 in NTSC, 352x288 in PAL) QCIF (160x112 in NTSC, 176x144 in PAL)	Audio Line Input	Unbalanced, 1.4Vp-p, 1Vrms, Mini Din
Image Frame Rate	30 fps at full D1 resolution (NTSC) 25 fps at full D1 resolution (PAL)	Web Browser	Microsoft Internet Explorer 6.0 or above
Composite Input	4, CVBS, 1.0Vp-p with 75Ω loading, BNC connector	SDK	ActiveX control, C SDK
		Security	Password protection : configured by the administrator

ORDERING INFORMATION

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

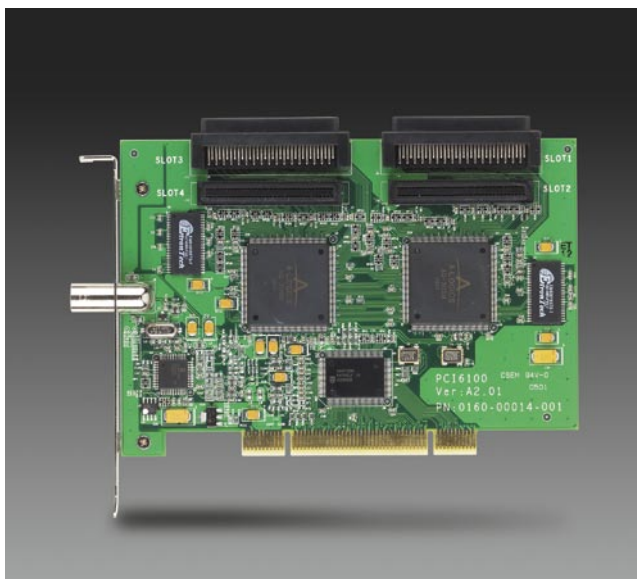
ACCESSORY OPTIONS

- Digital I/O board (4-in, 4-out) DIO-1100



DIO-1100

PCI-6100



- 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

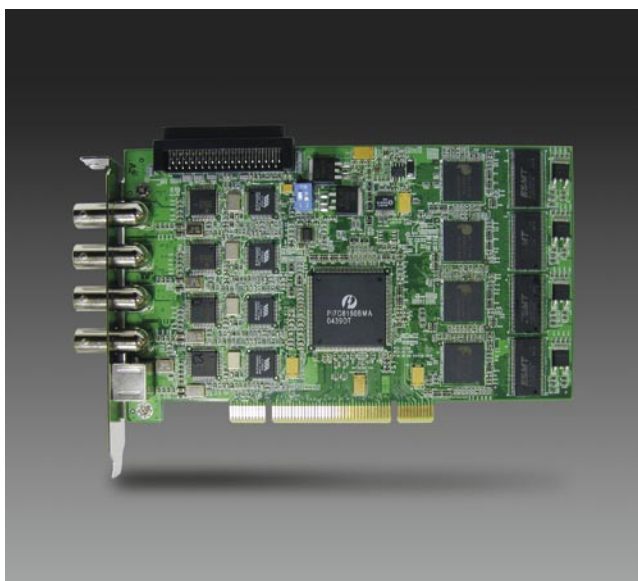
Video (Compression)		Video Output	
Compression	MPEG-4 Decoding	Composite Output	1, CVBS, 1.0Vp-p with 75Ω loading, BNC connector
Picture Resolution	Full D1 (720x480 in NTSC, 720x576 in PAL) CIF (352x240 in NTSC, 352x288 in PAL)	Software	
Image Frame Rate	30 fps at full D1 resolution (NTSC) 25 fps at full D1 resolution (PAL)	Web Browser	Microsoft Internet Explorer 6.0 or above
		SDK	ActiveX control, C SDK
		Security	Password protection : configured by the administrator

ORDERING INFORMATION

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

PCI-5100

4-channel MPEG-4 Video Decoder Card



- MPEG-4 hardware decompression supported
- CIF up to Full D1 resolution at 30/25 FPS
- 4 composite video outputs

► MPEG-4 decompression gives a high resolution image quality

The PCI-5100 are the 4-channel PCI-based decoding add-in cards that provide high performance MPEG-4 decoding from a local HD, or a remote ACTi video products to analog video/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-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 the ACTi's PCI-6100, the real-time display PCI-based add-on Card. This saves lots of CPU loading for supporting a larger system.

PRODUCT SPECIFICATION

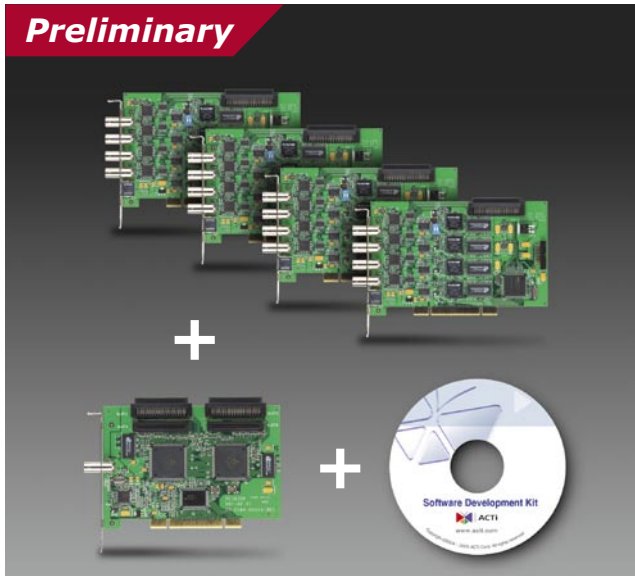
Video (Compression)		Video Output	
Compression	MPEG-4 decoding	Video Output	4, CVBS, 1.0Vp-p with 75Ω loading, loading, BNC connector
Picture Resolution	Full D1 (720x480 in NTSC, 720x576 in PAL) CIF (352x240 in NTSC, 352x288 in PAL)	Software	
Image Frame Rate	30 fps at full D1 resolution (NTSC) 25 fps at full D1 resolution (PAL)	Web Browser	Microsoft Internet Explorer 6.0 or above
		SDK	ActiveX control, C SDK
		Security	Password protection : configured by the administrator

