

ICE-MSTRAILER-1380W

Solar-Powered Single-Axle Surveillance Trailer



System Overview

The ICE-MSTRAILER-1380W combines simplicity and functionality. This single-axle trailer can be assembled by a single person and does not require any special tools, reducing the time and labor spent on setup. Its durability allows for deployment anywhere including in windy or corrosive environments.

The base configuration includes a 26-foot Mast with a weatherproof NEMA enclosure housing our NVR-MX08POE-1U16MPT1 8-channel NVR. Mounted outside the box, two IPFX-P4025M-IRW1 PTZ IP cameras are mounted to provide overwatch with space for up to two more cameras. It is also equipped with speakers and warning lights for deterrence.

- All-in-One Mobile Remote Surveillance Solution
- One-Person Site Deployment
- Included 8-channel NVR and two (2) PTZ cameras
- Weatherproof NEMA, Retractable 26 ft Mast
- Three (3) 460-Watt Silicon Solar Panels
- Four (4) 12.8V Lithium Iron Phosphate Batteries
- GPS Tracking, C5 Corrosion Protection
- Level 12 Beaufort Wind Scale
- IP67 Ingress Rating
- UL, FCC Certified

Functions

Integrated Plug-and-Play Platform

The trailer's onboard computer provides full access and control to the trailer's router, NVR, cameras, speakers, and strobe lights. The computer also provides users remote access for on-the-go controls.

Monocrystalline PERC Technology

The trailer's panels use monocrystalline silicon cells and have PERC technology. This technology improves electron collection and light absorption for increased performance and efficiency, particularly in low light.

Level 12 Beaufort Wind Scale

The trailer is able to withstand "hurricane force" as it is rated the highest level possible on the Beaufort Wind Scale. This means it can withstand winds 73 MPH (118 KPH) or higher and widespread damage in the surrounding environment.

C5-I Corrosion Protection

The trailer is rated C5-I, the highest level of corrosion protection possible based on the ISO 12944-2 standard. C5-I products must be able to operate properly even in intensely corrosive environments with constant high humidity, pollution, and condensation.

IP67 Ingress Rating

The trailer is waterproof, protected against dust over an extended period of time, and can withstand contact with objects greater than 1 mm in diameter.

Technical Specification

General

System Voltage	48 VDC
PV Controller	MPPT 30A, 96.9%
IP Rating	IP67
Control	Remotely Accessible; ICE Cloud
Battery Supply	Solar Power, Mains Electricity
Charge Time	20 Hours (AC)
Estimated Run Time	7-10 Days
Corrosion Class	C5 (Chassis), C4 (Nema, PV Structure)
NEMA Enclosure Components	1 x 8-channel NVR (NVR-MX08POE-1U16MPT1)
	1 x Hard Drive (1 TB)
	2 x IP PTZ Cameras (IPFX-P4025M-IRW1)
	1 x 4G Router
	1 x Flood Light
	3 x Strobe Lights
	2 x Speakers
Warranty	1 x Edge Controller
	1 x Power Supply Board (12/48 VDC)
	5 Years warranty (Chassis, PV, Battery, PV Support Structure)

Trailer Chassis

Product Name	ICE-MSTRAILER
Trailer Coupler	Fits 2 in. (50 mm) Trailer Ball
Speed Limit	Standard: 50 MPH Maximum: 62 MPH
Hand Brake	One (1)
Wheel/ Tire Type	Aluminum Wheel, 175-R13 Tires
Stationary Legs	Four (4)
Electronic Braking System	1x7-core cable, 1x7-to-4 cable
Product Dimensions	121.5 in. x 136.4 in. x 312.6 in.
Packaging Dimensions	86.6 in. x 63.0 in. x 94.1 in
Product Weight	< 1840.9 lb
Anti-Theft Measures	Mask Anti-Tamper Action, PV Bracket Anti-Tamper Action, Anti-Theft Control Box, Trailer Legs Support Anti-Theft, GPS Positioning

Mast

Height	26.0 ft, Retractable
Control	Hand Crank-Operated
Beaufort Wind Scale	Level 12
Coating	Electrophoretic Preservative
Material	Aluminum Alloy

PV Controller

Nominal System Voltage	48 VDC
Working Voltage Range	8 to 68 VDC
Communication	RS-485 (RJ45 5 VDC/200 mA)
Relative Humidity	< 95%
Self-Consumption	< 0.624%
Certifications	FCC, UL

Solar Panel

Number of Panels	Three (3)
Solar Cell Type	Monocrystalline Silicon
Wattage	460W per Panel
Voltage Range	10 to 40.9 VDC
Energy Efficiency	23.80%
Operating Temperature	-40 °F to 185 °F
Dimensions	69.2 in. x 44.6 in. x 1.2 in
Weight per Panel	47.4 lb
Certifications	TUV, CQC, CE

