



Note: This is image is for marketing purposes ONLY. It does not indicate the position of the cameras and is not to scale.



2MP PTZ Camera



4G Router



**4CH NVR with
1x HDD capacity
and POE**



**1 Month
Backup**



**5 Day Battery
Backup**

Solutions



Features

PTZ Camera : 2MPIP-2MIR505X

- Light Predator illumination
- 2MP PTZ camera
- 5x optical zoom
- up to 50m (164 ft) night vision and 10m (33 ft) warm light distance
- With wall mount

Video Recorder : 2MN-8004-P4

- 4 channel IP camera input
- 4 PoE channels
- 1 TB hard drive included

Solar Power System

- Monocrystalline silicon solar cell module with a 25 year service life
- Durable Lithium iron phosphate battery with an 8 year service life
- Standby time: 24 hours for 5 days
- Easy to manage controller
- Integrated power cabinet

Note: More cameras can be added. Further customization is available. Price will change accordingly.

Specifications

CAMERA: MODEL 2MPIP-2MIR505X					
Sensor		1/2.8" progressive scan, 2.0 megapixel, CMOS			
Lens		2.8~12mm, AF automatic focusing and motorized zoom lens			
DORI Distance	Lens	Detect (m)	Observe (m)	Recognize (m)	Identify (m)
	2.8mm	43.4	17.4	8.7	4.3
	12mm	186.2	74.5	37.2	18.6
Angle of View (H)		32.5°~95.7°			
Angle of View (V)		18.4°~52.2°			
Angle of View (O)		36.9°~100.8°			
Shutter		Auto/Manual, shutter time: 1 s ~ 1/100000 s			
Minimum Illumination		Color:0.001 lux (F1.6,AGC ON) 0 lux with IR			
Day/Night		IR-cut filter with auto switch (ICR)			
Digital noise reduction		2D/3D DNR			
S/N		>52 dB			
IR Range		UP to 50m (164ft)			
Wavelength		850nm			
IR On/Off Control		Auto/Manual			
Warm Light Range		UP to 10m (33ft)			
WDR		120dB			

PTZ Camera



VIDEO	
Video Compression	Ultra 265, H.265, H.264, MJPEG
H.264 code profile	Baseline profile, Main Profile
Frame Rate	Main Stream: 1080P (1920*1080): Max. 30 fps; 720P (1280*720): Max. 30 fps; Sub Stream: 720P (1280*720): Max. 30 fps; Third Stream: CIF (352*288): Max. 30 fps
Video Bit Rate	128 Kbps ~ 16 Mbps
OSD	Up to 8 OSDs
Privacy Mask	Up to 8 areas
ROI	Up to 8 areas
Motion Detection	Up to 4 areas
IMAGE	
White Balance	Auto/Outdoor/Fine Tune/Sodium Lamp/Locked/Auto2
Digital noise reduction	2D/3D DNR
Smart IR	Support
Flip	Normal/Vertical/Horizontal/180°
Dewarping	Support
HLC	Supported
BLC	Supported
AUDIO	
Audio Compression	G.711
Suppression	Supported
Sampling Rate	8 KHZ
STORAGE	
Edge Storage	Micro SD, up to 128 GB
Network Storage	ANR, NAS(NFS)