ORDERING INFORMATION

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

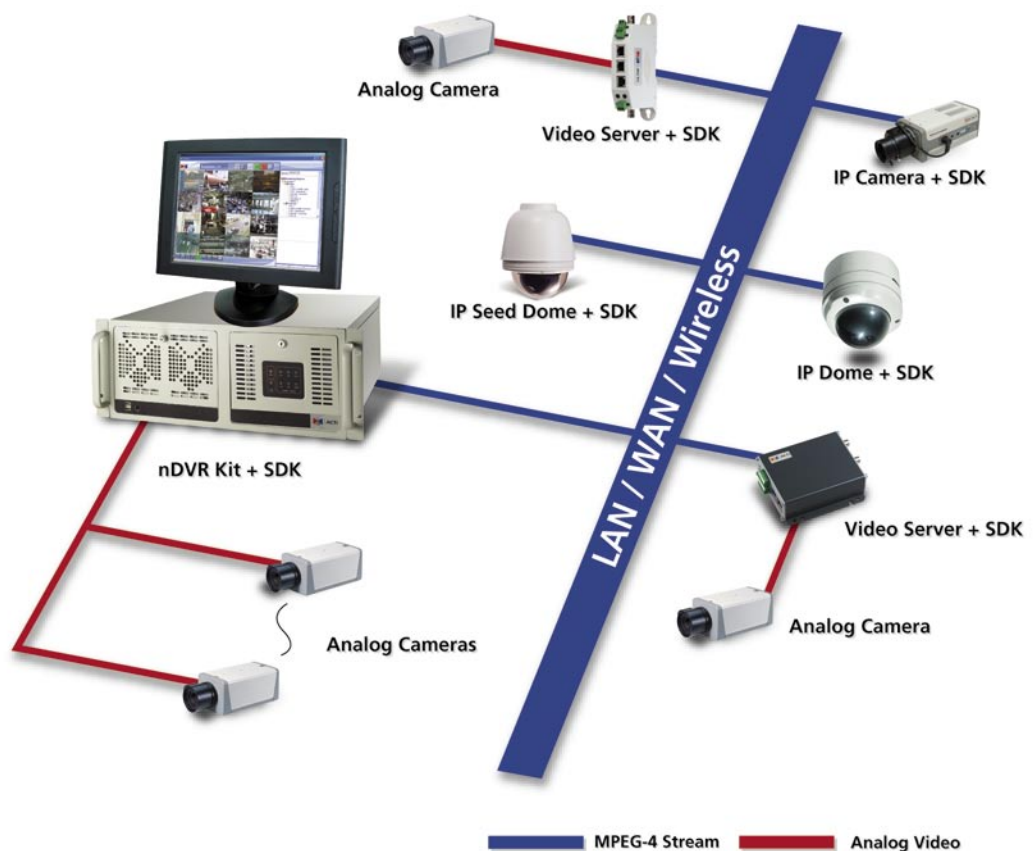
nDVR Development Kit

Preliminary



- Easy to integrate into video surveillance applications
- Visual C, C++ support
- 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 Full D1 resolution at 30/25 FPS
- Digital time code embedded
- Windows WDM driver (DirectShow Filter Supported)
- Video signal loss detection
- Hardware motion detection
- Blind camera detection

nDVR Solution



**PRODUCT SPECIFICATION**

Compression	MPEG-4 ASP compliant hardware compression	Recording	Background recording, alarm recording, pre-event and post-event recording
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)	Playback	MPEG-4 decoding and display
Image Frame Rate	30 fps at full D1 resolution (NTSC) 25 fps at full D1 resolution (PAL)	Motion Detection	Callback function supported when a motion detected
Video Input	Composite, BNC connector	Digital I/O Event	Callback function supported when a digital input is triggered
Video Output	Composite, BNC connector x1	Serial Port Function	Sends serial port command
Audio Output	Unbalance audio, RCA connector	PTZ Function	Pelco-P and Pelco-D protocol sample code included
PCI Interface	PCI 2.1 compliant	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
Device Driver	Driver supports Windows 2000, Windows XP and Windows 2003		
Programming Languages	Visual C++ v6.0, Visual Studio.Net 2003		
Live Preview	Streaming and decode MPEG-4 information		

System Requirement

CPU	Pentium IV 2.8 GHz and above	Display	AGP 8X with 64 MB memory and above
PCI Slots	5 (32bit/33Mhz PCI slot) for maximum load (PCI-4100 x4 + PCI-6100 x1)	Hard Disk	40 GB and above
System Memory	512 MB	Power Supply	ATX 300 W
Network Connection	1 Gbps Ethernet	* Detail qualified vender list is provided upon request. Please contact your sales representatives for more detail information.	

Integration Test

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

nDVR Kit Content

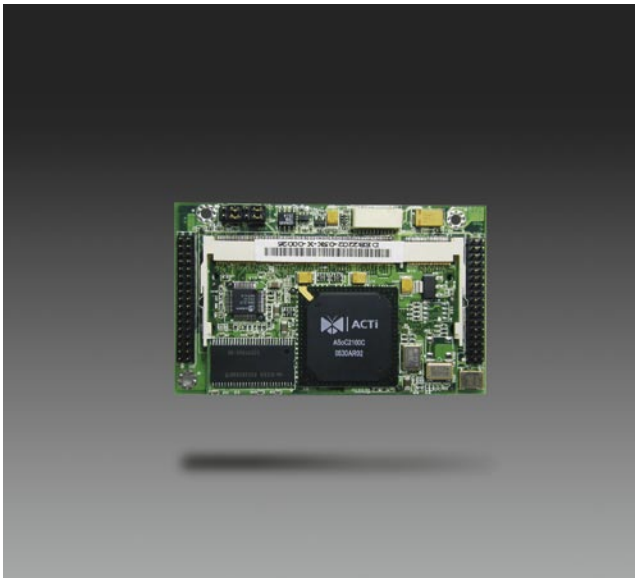
PCI-4100	4-channel MPEG-4 Video Audio Compression Card
PCI-6100	16-channels Real time Video Output Display Card (optional)
SDK-4000 / SDK-6000	nDVR SDK for PCI-4100 and PCI-6100

ACCESSORY OPTIONS

- Digital I/O board (4-in, 4-out) DIO-1100

SEM-1110/1120

MPEG-4 Encoder Module

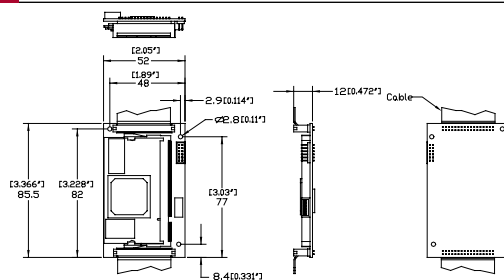


- MPEG-4 ASP compliant compression
- CIF up to full D1 resolution at 30/25 FPS
- Dual MPEG-4 video stream output via LAN and WAN (PPPoE supported) ports at the same time
- QoS enabled (L3) video streaming
- Digital time code embedded
- Bi-directional audio supported
- Isolated digital input and output supported
- Three options for video interfacing - composite or S-Video or component

PRODUCT SPECIFICATION

		SEM-1110	SEM-1120
Video Compression	Compression	MPEG-4 ASP compliant	
	Picture Resolution	Full D1 (720x480 in NTSC, 720x576 in PAL); CIF (352x240 in NTSC, 352x288 in PAL); QCIF (160x112 in NTSC, 176x144 in PAL)	
	Bit Rate	28 K ~ 3 M bps	
Video Input	Image Frame Rate	30fps at full D1 resolution (NTSC); 25fps at full D1 resolution (PAL)	
	Multi-stream	Up to 4 configurable frame rate/bit rate streams for preview and recording	
	Composite Input	CVBS, 1.0Vp-p with 75 Ω loading Y/C, 1.0Vp-p with 75 Ω loading/ 0.286Vp-p with 75 Ω loading	
Video Output	Digital Input	YPbPr, 1.0Vp-p with 75 Ω loading/ 0.7Vp-p with 75 Ω loading	
	Composite Output	CVBS, 1.0Vp-p with 75 Ω loading	
Audio Input	Compression	8kHz, Mono, PCM	N/A
	Audio Line Input	Unbalanced, 1.4Vp-p, 1Vrms	N/A
Audio Output	Compression	8kHz, Mono, PCM	N/A
	Audio Line Input	Unbalanced, 1.4Vp-p, 1Vrms	N/A
Alarm	Input	2, TTL	
	Output	2, TTL	
Remote Control	Serial Port	RS-485: half duplex; RS-422: full duplex; RS-232: full duplex	
External I/O	Reset Key	Factory default	
	LED	System status	
	LAN Port	Ethernet(10/100Base-T)	
Network	WAN Port	Ethernet(10/100Base-T)	
	Protocol	TCP, UDP, IP, HTTP, DHCP, PPPoE, RTP, RTSP, FTP, SMTP	
	Web Browser	Microsoft Internet Explorer 6.0 or above	
Software	SDK	ActiveX control, C SDK	
	Security	Password protection: configured by the administrator	
Operating	Temperature	-30 $^{\circ}$ C to 60 $^{\circ}$ C (-86 $^{\circ}$ F ~ 140 $^{\circ}$ F)	
Power	Power Requirement	DC 12 V $\pm$ 10%	
	Power Consumption	7.5 W	
Physical	Dimensions	52 mm x 85.5 mm x 12 mm (2.05" x 3.37" x 0.47")	
	Weight	50 g (0.01 lb)	

DIMENSION DIAGRAM



Unit: mm [inch]

ORDERING INFORMATION

Model Number	w/ Audio	w/o Audio	Wire to Board Connection	w/ Casing	Board to Board Connection
SEM-1110	V		V		
SEM-1110C	V		V	V	
SEM-1111	V				V
SEM-1120		V	V		
SEM-1120C		V	V	V	
SEM-1121		V			V

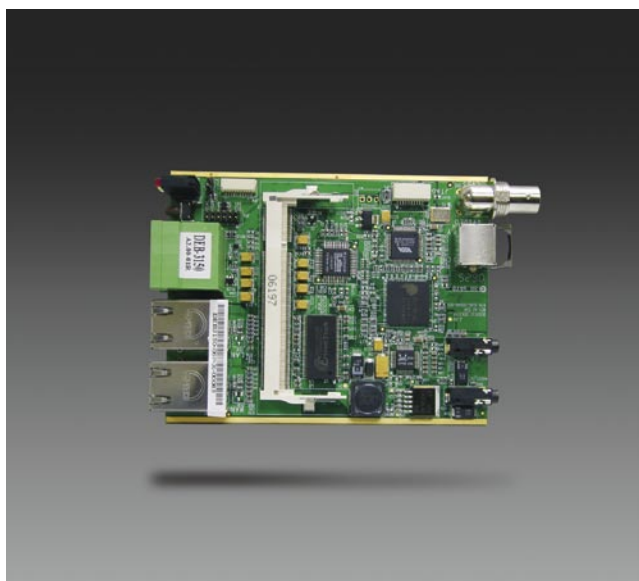
* EVB-2100 evaluation board for SEM-1110/SEM-1110C/SEM-1120/SEM-1120C is available upon request.