Battery

Number of Batteries	Four (4)
Cathode Material	Lithium Iron Phosphate
Voltage per Battery	12.8 V
Capacity	4x220 Ah (51.2 VDC 11260Wh)
Operating Temperature	Charge: 32 °F to 140 °F Discharge: -4 °F to 140 °F
Weight (per Battery)	38.6 lb
Life Cycle	≥ 5000 Cycle at 77 °F, 0.5 C, and 80% DOD

AC Charging (Optional)

Voltage Range	90 to 264 VAC, 127 to 370 VDC
Frequency Range	47 to 63 Hz
Power	450 W
Output Voltage	42 to 80 VDC (Adaptable)
Output Current	6.8 A
Operating Temperature	-22 °F to 158 °F
Charging Protection	Low Voltage, Over Current, Over Voltage, Short Circuit, Over Temperature
Certification	UL, TUV, EAC, CE, CB

4G CPE Router

4G	LTE FDD: B1/B2/B3/B4/B5/B7/B8/B9/ B12/B13/B17/ B18/B19/B20/B25/B26/B28/B66
	LTE TDD: B34/B38/B39/B40/B41
SIM	1.8V/3V SIM/UIM Cards Built-In 15kV ESD protection
Ports	LAN: Two (2) RS-485/RS-232: One (1)
LAN Protocol	ARP, Ethernet
WAN Protocol	IP, DHCP, PPPoE
Power	12V DC 1A
Power Consumption	2.88 W (Max.)
Operating Temperature	-22 °F to 158 °F

Technical Specification

System

Product Name	NVR-MX08POE-1U16MPT1
Main Processor	Multi-core embedded processor
Operating System	Embedded LINUX, ICR 4.0

Video

Max IP Channels	8 Channels (up to 16MP)
Bandwidth	AI disabled: 256 Mbps incoming, 256 Mbps recording and 256 Mbps outgoing AI enabled: 180 Mbps incoming, 180 Mbps recording and 180 Mbps outgoing
Video Compression	Smart H.265+; H.265; Smart H.264+; H.264; MJPEG
Image Resolution	16 MP; 12 MP; 8 MP; 6 MP; 5 MP; 4 MP; 3 MP; 1080p; 960p; 720p; D1; CIF
Record Mode	Manual, Schedule (Regular, Motion Detection , Alarm, IVS), Stop
Record Interval	1 ~ 120 min (default: 60 min), Pre-record: 1 ~ 30 sec, Post-record: 10 ~ 300 sec
Record Rate	AI disabled: 2-channel 16 MP@30 fps; 2-channel 12 MP@30 fps; 4-channel 8 MP@30 fps; 6-channel 5 MP@30 fps; 8-channel 4 MP@30 fps AI enabled: 1-channel 16 MP@30 fps; 2-channel 12 MP@30 fps; 3-channel 8 MP@30 fps; 4-channel 5 MP@30 fps; 6-channel 4 MP@30 fps; 8-channel 1080p@30 fps

Audio

Interface	1/1 (RCA)
Two-way Talk	Supported
Audio Compression	G.711a; G.711u; PCM; G726

Display

Interface	1 HDMI, 1 VGA (Configurable simultaneous/heterogeneous video sources output for VGA & HDMI)
Resolution	HDMI: 3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720 VGA: 1920 × 1080, 1280 × 1024, 1280 × 720
Display Split	1st Screen: 1/4/8/9 2nd Screen: 1/4/8/9
OSD	Camera title, Time, Video loss, Camera lock, Motion detection, Recording

Playback & Backup

Multi-channel Playback	Up to 8 channels
Record Mode	General, motion detection; intelligent; alarm; POS
Playback Functions	Play, Pause, Stop, Rewind, Fast play, Slow Play, Next File, Previous File, Next Camera, Previous Camera, Full Screen, Backup Selection, Digital Zoom
Backup Mode	USB Device/Network/eSATA Device

Alarm

Alarm Input / Output	Input: 4 Channel; Output: 2 Channel
General Alarm	Motion detection; privacy masking; video loss; scene changing; PIR alarm; IPC external alarm
Anomaly Alarm	Camera disconnection; storage error; disk full; IP conflict; MAC conflict; login locked; and cybersecurity exception
Intelligent Alarm	Face detection; face recognition; perimeter protection; iMD; people counting; stereo analysis; heat map
Alarm Linkage	Record; snapshot; IPC external alarm output; audio; buzzer; log; preset; email

Perimeter Protection

Capabilities	Tripwire & intrusion; Recognition of human and vehicle
Performance	AI by Recorder: 2 channels; AI by Camera: 8 channels (10 IVS rules for each channel)
AI Search	Search by target classification (Human, Vehicle)