NETWORK	
Protocols	IPv4, IGMP, ICMP, ARP, TCP, UDP, DHCP, PPPoE, RTP, RTSP, RTCP, DNS, DDNS, NTP, FTP, UPnP, HTTP, HTTPS, SMTP, 802.1x, SNMP, SSL
Compatible Integration	ONVIF(Profile S, Profile G, Profile T), API
Client	Android®, iPhone®, 2M Station, 2M Guard
Web Browser	Plug-in required live view: IE9+, Chrome 41 and below, Firefox 52 and below Plug-in free live view: Chrome 57.0+, Firefox 58.0+, Edge 16+, Safari 11+
PAN & TILT	
Pan Range	345°
Pan Speed	0.1°/s ~ 50°/s Preset speed: 50°/s
Tilt Range	90°
Tilt Speed	0.1° ~ 40°/s Preset speed: 40°/s
Number of Presets	256
Patrol	Preset patrol, Route patrol
INTERFACE	
Network	1 RJ45 10M/100M Base-TX Ethernet
Built-in Mic	Supported
Built-in Speaker	Supported
Alarm Light	Supported
CERTIFICATIONS	
Certifications	CE: EN 60950-1 UL: UL60950-1 FCC: FCC Part 15
GENERAL	
Power	DC 12V±25%, PoE (IEEE802.3 at) Power consumption: Max 16 W
Dimensions (Ø x H)	Ø 133 x 269.4 (mm) (Ø 5.2" x 10.6" in.)
x	0.87 kg (1.92lb)
Gross Weight	1.13 kg (2.49lb)
Material	Metal + Plastic
Working Environment	-20°C ~ 60°C (-4°F to 140°F), Humidity: ≤95% RH (non-condensing)

Network Video Recorder



Storage Environment	-20°C ~ 60°C (-4°F to 140°F), Humidity: ≤95% RH (non-condensing)
Surge Protection	4KV
Ingress Protection	IP66
Reset Button	Supported

RECORDER MODEL: 2MN-8004-P4

VIDEO INPUT/ OUTPUT

IP Video Input	4CH
Two-way Audio Input	1CH, RCA

NETWORK

Incoming Bandwidth	80Mbps
Outgoing Bandwidth	64Mbps
Remote Users	128
Protocols	P2P, UPnP, NTP, DHCP, PPPoE

VIDEO/AUDIO OUTPUT

HDMI/VGA Output	HDMI: 3840x2160/30Hz, 1920x1080p/60Hz, 1920x1080p/50Hz, 1600x1200/60Hz, 1280x1024/60Hz, 1280x720/60Hz, 1024x768/60Hz VGA: 1920x1080p/60Hz, 1920x1080p/50Hz, 1600x1200/60Hz, 1280x1024/60Hz, 1280x720/60Hz, 1024x768/60Hz
Recording Resolution	4K/5MP/4MP/3MP/1080p/960p/720p/D1/2CIF/CIF
Audio Output	1-ch, RCA
Synchronous Playback	4-ch
Corridor Mode Screen	3/4

DECODING

Decoding format	Ultra 265/H.265/H.264
Liveview/Playback	4K/5MP/4MP/3MP/1080p/960p/720p/D1/2CIF/CIF
Capability	1 x 4K@30, 1 x 5MP@30, 2 x 4MP@30, 2 x 3MP@30, 4 x 1080P@30

HARD DISK

SATA	1 SATA interface
Capacity	up to 6TB for each disk

SMART

VCA Detection	Face detection, Intrusion detection, Cross line detection, Audio detection, Defocus detection, Scene change detection, Auto tracking, Object Left Behind, Object Removed
VCA Search	Face search, Behavior search
Statistical Analysis	People counting

EXTERNAL INTERFACE

Network Interface	1 RJ45 10M/100M self-adaptive Ethernet Interface
USB Interface	Rear panel: 1 x USB2.0, 1 x USB3.0

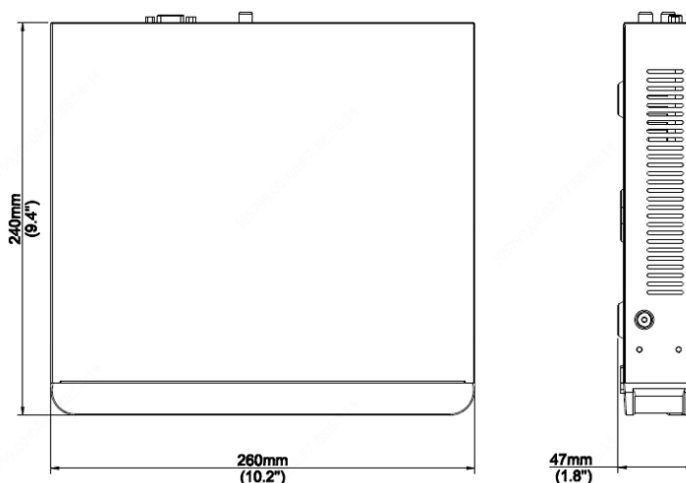
POE

Interface	4 independent 100 Mbps PoE network interfaces
Max Power	Max 30W for single port Max 54W in total (13.5W for each)
Supported Standard	IEEE 802.3at, IEEE 802.3af