Module Housing

SEM-2110/2120

MPEG-4 Decoder Module

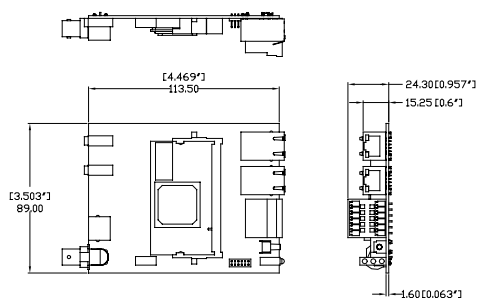


- Up to full D1 MPEG-4 video decoding at 30/25 FPS
- QoS enabled (L3) video streaming
- Dual MPEG-4 video stream output via LAN and WAN (PPPoE supported) ports at the same time
- Digital time code retrieved
- Isolated digital input and output supported

PRODUCT SPECIFICATION

		SEM-2110	SEM-2120
Video Compression	Compression	MPEG-4 ASP decoding	
	Picture Resolution	Full D1 (720x480 in NTSC, 720x576 in PAL); CIF (352x240 in NTSC, 352x288 in PAL)	
	Bit Rate	28 K ~ 3 M bps	
	Image Frame Rate	30 fps at full D1 resolution (NTSC); 25 fps at full D1 resolution (PAL)	
Video Output	Composite Output	CVBS, 1.0Vp-p with 75 Ω loading, BNC connector	
		Y/C, 1.0Vp-p with 75 Ω loading/ 0.286Vp-p with 75 Ω loading, S connector	
Audio Input	Compression	8 kHz, Mono, PCM	N/A
	Audio Line Input	Unbalanced, 1.4Vp-p, 1Vrms	N/A
Audio Output	Compression	8 kHz, Mono, PCM	N/A
	Audio Line Input	Unbalanced, 1.4Vp-p, 1Vrms	N/A
Alarm	Input	2, TTL	
	Output	2, TTL	
Remote Control	Serial Port	RS-485: half duplex; RS-422: full duplex; RS-232: full duplex	
External I/O	Reset Key	Factory default	
	LED	System status	
	LAN Port	Ethernet(10/100Base-T)	
Network	WAN Port	Ethernet(10/100Base-T)	
	Protocol	TCP, UDP, IP, HTTP, DHCP, PPPoE, RTP, RTSP, FTP, SMTP	
Software	Web Browser	Microsoft Internet Explorer 6.0 or above	
	SDK	ActiveX control, C SDK	
Operating	Security	Password protection: configured by the administrator	
	Temperature	-30 $^{\circ}$ C to 60 $^{\circ}$ C (-86 $^{\circ}$ F ~ 140 $^{\circ}$ F)	
Power	Power Requirement	DC 12 V $\pm$ 10%	
	Power Consumption	7.5 W	
Physical	Dimensions	89 mm x 116.8 mm x 24.3 mm (3.5" x 4.55" x 0.95")	
	Weight	150 g (0.35 lb)	

DIMENSION DIAGRAM



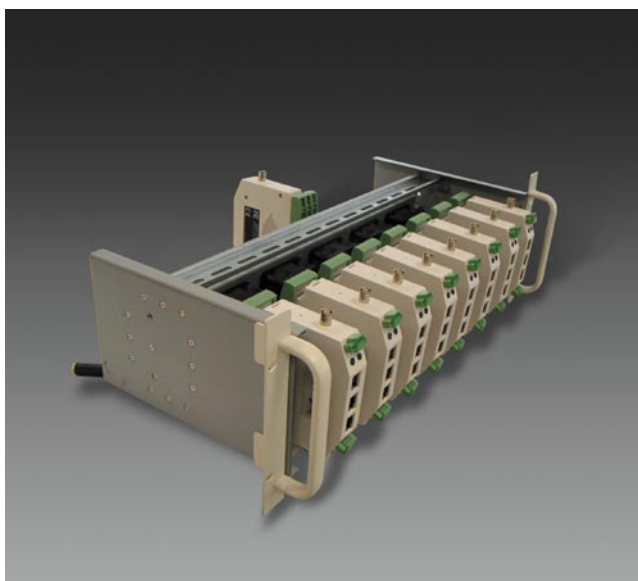
Unit: mm [inch]

ORDERING INFORMATION

Model Number	w/ Audio	w/o Audio
SEM-2110	V	
SEM-2120		V

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 separated DIN rail mounting planes
- Dedicated 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-2100 video server. The RMK-1000 provides the space efficiency required in applications that need the central management for high volume of DIN rail devices.

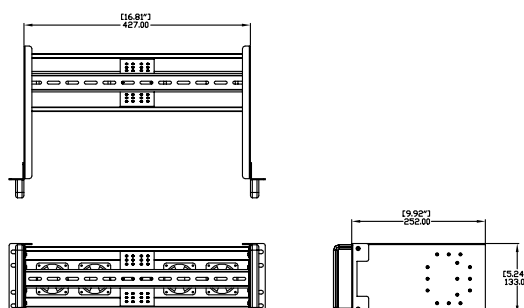
The RMK-1000 also provides a set of 5 fans cooling method for best ventilation. Each of the fans is replaceable if it reaches its end of life or by customer's request for higher CFM of air flow or lower dBA of noise.

For installing the ACTi's SED-2100, a DIN rail mounting bracket is needed. It is recommended that a max. of 16 pieces of the SED-2100 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-2100
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
Operation Temperature	5 °C ~ 50 °C (40 °F ~ 122 °F)
Color	Beige
Dimension (W x D X H)	427 mm x 133 mm x 252 mm (16.8" x 5.24" x 9.92")

DIMENSION DIAGRAM



Unit: mm [inch]

RMK-2000

Rackmount Kit for Wallmount Type Devices



- 19-inch 4U Rackmount Kit
- Dedicated 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.