Intelligent Motion Detect (iMD)

Capabilities	Secondary filtering for human and motor vehicle , reducing false alarms caused by leaves, rain and lighting condition change
Performance	AI by Recorder: 5 channels; AI by Camera: 8 channels
AI Search	Search by target classification (Human, Vehicle)

Face Detection

Capabilities	Gathers Face attributes: Gender; age group; glasses; expressions; face mask; beard
Performance	AI by Recorder: 1 channel; AI by Camera: 8 channels (up to 12 face images/s each channel)

Face Recognition

Capabilities	Captures faces within camera images and compares them to an internal database.
Performance	AI by Recorder: 8-channel FD (by camera) + FR (by recorder) or: 1-channel FD (by recorder) + FR (by recorder); AI by Camera: 8 channels. Processes 12 face images/s

Network

Ethernet	1x (10/100/1000 Mbps Ethernet port, RJ-45)
PoE	8x ports, 10/100 Mbps, IEEE 802.3 af/at
PoE Switch Bridge Mode	Supported
Network Functions	HTTP; HTTPS; TCP/IP; IPv4/IPv6; RTSP; UDP; SNMP; NTP; DHCP; DNS; SMTP; UPnP; IP Filter; PPPoE; FTP; DDNS; Alarm Server; IP Search; Multicast; P2P; Auto Registration
Smart Phone	Android, iOS, iPhone
Interoperability	ONVIF 22.06 (Profile T; Profile S; Profile G); CGI; SDK
Browser Compatibility	Chrome, IE 9 or later, Edge, Safari, Firefox

Storage

Internal HDD	2 SATA III Ports, Up to 16 TB capacity for each HDD
RAID	N/A

Auxiliary Interface

USB	2 (1 front USB 2.0 port, 1 rear USB 2.0 port)
RS232	1 Port, for PC Communication and Keyboard
RS485	2 (1 port for half-duplex serial communication, 1 port for full-duplex serial communication)

General

Power Supply	100–240 VAC, 47–63 Hz
Power Consumption	Total output of NVR is <10 W(without HDD) Total output power of PoE is 130W,the maximum output power of a single port is 25.5W
Operating Humidity	10%–93% (RH)
Working Environment	14 °F to +131 °F (–10 °C to +55 °C)
Dimensions (W×D×H)	14.76" × 12.96" × 2.09 (375 mm × 329.3 mm × 53.0 mm)
Weight	5.53 lb (2.51kg) (without HDD)

Certifications

Certifications	FCC: Part 15 Subpart B, UL Certified
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Technical Specification

Camera

Product Name	IPFX-P4025M-IRW1
Image Sensor	1/2.8" CMOS
Effective Pixels	2560 (H) × 1440 (V) 4 Megapixels
RAM/ROM	1GB/ 4GB
Scanning System	Progressive
Electronic Shutter Speed	1/1s~1/30,000s
Minimum Illumination	Color: 0.005 lux@F1.6 B/W: 0.0005 lux@F1.6 0 lux@F1.6 (IR light on)
IR Distance	Distance up to 328ft (100m)
IR On/Off Control	Zoom Priority; Manual; Auto; Off
IR LEDs	4
Wiper	N/A

Lens

Lens Type	5 mm–125 mm			
Max. Aperture	F1.6 ~ F3.6			
Angle of View	H: 51.9°~3.0°; V: 39.7°~2.2°;			
Optical Zoom	25x			
Focus Control	Auto/Manual			
Close Focus Distance	0.33 ft–1.64 ft (0.1 m–0.5 m)			
DORI Distance	Detect	Observe	Recognize	Identify
	8208ft	3239ft	1640ft	820ft

PTZ

Pan/Tilt Range	Pan: 0° to 360° endless Tilt: -15° to +90°, auto flip 180°
Manual Control Speed	Pan: 0.1° ~200° /s; Tilt: 0.1° ~120° /s
Preset Speed	Pan: 240° /s; Tilt: 200° /s
PTZ Mode	300 Presets, 5 Pattern, 8 Tour, Auto Pan ,Auto Scan
Speed Setup	Human-oriented focal Length/ speed adaptation
Power up Action	Supported
Idle Motion	Pattern; Preset; Scan; Tour

Intelligence

Auto Tracking	N/A
Intelligent Motion Detect 2.0	Advanced motion detection alarm for human and vehicle. Works with AI NVR Object Search
IVS	Tripwire, Intrusion, Double Line Crossing, loitering detection; abandoned/missing object; fast moving; parking detection; people gathering
Perimeter Protection	Tripwire; Intrusion (Supports vehicle and human detection and Auto Tracking)
Advanced Intelligent Functions	Face Detection, Auto Patrol