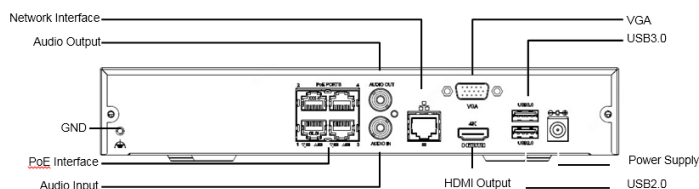
GENERAL

Power Supply	48V DC
Power Consumption	≤9W (without HDD)
Working Environment	-10°C ~ 55°C (14°F ~ 131°F), Humidity ≤ 90% RH (non-condensing)
Dimensions (W×D×H)	260 x 240 x 47 (mm) (10.2"×9.4"×1.9" in.)
Weight (without HDD)	1kg (2.20 lb)

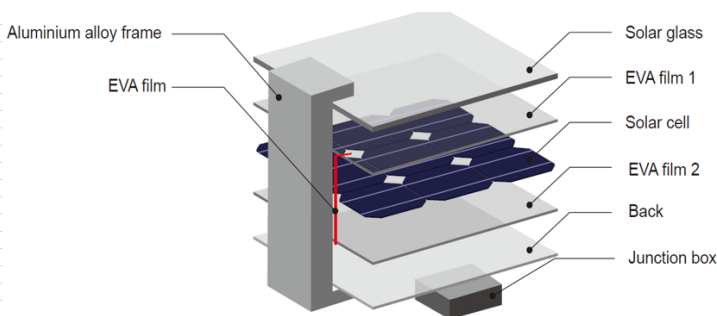
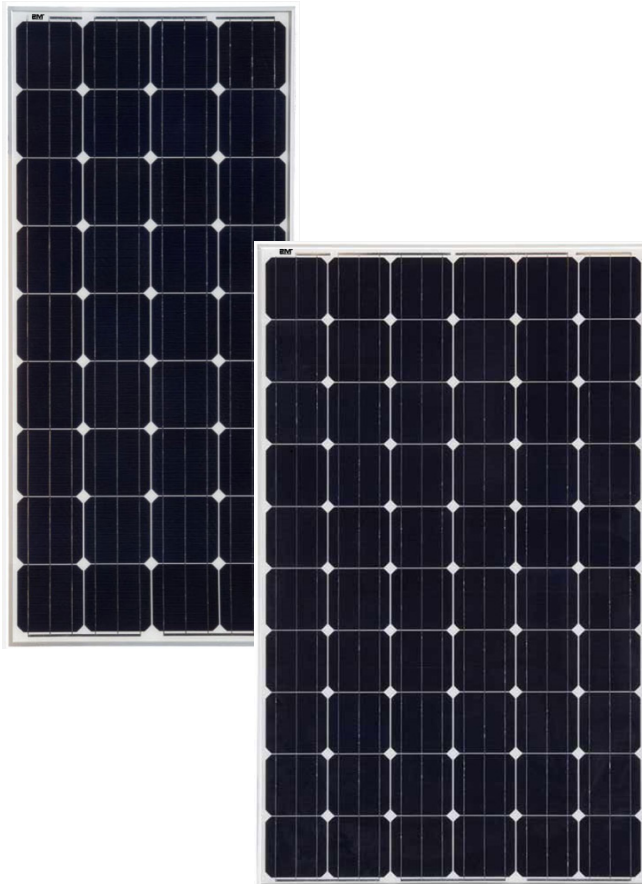
Recorder Dimensions