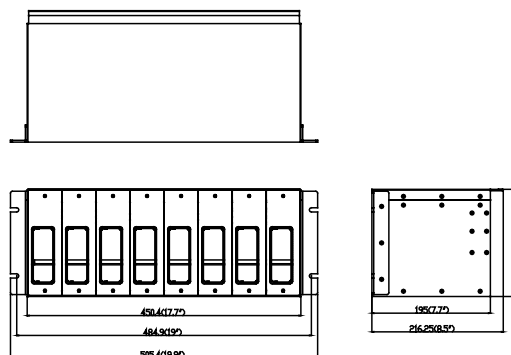
PRODUCT SPECIFICATION

Construction	Heavy-duty steel
Applied Devices for RMK-2000	SED-2120/SED-2140/SED-2310Q/ SED-2320Q/ SED-2410/SED-2420/SED-3300/ SED-3320
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
Operation Temperature	5 °C ~ 50 °C (40 °F ~ 122 °F)
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

- | | |
|---|----------------|
| • FRONT-BEZEL for SED-2410/SED-2420 | 0306-00003-000 |
| • FRONT-BEZEL for SED-2120/SED-2140/
SED-2310Q/SED-2320Q/SED-3300/SED-3320 | 0306-00004-000 |
| • FRONT-BEZEL for SED-8100 | 0306-00005-000 |
| • FRONT-BEZEL for SED-8120/SED-8140/
SED-8310Q/SED-8320Q/SED-9300/SED-9320 | 0306-00006-000 |
| • FRONT-BEZEL for General | 0306-00007-000 |

DIMENSION DIAGRAM



Unit: mm [inch]

IP Integration Products

PoE

MS-POE-PD1212



802.3af Enable PoE Splitter

- Work with 802.3af PSE (Power Source Equipment), as a data/power splitter and DC to DC converter
- With surge voltage protection
- Support 12 V DC, 1 A max.
- Plastic Case Dimension: 85mm (D) x 76mm (W) x 36mm (H)
- Weight: 150 g
- CAT-5 UTP cable length: 30 cm, RJ-45 plug, gray color
- DC power cable length: 30 cm, DC power plug, gray color

MS-POE-IJAF



802.3af Enable PoE Injector

- Fully IEEE 802.3af enable solution.
- Transform AC power to 48 V DC power
- Inject 48 V DC through CAT-5 cable pin# 4, 5, 7, 8, into remote devices such as Wireless AP, IP Phone, Web Camera, etc.
- Input: AC 90 V – AC 264 V / 0.4 A @ 110 Vac, 0.2 A @ 220 Vac
- OUTPUT: DC 48 V, 350 mA
- Plastic case dimension: 85 mm (L) x 76 mm (W) x 36 mm (H)
- Weight: 150g

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
- MOQ: 5 PCS

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
- MOQ: 5 PCS

Wireless (Outdoor)

ALink-5801



Broadband Wireless Bridge Solutions (1 Master to 4 Slaves 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
- Without Antenna

R-ASU-24005g



Broadband Wireless Access Point Solutions (AP/Bridge/Client)

- Standard: IEEE 802.11b, IEEE 802.11g, IEEE 802.3, IEEE802.3u, IEEE802.3x
- Output Power: 18 dBm (802.11b), 17 dBm (802.11g)
- Operation Mode: AP / Wireless Client (Infrastructure and Ad Hoc) / Repeater / WDS PtP and PtMP Mode
- Operation Temperature: -20 °C ~ +70 °C
- Combined Antenna: Integrated 12 dBi flat panel antenna
- Accessories: 12 V DC Injector/RJ-45, Bracket, FTP CAT5E/25M RJ-45, Switch Adaptor, 2 M RJ-45

R-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

WL-699C



802.11g Wireless Ethernet Adapter

- IEEE 802.11b/g standard compliant with data rate of up to 54Mbps
- 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

Antenna for Wireless

AN51812B



5.8GHz Omni-directional Antenna

- Frequency Range: 5.1~5.9 GHz
- Impedance: 50 OHMS $\pm$ 5 Ω
- SWR: $\leq$ 1.5
- Gain: 12 dBi
- Radiation: Omnidirectional
- Polarization: Vertical
- Connector: N-FEMALE
- Weight: 370g

AN51818A



5.8GHz Flat panel Antenna

- Frequency Range: 5.1~5.9 GHz
- Impedance: 50 OHMS $\pm$ 5 Ω
- SWR: $\leq$ 1.5
- Gain: 18 dBi
- Radiation: Directional
- Polarization: Vertical
- Connector: N-FEMALE
- Weight: 900g
- Size (mm):
L 263mm $\times$ W 263 mm $\times$ H 30mm

AN58022D



Gridpak Antenna

- Frequency range: 5725-5850 MHz
- Gain: 22dBi
- VSWR: < 1.5:1 avg.
- Polarization: Horizontal or Vertical
- HPBW / horizontal: 13°
- HPBW / vertical: 10°
- Front to back ratio: 25 dB
- Max. Input Power: 100 Watts
- Impedance: 50ohms
- Connector: N-Female
- Weight: 3 lbs. (1.4 kg)

AN51823A



Directional Panel Antenna

- Frequency range: 5150-5875MHz
- Gain*: 23dBi
- VSWR: 2.0:1Max
- Polarization: Linear
- HPBW / horizontal: 9°
- HPBW / vertical: 9°
- Front to back ratio: 30dB
- Power handling: 1W
- Impedance: 50ohms
- Connector: N-Female
- Weight: 1.2kg
- Dimensions: 320x320x18mm

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

Bracket

GL-201



Bracket

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

GL-205N



Housing Bracket

- Construction: Aluminum (Beige Silver-grey)
- Maximum Load: 10 Kg
- Swivel Angle: 360°
- Tilt Angle: 90°
- Dimension (W x L x H):
85 x 100 x 285mm
- Weight: 750g

CCTV Lens

0690-00002-000



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
0690-00004-000	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

Accessories

Speed Dome Mounting (CAM-6500/CAM-6600 Series)

D77H06-H00



Hard Ceiling Mount

- Height: 21.4mm;
- Diameter of the three holes: 4.5mm;
- Diameter of the bracket: 158mm; 0.2kg
- For CAM-6500 Series

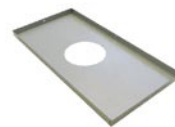
D77H06-T25



T-Bar Ceiling Mount

- Height: 170 mm (6.7 inches);
- Diameter: 180 mm (7.1 inches);
- 0.5 kg (1.1 lbs)
- For CAM-6500 Series

90-77H061P00



Ceiling Panel

- Zn plated;
- 610×305 mm (24×12 inches);
- Diameter: 135 mm (5.3 inches)
- For CAM-6500 Series

69-77H05AIMK



Indoor Mount Kit

- White; Diameter:
- 140 mm (5.5 inches);
- Height: 74 mm (2.9 inches)
- For CAM-6500 Series

D77H03-BW



Gooseneck Tube

- White/Iron; 298×385 mm (11.73×15.56 inches) ;
- 2.1 kg (4.6 lbs)

D77H03-1W

D77H03-2W



Straight Tube

- White/Iron; Height: 250/500 mm
- (9.8/19.7 inches); Diameter: 50 mm
- (2 inches); 1 kg (2.2 lbs) / 1.8 kg (4 lbs)

D77H05-WBM



Wall Box Mounting

- 270x166x95mm (10.6x6.5x3.7 inches);
- 2.2kg (4.84lbs)

D77H05-CTB



Corner Thin Box Mounting

- 300x164x222mm (11.8x6.5x8.7 inches);
- 3kg (6.7lbs)

D77H05-PTB



Pole Thin Box Mounting

- 291x170x250mm (11.5x6.7x9.8 inches);
- 3.1kg (6.9lbs)

Speed Dome Bracket (CAM-6100/CAM-6200 Series)

SAD755



Speed Dome Corner Mount Bracket

- Color: Beige
- Dimensions:
- 210 x 305 x 180 mm
- Combined with SAD752 + SAD753
- Weight: 1.8 Kg
- For CAM-6100 Series

SAD756



Speed Dome Pole Mount Bracket

- Color: Beige
- Dimensions: 180 x 60 x 240 mm
- Combined with SAD752 + SAD753
- Weight: 1.2 Kg
- For CAM-6100 Series

QA-302



Speed Dome Corner Mount Bracket

- Color: Beige
- Dimensions:
- 279 x 239 x 313.5 mm
- Weight: 3.5 Kg
- For CAM-6200 Series

QA-305



Speed Dome Pole Mount Bracket

- Color: Beige
- Dimensions:
- 174 x 51 x 238 mm
- Weight: 3.5 Kg
- For CAM-6200 Series

Accessories

Speed Dome Cover

61-PDH700105A1

(Non-Vandal)



5" Transparent Cover for CAM-6500

Diameter: 127 mm

61-PDH700106A1

(Non-Vandal)

61-PDH700109A1

(Vandal)



5.4" Transparent Cover for CAM-6500

Diameter: 137 mm

61-PDH700107A1

(Non-Vandal)



5" Smoke Cover for CAM-6500

Diameter: 127 mm

69-H8101CA1

(Non-Vandal)



6" Transparent Cover for CAM-6600

Diameter: 152 mm

69-DH8001CV1

(Vandal)



