

2MS1PAN-4G3D

Solar Solution with a 4K Starlight Panoramic Camera, NVR and 4G Router
Standby 24hr x3 Days



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



Panoramic View Camera



4G Router



NVR with 1 HDD capacity



1 Month Backup



3 Day Battery Backup

Solutions



Features

Starlight Panoramic Network Camera: 2MPANIP-4KIR50-P

- 4K Panoramic Camera
- 180° horizontal viewing angle
- Customized OSD
- 5th generation infrared technology, up to 50m (164ft)
- IP67

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 3 days
- Easy to manage controller
- Integrated power cabinet

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

Specifications

CAMERA: 2MPIP-2MIR505X					
Sensor		1/1.8" progressive scan, 2.0 megapixel, CMOS			
Lens		4 x 4.2mm lens			
DORI Distance	Lens	Detect (m)	Observe (m)	Recognize (m)	Identify (m)
	4.2mm	50.4 (165.4ft)	20.2(66.3ft)	10.1(33.1ft)	5.0(16.4ft)
Angle of View (H)		180°			
Angle of View (V)		80°			
Angle of View (O)		221.4°			
Adjustment Angle		Pan: -90°~90°; Tilt: -45°~60°			
Shutter		Auto/Manual, shutter time: 1 s ~ 1/100000 s			
Minimum Illumination		Color: 0.002lux (F1.8,AGC ON) 0lux with IR			
Iris		F1.8			
Day/Night		IR-cut filter with auto switch (ICR)			
S/N		>55 dB			
IR Range		UP to 50m (164ft)			
WDR		120dB			

Starlight Panoramic Camera



Protocols	IPv4, IGMP, ICMP, ARP, TCP, UDP, DHCP, PPPoE, RTP, RTSP, RTCP, DNS, DDNS, NTP, FTP, UPnP, HTTP, HTTPS, SMTP, 802.1x, SNMP, QoS
Compatible Integration	ONVIF (Profile S, Profile G, Profile T), API
INTERFACE	
Audio I/O	1 Input: impedance 35 kΩ; amplitude 2 V [p-p] 1 Output: impedance 600 Ω; amplitude 2 V [p-p]
Alarm I/O	2/1
Network	1x100M/1000M Base-FX SFP + 2x10M/100M/1000M Base-TX Ethernet
GENERAL	
Power	AC24V/DC24V±25%
Power Consumption	48W Max
Dimensions	259 x 211 x 115 (mm)
Weight	2.4kg (5.3lb)
Working Environment	-40°C ~ +70°C (-40°F ~ 158°F), Humidity: 10%~95% RH (non-condensing)
Ingress Protection	IP67
Reset Button	Supported

VIDEO

Video Compression	Ultra H.265, H.265, H.264, MJPEG
Frame Rate	Main Stream: 4096×1800:Max. 30 fps; Sub Stream: 1920×832:Max. 30 fps; Third Stream: 1280×560: Max. 30 fps
HLC	Supported
BLC	Supported
OSD	Up to OSD's
Privacy Mask	Up to 8 areas
ROI	Up to 8 areas

SMART

General Function	Watermark, IP Address Filtering, Tampering Alarm, Alarm input, Alarm output, Access Policy, ARP Protection, RTSP Authentication, User Authentication
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AUDIO

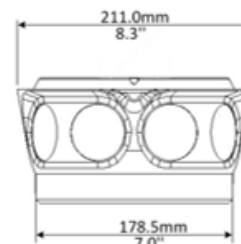
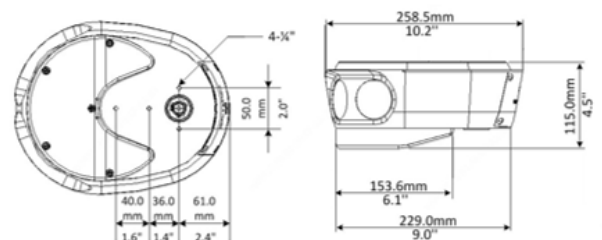
Audio Compression	G.711
Two-way Audio	Supported
Suppression	Supported
Sampling Rate	8 KHZ

STORAGE

Edge Storage	Micro SD, up to 256 GB
Network Storage	ANR

NETWORK

Recorder Dimensions



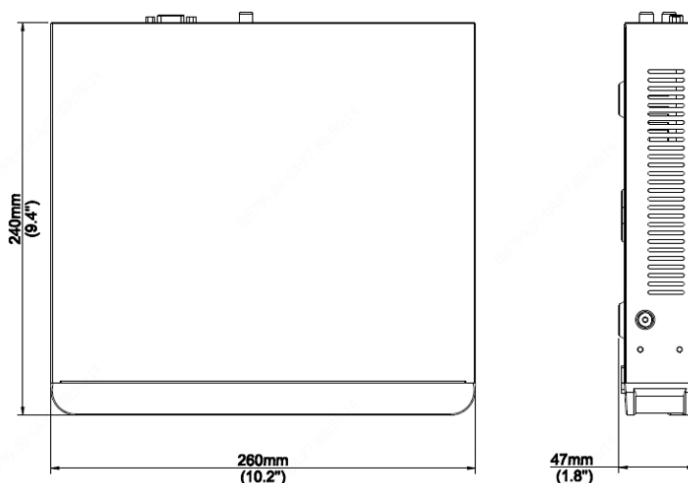
Network Video Recorder



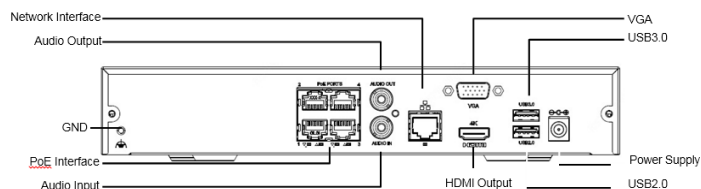
RECORDER MODEL: 2MN-8004-P4	
VIDEO INPUT/ OUTPUT	
IP Video Input	4CH
Two-way Audio Input	1CH, RCA
NETWORK	
Incoming Bandwidth	80Mbps
Outgoing Bandwidth	64Mbps
Remote Users	128
Protocols	P2P, UPnP, NTP, DHCP, PPPoE
VIDEO/AUDIO OUTPUT	
HDMI/VGA Output	HDMI: 3840x2160/30Hz, 1920x1080p/60Hz, 1920x1080p/50Hz, 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)

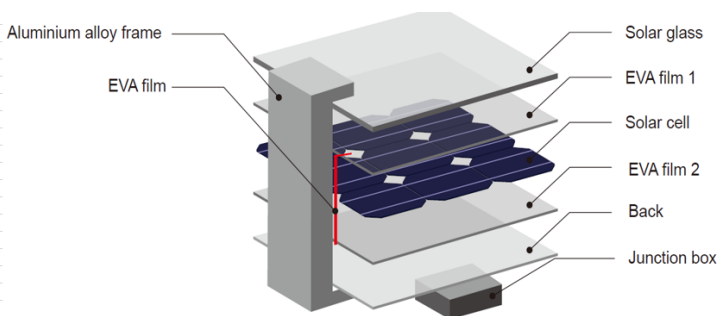
Recorder Dimensions



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.