Rear Panel



Solar Panel Modules



SOLAR MODULE SPECIFICATIONS

MODULE DATA

Standard Power (W)	170	300	380
Working Voltage (V)	18.86	32.01	38.41
Working Current (A)	8.51	8.86	8.86
Open Circuit Voltage (V) Voc	22.35	37.27	44.72
Short-circuit Current (A) Isc	9.02	9.373	9.895
Cell Efficiency (%) CE	19.3	19.9	19.9
Module Efficiency (%) ME	>16.13	>17.43	>17.52
Tolerance (%)	±3%		
Nominal Operating Cell Temperature	47°C (+/- 2°C) 116.6°F (+/- 35.6°F)		

TEMPERATURE COEFFICIENTS

Short Circuit Current Coefficient Isc (%)	0.04°C / 32.1°F
Open Circuit Voltage Coefficient Voc (%)	-0.38°C / 31.3°F
Nominal Power Factor Pm (%)	-0.47°C / 31.2°F
Working Current Coefficient Im(%)	0.04°C / 32.1°F
Working Voltage Coefficient Vm (%)	-0.38°C / 31.3°F

COMPONENTS & MECHANICAL DATA

Solar Cell	156 x 156 Mono-crystalline silicon		
Number of Cell (pcs)	4 x 9 series connection	6 x 10 series connection	6 x 12 series connection
Size of Module	1485 x 668 mm / 4.9' x 2.2' ft	1640 x 990 mm / 5.4' x 3.2' ft	1960 x 990 / 6.4' x 3.2' ft
Front Glass Thickness	3.2mm 0.1" in		
Surface Maximum Load Capacity	2400-5400Pa		
Allowable Hail Load	23m/s, 7.53g 23m/s, 0.3oz		
Weight Per Piece (kg)	15.26kg/33.6 lbs	18.86/41.6 lbs	22.16/48.9 lbs
Junction Box Type	Pass the TUV or CE Certificate		
Bypass Diode Rating (A)	12 or None		
Cable & Connector Type	Pass the TUV or CE Certificate		
Frame (Material Corners, etc.)	30# / 35#	40# / 35#	
Back Board Type (Brand Type)	TPT, PET or KPF		
Working Temperature	-40°C to 85°C -40°F to 185°F		
Standard Test Conditions	AM1.5 1000W/m ² 25°C/77°F		

Solar Power Controller MPPT



CONTROLLER SPECIFICATIONS

System Voltage	12V/24V/48V/96V automatic recognition
Max Charging Current	40A
Fast Charging Voltage	14.0/28.0V/56V/112V(25°C)/(77°F)
Boost Charging Voltage	14.5/29.0V/58.0V/116V(25°C)/(77°F)
Equalization Charging Voltage	14.8/29.6V/59.2V/118.4V(25°C)/(77°F)
Float Charging Voltage	13.7/27.4V/54.8V/109.6V(25°C)/(77°F)
Low Voltage Alarm	11.0/22.0/44.0/88.0V
Low Voltage Disarming	12.5/25.0V/50.0V/100.0V
Storage Cell Type	Liquid, Gel, Lithium
Temperature Compensation	-4.17mV/K per cell (boost charging, equalization charging); -3.33mV/K per cell (float charging)
Solar Power End Max Voltage	55V/100V/150V/300V
Storage Cell Max Voltage	DC280V
Cable Length	120mm/80mm 4.7" in/3.1" in.
High Protection Voltage For Storage Cell	15.5/31.0/62V/124V
Communication Protocol	RS232/RS485/TCP/IP transmission wired or wireless by GPRS/3G/4G etc.
Recommended Wire Diameter	6mm ²
Max Current Consumption	8mA/16mA/24mA
Working Temperature	-40°C ~ 60°C
Protection Level	IP30~IP68
Altitude (for reference)	4000~5000m 2.5~3.1 miles

Lithium Iron Phosphate Battery

BATTERY SPECIFICATIONS

Voltage	12.8V
Max Capacity	230AH
Discharge Stop Voltage	11.2V
Charge Stop Voltage	14.4V
Working Temperature	-10°C~70°C 14°F to 158°F
Service Life	2000-2500 circle life
Features	Deep discharge depth, no memory, environmental protection, portable, long life



Note: Batteries are custom made according to the projects requirement. Picture is for reference only.