6" Transparent Cover for CAM-6600

Diameter: 152 mm

69-DH8101CS1

(Non-Vandal)



6" Smoke Cover for CAM-6600

Diameter: 152 mm

Control Panel

0697-00001-000



Control Panel for CAM-6100 Series

- RS-485/422/232 multi-protocols
- Controls up to 256 speed domes directly
- Compatible with CAM-61xx series
- Presets, tour, auto scan, random scan and frame scan control
- RS-232 port for computer to control cameras via this control panel
- Support Pelco-P / Pelco-D protocol
- Dimensions (W x H x D): 175 x 248 x 55 mm
- Weight: 1.2 Kg

0697-00002-000



Control Panel for CAM-6200 Series

- Communication port: RS485
- Controls up to 255 speed domes directly
- Compatible with CAM-62xx series
- Presets, tour, auto pan and patrol learn
- Set up as "Master" and "Slave" keyboard, max. up to 4 keyboard to enable the function of the multi-control system
- Support Pelco-P / Pelco-D / Eyeview / Alec protocol
- Dimensions (W x H x D): 350 x 62 x 200 mm
- Weight: 5.5 Kg

0697-00003-000



Control Panel for CAM-6500 Series/CAM-6600 Series

- RS-485 port for CCTV system control
- Built-in DSCP, Pelco D&P protocol
- Joystick control of PTZ functions
- Preset position and Cruise control
- User-friendly interface
- Firmware upgrade via RS-232
- Control Dome cameras, P/T/Z Receivers, Multiplexers, DVRs
- Maximum 255 devices can be controlled on the same bus, included 223 Dome Cameras or Receivers, 16 System Keyboards
- Dimensions (W x H x D): 175 x 330 x 65 mm
- Weight: 1.5 Kg

Others

90-D77H05AT02



Cutting Tools for Stainless Straps

1.4 kg (3.1 lbs)

69-77H071C00



Alarm Kit

White Color; 92×42 mm
(3.7×1.7 inches); 0.13 kg (0.3 lbs)

69-77H071PD13



Power Box (IP66)

- White; 186.5×147 mm (7.3×5.8 inches); 2.6 kg (5.8 lbs)
- PD13 Input: 10~115VAC/Output: 24VAC 72VA
- PD23 Input: 220~230VAC/Output: 24VAC 72VA

69-77H071PD23



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, DivX
- Support video and audio functions

► 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+, ActiveX 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 + JavaScript) are included. User may use XviD, FFMPEG, DivX 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, DivX 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, WSS2003
Programming Language	Visual C++ v6.0, Visual Studio.Net, Visual Studio.Net 2003, Visual BASIC v6.0, Visual BASIC.Net, HTML + JavaScript

Functionality

Format	Support video and audio format
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 XviD, FFMPEG, DivX 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-2200

SDK for ACTi NVR

Preliminary

- ACTi NVR Integration via URL Commands
- Easy to integrate into video surveillance application
- Search events and remote playback functions
- 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, DivX
- Supports video and audio functions

► Versatile support on industry-standard programming languages

ACTi SDK-2200 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+, ActiveX 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 + JavaScript) are included. User may use XviD, FFMPEG, DivX or other ISO-14496-2 compliant MPEG-4 software decoder to decode ACTi's MPEG-4 raw data stream.

► URL commands to manage ACTi NVR

User may use URL commands to interact with ACTi NVR system, including manage, monitor ACTi NVR system, search events stored in ACTi NVR system and playback recorded video clip remotely. The commands are listed in XML format; sample codes are included.

► Decodes with Xvid, FFMPEG

Developers may get MPEG-4 raw stream with a simple function, then decodes with XviD, FFMPEG, DivX 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.

PRODUCT SPECIFICATION

Development Environment

Environment	Windows XP, Windows 2000, Windows 2003, WSS 2003
Programming Language	Visual C++ v6.0, Visual Studio.Net, Visual Studio. Net 2003, Visual BASIC v6.0, Visual BASIC.Net, HTML + JavaScript

Functionality

Format	Support video and audio format
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

MPEG-4 Streaming Management

Callback function to get MPEG-4 raw data directly

Standard MPEG-4 Decoding

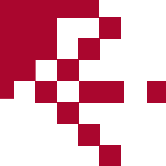
User may decodes ACTi's MPEG-4 raw data using XviD, FFMPEG, DivX or other standard ISO-14496 compliant MPEG-4 software decoder libraries.

MJPEG Function Calls

Provides function calls to convert ACTi's MPEG-4 stream to a series of RGB buffer.

ACTi NVR Integration

Manage	Query system information and add, delete device
Monitor	Monitor ACTi NVR system resources, disk capacity, recording and schedule status
Search	Search events by channel, date, time, motion detection, alarm event, video loss event and network disconnect event
Remote Playback	Playback video clips remotely
Remote Preview	Preview IP device via ACTi NVR system



SDK-3000

SDK for Transcoder



- 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
- 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 switch system with URL command, the codes are listed as follow:

```
http://192.168.1.1/cgi-bin/url.cgi?USER=Admin&PWD=123456&VIDEO_TCP_IP=192.168.1.100&SWITCH
```

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

SDK for Capture Card



- 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, DivX

► 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, DivX 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, DivX 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

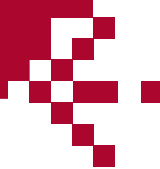
To implement a video surveillance system with ActiveX Control, the codes is listed as follow:

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



SDK-5000

SDK for Decoder Card



- 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
- 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

SDK for Multiplexer Card



- 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 SDK-6000 offers a simple but flexible way to enable quick and cost-effective development of multiplexing video source from Capture Card or Decoder Card 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.

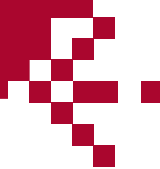
► Sample implementation codes

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

```
;; multiplexing on 4-window, 9-window          ;; motion detection enabling
objMedia.DisplayMode = 4 ; 4-window layout      ;; on channel 1, grid (3, 5) to (6, 8)
objMedia.SetMappingChannel(1, 1)                ;; with sensitivity 80
objMedia.SetMappingChannel(2, 2)                objMedia.EnableMD(1, 3, 5, 6, 8, 80)
objMedia.Connect()
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	
Multiplexing	Supports various mode of window layout, including 1, 4, 6, 7, 9, 10, 13, 16 window layout
Motion Detection	Enable motion detection



SDK-10000

Unified SDK



- Easy to integrate into video surveillance application
- Simple calls to support preview/record/playback/motion detection/DIO/PTZ functions
- Unified SDK for IP devices, capture card and decoder card products
- Superset of SDK-2000, SDK-4000 and SDK-5000
- Visual C, C++, Visual BASIC and JavaScript Supported
- C Library edition
- ActiveX Control edition
- URL Command edition
- May decode with FFMPEG, XviD, DivX
- Support video and audio functions

► Versatile support on industry-standard programming languages

ACTi SDK-10000 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+, ActiveX Control and URL command.

► Software modules

ACTi SDK-10000 modules include device connection (TCP, Multicast), device configuration, receive MPEG-4 stream callback, decode MPEG-4 to RGB callback, preview, after render callback, DIO, motion detection, PTZ, recording, and playback functions; user may easily develop their own application with desired programming language and methods to link with ACTi devices.

► Unified SDK

ACTi SDK-10000 links with ACTi IP Devices, Capture cards and Decoder cards. SDK-10000 is the superset of SDK-2000, SDK-4000 and SDK-5000 with the benefits of the same function calls for integrating these products.

► Decodes with FFMPEG, XviD, DivX

Developers may get MPEG-4 raw stream and decodes with FFMPEG, XviD, DivX or other MPEG-4 compliant software decoders. Users may decode them into RGB buffer and process them as a series of pictures. Detailed protocols (TCP, Multicast, RTP) and MPEG-4 data structure are listed in the Programming Guide.

► 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()

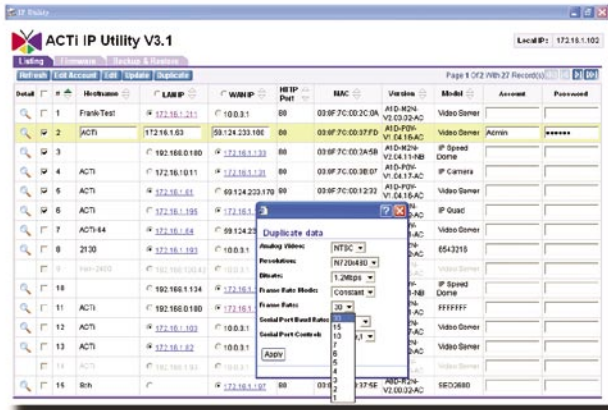
;; recording
objMedia.Record(" C:\\TEST.AVI")
;; playback
objMedia.MediaSource = " C:\\TEST.AVI"
objMedia.Play()
```