Video

Compression	H.264H; H.264B; Smart H.265+; H.264; H.265; MJPEG(Sub Stream); Smart H.264+
Streaming Capability	3 Streams
Resolution	4M (2560 × 1440); 3M (2048 × 1536); 3M (2304 × 1296); 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576/704 × 480); CIF (352 × 288/352 × 240)
Frame Rate	Main stream: 4M/3M/1080p/1.3M/720p @(1~25/30fps)
	Sub stream1: D1/CIF(1 ~ 25/30fps)
	Sub stream2: 1080P/1.3M/720P/D1/CIF (1~25/30fps)

Bit Rate Control	CBR/VBR
Bit Rate	H264: 96–14,848 Kbps; H265: 38–8,960 Kbps
Day/Night	Auto(ICR) / Color / B/W
Backlight Compensation	BLC / HLC / WDR
White Balance	Auto; indoor; outdoor; ATW; manual; sodium lamp; natural light; street lamp
Gain Control	Auto / Manual
Noise Reduction	2D NR; 3D NR
Region of Interest	Support
Electronic Image Stabilization (EIS)	Support
Defog	Electronic
Digital Zoom	16x
Flip	180°
Privacy Masking	Up to 24 areas

Audio

Compression	PCM; G.711a; G.711Mu; G.726; MPEG2-Layer2; G722.1; G729; G723
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Network

Ethernet	RJ-45 (10Base-T/100Base-TX)
Protocol	FTP; RTMP; IPv6; Bonjour; IPv4; DNS; RTP; PPPoE; NTP; RTP; 802.1x; HTTPS; SNMP; TCP/IP; DDNS; UPnP; NFS; ICMP; UDP; IGMP; HTTP; SSL; DHCP; SMTP; Qos; RTSP; ARP
Interoperability	RTMP; CGI; SDK; ONVIF (Profile S&G&T); P2P
Streaming Method	Unicast / Multicast
Max. User Access	20 users (total bandwidth: 64 MB
Edge Storage	Micro SD card (512 GB); FTP/SFTP; NAS
Web Viewer	IE, Chrome, Firefox, Safari
Management Software	ICE Cloud, IC Now
Smart Phone	IOS, Android

Interface

Video Interface	N/A
Audio Interface	1/1 channel In/Out (bare wire)
RS485	N/A
Alarm I/O	2/1

Electrical

Power Supply	12 VDC/3 A ± 10%, PoE+ (802.3at)
Power Consumption	9 W; Max.: 20 W (Illuminator+alarm+PTZ)
Lightning Protection	TVS 6000 V lightning proof; surge protection; voltage transient protection

Environmental

Operating Conditions	-40° C ~ +70° C (-40° F ~ +158° F) / Less than 95% RH
Storage Conditions	-40° C ~ +70° C (-40° F ~ +158° F) / Less than 95% RH
Ingress Protection	IP66
Vandal Resistance	IK10

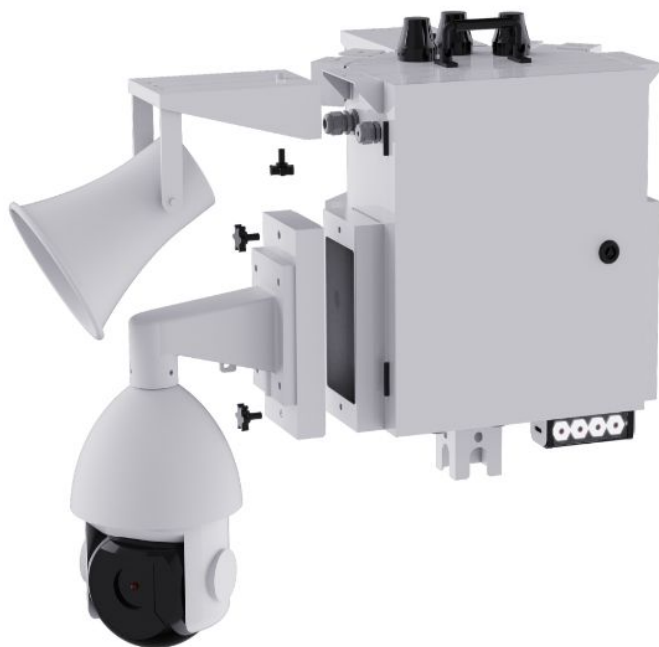
Construction

Casing	Metal
Dimensions	(10.65" × Φ6.30"" (270.4 mm × Φ160 mm)
Net Weight	5.29 lb (2.4 kg)
Gross Weight	8.60 lb (3.9 kg)

Certifications

Certifications	FCC: Part15 subpart B
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NEMA Surveillance Enclosure



Mobile Solar Trailer