PRODUCT SPECIFICATION

Development Environment			
Environment	Win 2000, Win XP, Win 2003, WSS2003	Recording	Recording, alarm recording with pre-event, post-event recording time
Programming Language	Visual C++ v6.0, Visual Studio.Net, Visual Studio.Net 2003, Visual BASIC v6.0, Visual BASIC.Net, HTML + JavaScript	Playback	Playing recorded archive with various control mechanisms
Device Supported		Motion Detection	Callback function supported when a motion detected
IP Products	IP Camera, Video Server, IP Speed Dome, Quad Video Server	Digital I/O Event	Callback function supported when a digital input is triggered
Capture Card Products	Capture card series products	Serial Port Function	Sends serial port command
Decoder Card Products	Decoder card series products	PTZ Function	Various PTZ protocols (including Pelco-P, Pelco-D), etc and sample codes included
Functionality		MPEG-4 Streaming Management	Callback function to get MPEG-4 raw data directly
Format	ISO-14496-2 video and audio format	Standard MPEG-4 Decoding	Decode with FFMPEG, XviD, DivX
Live Preview	Streaming and decode MPEG-4 information		

IP Utility

IP Network Utility And Management Tool



- Search and locate ACTi IP Surveillance products
- Search and report firmware version and Configuration of the IP devices
- Manages IP devices on-the-fly
- Upgrade firmware to multiple devices at the same time
- Backup and restore configuration to multiple devices at the same time
- Duplicate settings 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 camera name, 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

Administrator may duplicate the same settings to multiple devices on the network, including:

- Analog standard
- Resolution, Bit Rate, Frame Mode, Frame Rate
- Serial port baud rate and setting

► Global firmware upgrades

Manages multiple devices at the same time:

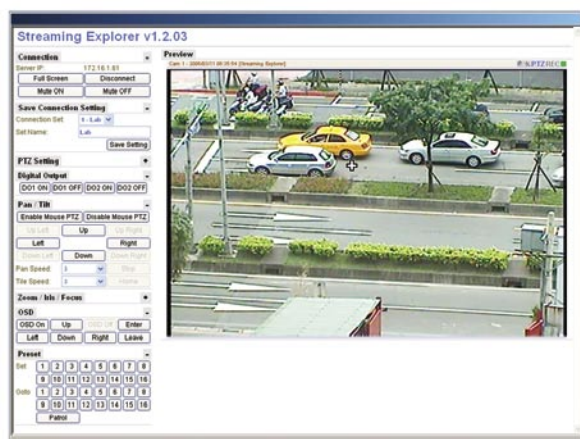
- Upgrade firmware to multiple devices
- Update configuration to multiple devices

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
Duplicate Setting	
Analog Video	NTSC or PAL standard
Bit Rate	3Mbps, 2.5Mbps, 2Mbps, 1.5Mbps, 1.2Mbps, 1Mbps, 750Kbps, 500Kbps, 256Kbps, 128Kbps, 56Kbps
Frame Mode	Constant Frame Rate or Variable Frame Rate
Frame Rate	• NTSC Constant Frame Rate: 30, 15, 10, 7, 6, 5, 4, 3, 2, 1 • PAL Constant Frame Rate: 25, 12, 10, 7, 6, 5, 4, 3, 2, 1 • NTSC Variable Frame Rate: 30, 6, 3, 1 • PAL Variable Frame Rate: 25, 5, 3, 1
Serial Port Baud Rate	115200, 57600, 38400, 19200, 9600, 4800, 2400 bps
Serial Port Setting	N81, E81, O81

Streaming Explorer



- Web Application
- One-channel live video display
- Camera Configuration via Web OSD Menu
- Support PTZ operations
- On-screen 8-way Mouse PTZ
- Support PTZ, Focus, IRIS, Preset, OSD, BLC, day and night operations

► Web-enabled application

ACTi Streaming Explorer is a web 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 as well as 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

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
Expandable PTZ Commands	User may create the PTZ commands themselves or download new PTZ protocols from ACTi web site

PTZ Functions

Pan, Tilt, Zoom	8-way Pan, Tilt and Zoom operation with speed
OSD Menu	On screen menu to further configure the setting in speed dome or camera
Preset	Set, Goto, Clear preset position. Maximum 16 positions supported

Preset Tour	Configure and execute a preset tour
Pattern Tour	Configure and execute a pattern tour
Auto Scan	Execute auto scan
Day and Night Switch	Enable/disable day-n-night setting via a button
Mouse PTZ	On-screen mouse PTZ. 8-direction pan-tilt control.
Saved Setting	Streaming Explorer remember 3 sets of settings, including IP, Account, Password, Port information, Serial Port and PTZ Protocol information

ACTi Streaming Engine

Streaming Engine



- Supports 64 remote clients all at D1, 30 FPS
- Supports 64 ACTi devices all at D1, 30 FPS
- Supports load-balancing architecture
- Supports ISO-14496-2 MPEG-4 video + audio format
- Remote Preview on IP Camera, Video Server, IP Speed Dome and Capture Card
- Remote Playback with seek operation
- Win32 Service
- Integrated with Activator, NVR web client
- May link with SDK-2000 v2.0, SDK-10000 v1.0

► Multiple concurrent connections

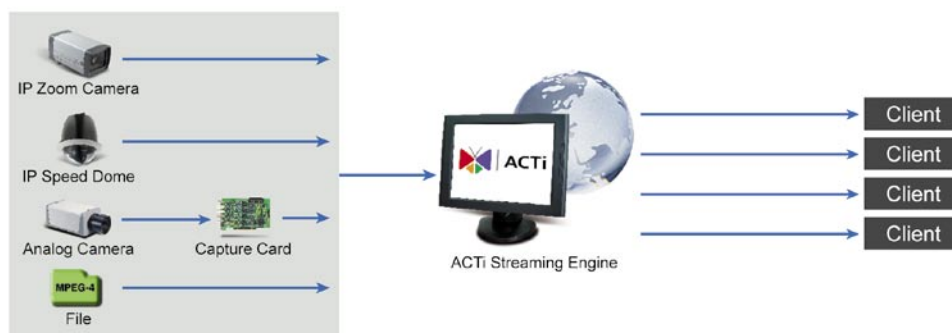
ACTi Streaming Engine connects to all ACTi products, and forwards the MPEG-4 streaming data to connected clients; with maximum 64 concurrent clients.

► Supported devices

ACTi Streaming Engine connects to ACTi video server, IP Camera, IP Speed Dome, Capture Card and Multiplexer Card. Client may connect to ACTi Streaming Engine with standard NVR client, Activator, SDK-10000 v1.0 and SDK-2000 v2.0.

► Flexible Deployment with Remote Preview

ACTi Streaming Engine may connect to IP cameras inside Intranet and supports remote preview on Internet site.



PRODUCT SPECIFICATION

Hardware Requirements

CPU	Intel Pentium-D 3.0GHz (FSB 800)
Motherboard	Intel 945 chipset or above
LAN Card	Gigabit Ethernet
Hard Disk	80 GB
OS	Windows XP, Windows 2003, WSS2003
Browser	Microsoft Internet Explorer v6.0

Connectivity

Maximum Connection	64 Clients
Load-balancing	Streaming engine may connect to another Streaming engine to share loading
Network Protocol	TCP, Multicast*, RTP / RTSP*

Data Format	ISO-14496-2 MPEG-4 video+audio format
Client Connections	NVR v1.0 Web Client, Activator v1.37, Activator v2.0
SDK	SDK-2000 v2.0 , SDK-10000 v1.0

Supported Devices

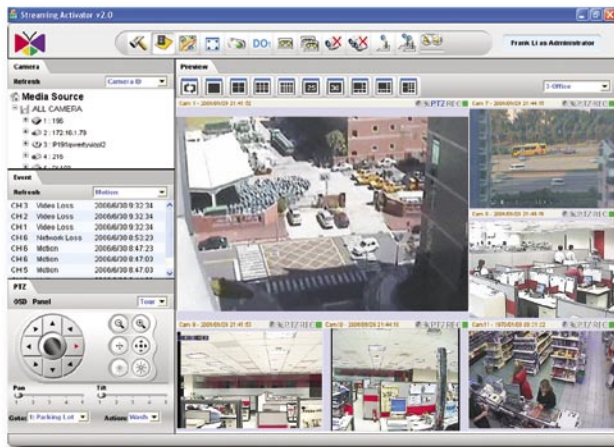
Devices	Video Server, IP Camera, IP Speed Dome, Capture Card, Display Card
---------	--

Functionalities

Remote Preview	Live preview on remote site via ACTi streaming engine
Remote Playback	Playback video clip stored on remote sites.
Remote Seek Operation	Supports seek operation on remote playback

* The features will be implemented in later released bundled application

Streaming Activator



- Manages up to 64 cameras with tree-directory display
- Supports 1, 4, 6, 8, 9, 10, 16, 25, 36 window layout
- ISO 14496-2 MPEG-4 Video+Audio Format
- Customizable logo and user interface
- Multiple-channel preview in full-screen mode
- Support dual monitor and hot-spot window
- Continuous, Schedule, Motion, Alarm Recording
- Hardware motion detection and Digital I/O event handling
- Maximum 30 seconds pre-event recording
- Expandable PTZ commands
- Search video clips by date, time and event
- Time-based search bar
- Multiple-channel synchronized playback
- eMap Manager
- Remote Preview / Playback via ACTi NVR or Activator

► Digital video surveillance functions

ACTi Streaming Activator manages up to 64 cameras in a tree-directory panel; user may arrange camera groups into pre-defined window layout, and pop the window layout onto full screen mode with a single click or a user-defined hot key. With dual-monitor support, user may display two functions among preview, playback or eMap manager to have full visibility from different aspects of the surveillance system. When an event occurs, event handler alerts security manager by switching the channel to the hot-spot window, playing audio file and flashing on the border of the window, security manager then need to acknowledge the event by clicking on the button in the event list window.

User may deploy recording plan with continuous, schedule, alarm and motion recording mechanism; the recorded video clips can then be searched with channel, date, time, event or browse with a time-based search bar; after certain video clip being located, video clips from multiple channels can be organized together and played synchronously. User may operate video clips with play, pause, stop, reverse play, fast forward, fast rewind and frame-by-frame actions with functions to add bookmark, create snapshot or export video to an AVI file.

► Expandable PTZ commands

ACTi Streaming Activator supports various PTZ protocols, including Pelco-P, Pelco-D, Lilin, Dynacolor, TOA, Kampro, EyeView, VideoTrec, Sony VISCA, Panasonic, GE Kalatel, 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 event handling

Hardware motion detection is supported and user may set 3 individual regions of interest and sensitivity. An event will be triggered when a motion detection event or digital input event occurs. Maximum 30 seconds pre-event recording time can be set prior to a motion detection or digital input event occurs.

Event handling including trigger digital output, request speed dome to turn to a preset position, play audio file, beep on the PC, send snapshot via E-Mail and send snapshot to FTP site.

► 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 can be customized. User may even add or remove part the functions from current application.

Streaming Activator

PRODUCT SPECIFICATION

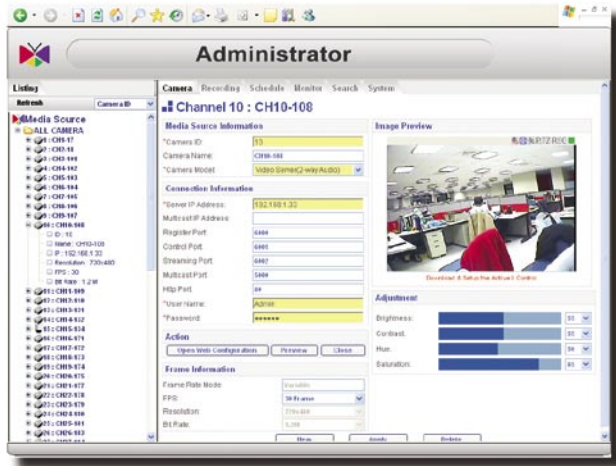
System Requirement	
PC Spec	Pentium D 3.0GHz, 945 Chipset, 800 FSB, 1GB Memory, 80GB HDD
Operating System	Windows 2000, Windows XP, Windows 2003, WSS2003
Browser	Microsoft Internet Explorer v6.0+
Preview	
Maximum Number of Camera	64
Window Layout	1, 4, 6, 8, 9, 10, 16, 25, 36
Tree Display Panel	User may use drag-n-drop to drag a video source to the layout manager for preview
Web Client	Microsoft Internet Explorer v6.0 remote video preview
Patrol Mode	Switches and displays each preview window accordingly. Pre-defined layout can be set to patrol mode as well
2-Way Audio	Supports 2-way audio. User may have 1-to-1 or 1-to-many audio broadcast to multiple devices at the same time.
Create Snapshots	Create snapshot images on-the-fly and as an event index for search later on
Advanced Preview Mode	Maximum 36-channel preview at the same time with different frame rate adjusted automatically
Layout Manager	Setup pre-defined window layout to group certain cameras in the same layout. Layout manager can be displayed in full-screen mode.
Hot-Spot Window	The channel with an event will be switched to the hot-spot window. 2nd monitor can be defined as hot-spot window.
Recording	
Format	Standard ISO-14496-2 MPEG-4 Video+Audio format. Compatible with FFMPEG, XviD, DivX
Schedule Recording	Record video with user-defined schedule and time period
Alarm Recording	Record video when a digital input event is triggered
Motion 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. Default 5 minutes.
Watermark*	Digital time code embedded from hardware
Storage Manager	
Number of Drives	Supports up to 23 drives in one single machine
Keep Certain Days	The video clips will be kept for certain days according to user-defined value
Recycle Recording	The oldest video clip will be overwritten when the disk reaches its minimum space requirement
Total Space Management	When total space reaches its minimum space requirement, certain space will be clean up. The oldest files will be removed first.
Playback	
Mode	Play, Pause, Stop, Fast Forward, Fast Rewind, Play Backward, Play frame by frame, 1/2/4/8x Speed Control
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 a period of video clips into one AVI file
Synchronous Playback	Multiple-channel synchronous playback at the same time
Search	
Time Sequence Search	Search video clips with date, time, channel
Event Search	Search motion detection, digital input, bookmark, snapshot event with specified date, time, channel
Thumbnail Image Search *	Search video clips with thumbnail image previews
Status Event Search	Search events on video loss / recovery, network disconnect / reconnect, user login / logout, database log with specified date, time, channel
Time-based Search Bar	The recording and events are displayed with a time-bar

PTZ Control	
PTZ Management	Manages pan, tilt, zoom operation with speed control
Protocol Supported	Pelco-P, Pelco-D, Lilin, Dynacolor, Samsung, Kampro, Sony VISCA, Panasonic, GE Kalatel protocol supported
Preset Position	Goto, set, clear preset positions and patrol on preset positions
Preset Position Number	16
PTZ Patrol	Patrol preset positions with user-defined dwell time
PTZ Pattern	Execute speed dome pattern command
Expandable PTZ Command	User-defined PTZ command to support additional PTZ protocols
Mouse PTZ	On-screen 8-direction PTZ operation with mouse operation. This can be run under full-screen mode as well
IP Joystick on PC	Connects joystick on the PC via USB port to control speed dome directly
Control Panel on PC	Connects control panel on the PC via COM port to control speed dome directly
Event Handling	
Event Types	Handles motion detection, alarm, video loss, network disconnect events
Event Acknowledgement	Event will need to be acknowledged by security operator
Trigger Digital Output	Triggers digital output when a certain event (digital I/O or motion detection) occurs
Hot-Spot Window	Activate and switch the channel with event to the hot-spot window. The original video in the hot-spot window will then be switched over.
Pop-up Window	Mini-preview window will be pop-up when event occurs. Pop-up window will be dismissed when user-defined dwell time elapsed or security operator click on the "Acknowledge" button.
Event Log	Triggered event will be recorded into a event log
E-Mail Notification	E-Mail notification with captured snapshot
FTP Notification	FTP captured snapshot to the FTP server
Play audio file	Play user-defined audio file or beep on the machine
Send PTZ Command	User-defined PTZ command will be executed. The channel operating PTZ command can be different to that of the channel with event.
Execute Command	User-defined execution command will be executed.
eMap	
eMap Manager	eMap configuration and management
eMap Monitor	Creates alarm when an event occurs on a certain camera in eMap
Preview-All Mode	With this mode, all cameras in the associated map will be displayed with QCIF @ 1FPS preview. When double-click on the preview window, the original video window will be brought up with its original resolution and frame rate
eMap Patrol	Maps can be patrolled and displayed one by one with user-defined dwell time.
Remote Function	
Remote Preview	May connect to ACTi NVR or Activator to run remote preview
Remote Playback	May connect to ACTi NVR or Activator to run remote playback
Permission Control	
3-level Permission	Administrator, Standard User, Guest levels
Security	Account/password defined with associated permission control
Camera Group Permission	User may setup the permission between user account and the camera group
eMap Permission	User may setup the permission between user account and eMap layer

* The features will be implemented in later released bundled application

ACTi NVR

ACTi Network Video Recorder



- Supports 16, 32, 48, 64 Channels at Full D1 @ 30 FPS with 1.5 Mbps concurrently
- Web-based Administration
- Record in ISO-14496-2 MPEG-4 video+audio format
- Continuous, Schedule, Motion, Alarm Recording
- Full-featured search functions based on channel, date, time and events
- Time-based Search Bar
- Active Storage Manager to manage disk capacity
- Streaming Engine included
- Customization and NVR SDK ready for integration
- Remote Preview and Remote Playback via web or Streaming Activator

► Recording Engine

ACTi NVR supports continuous, schedule, alarm and motion recording with pre-event and post-event time period programmable on per-channel basis. ACTi NVR system records video, audio and data information; the recording format complies with standard MPEG-4 (ISO-14496-2) format and can be decoded with standard MPEG-4 software decoders, like FFmpeg, Xvid and DivX.

► Active Storage Manager

Active storage manager monitors and manages disk capacity. Active storage manager manages up to 23 drives in a single machine; it also comes with three capacity management rule engine: keep certain days, recycle recording and keep minimum space. User may deploy their recording rules easily with active storage manager's complete and flexible design.

► Customization and SDK supported

ACTi NVR administrator is implemented in HTML format and can be fully customized by users in local language, look and feel style, layout and add or remove functions. NVR SDK (SDK-2200) is ready for integration with user's application suite, and can be implemented with URL commands with XML data format.

PRODUCT SPECIFICATION

Hardware Requirements

CPU	Intel Pentium-D 3.2GHz (FSB 800)
Motherboard	Intel 945 chipset or above
LAN Card	Gigabit Ethernet
Hard Disk	Minimum: 256GB x 1; Recommended: 320GB x 4
RAID Configuration	Minimum: 3
OS	WSS 2003 (Windows Storage Server 2003) Windows 2003 Server
Browser	Microsoft Internet Explorer v6.0

Recording Engine

Continuous Recording	Record at all time
Schedule Recording	Record at specified time period
Motion Recording	Record when motion detection event occurs
Alarm Recording	Record when digital input event occurs
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; maximum: 5 minutes

Active Storage Manager

Supported Drives	23 drives
Keep Certain Days	Keep recoding for certain days
Recycle Recording	Replace oldest file when threshold reached

Total Space	Remove user-defined space when total space reaches its minimal space threshold
Search	
Time Sequence Search	Search video clips with channel, date, time
Event Search	Search motion, alarm events with specified date, time, channel
Playback	
Remote Playback	Playback a recorded video clip on ACTi NVR system
Seek Operation	Remote playback also supports seek operation
Remote Management	
Remote Configuration	Web-based interface on ACTi NVR system setup and configuration
Remote Monitoring	System resources, disk information, system information, recording and schedule status via web-based interface
Remote Preview	Supports 1, 4, 9-channel remote preview
Remote PTZ *	Supports PTZ operation via NVR

*The features will be implemented in later release

Media Server

ACTi Media Server

Preliminary



- Media source conversion
- Accepts multiple client connections with load-balancing architecture
- Supports 3GPP Protocol to Client Application
- Supports RTSP/RTP Protocol to the client application
- Supports Multicast Protocol to Client Application
- Real-time media streaming forwarding
- Remote archive playback
- Easy to install and run on NAS
- Adopts MPEG-4, Motion-JPEG and AVI format
- Change resolution, bit-rate, frame-rate on-the-fly or via add-on utilities

► Accepts multiple client connections with load-balancing architecture

ACTi Streaming Media Server is designed to serve multiple connections from remote clients. Maximum connection number is depend on the hardware specification; meanwhile, multiple ACTi Media Server may operate together to serve more remote clients.

► Media file format conversion

ACTi Streaming Media Server complies with MPEG-4 data format. Add-on utilities help convert MJPEG and AVI file format into MPEG-4 data format. MPEG-4 data may be open, streamed and sent to the connected clients at real time.

► Real-time streaming forwarding and remote file playback

ACTi Media Server connects to multiple media sources and serve multiple remote clients.

ACTi Media Server serves as a video streaming gateway, accepts live video streams and passes them to remote preview clients.

ACTi Media Server also adopts various media file formats, and send the media files in streaming format to remote playback clients.

PRODUCT SPECIFICATION

Concurrent Connections

Number of Media Source	64 (depends on the hardware specification)
Number of Clients	64 (depends on the hardware specification)

Real-time Streaming Forwarding

Streaming Forwarding	Streaming data maybe received from connected IP cameras and forwarded to the connected clients. The streaming format is MPEG-4 data format.
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Remote Media File Playback

Remote Playback	Media files can be opened and streamed immediately to the connected clients
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Media File Conversion

MPEG-4	MPEG-4 format is ACTi Media Cente'sr standard format
Multiple Media Format Conversion	Motion-JPEG, AVI file format conversion

Frame Rate Conversion	Change frame-per-second rate on-the-fly or via add-on utilities
Resolution Conversion	Change video size (Full D1, CIF and QCIF) on-the-fly or via add-on utilities

Subscribe and notification

Subscribe Streaming Video	Clients may subscribe to the streaming services and receives streaming video data
Event Notification	Clients may subscribe on certain events, and notified when that event occurs

Outbound Protocol Supported

HTTP / FTP Service	The pictures in ACTi Media Server may be requested via HTTP and FTP services
RTSP/RTP Protocol	Real-time streaming protocol supported
Multicast Protocol	Apply Multicast to remote clients
3GPP Protocol	Supports 3GPP protocol



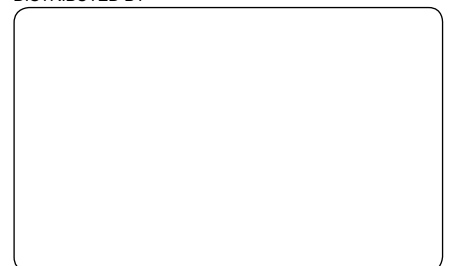
ACTi Corporation

7F, No.1, Alley 20, Lane 407, Sec.2, Tiding Blvd.,
Neihu District, Taipei 114, Taiwan, R.O.C
Tel: (886)2-2656-2588 Fax: (886)2-2656-2599
E-mail: sales@acti.com

www.acti.com

ACTi U.S. Office
TOLL Free : 1-866-410-ACTI (2284)
ACTi China Office
TEL : 86-21-5298-8666

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