MSU-GLS

Solar / battery

A solar/battery-powered mobile surveillance unit with two 550 W bifacial panels, a 24 V / 450 Ah AGM battery pack and AC-grid battery charging. It is designed to operate without fueling or external power during normal operation; runtime depends on load and operating conditions.

Configuration is subject to final confirmation by Mirtek before procurement. Component ratings apply only to the named component.

Model overview

Power	Solar / battery
Standard cameras	2 × AXIS P3748-PLVE
Mast height	23 ft
Mast rotation	350°
Communications	CAT4 LTE; up to 150 Mbps downlink / 50 Mbps uplink
Audio	15 W outdoor IP horn
Solar array	2 × 550 W bifacial panels (maximum rating)
Battery pack	24 V / 450 Ah AGM
Runtime at 65 W	28–32 hours
Runtime at 90 W	20–24 hours

Platform & power

Power source	Solar photovoltaic + battery energy storage
Operating concept	Solar-powered; no fueling or external power required for normal operation
Travel dimensions (L × W × H)	103.3 in × 51.6 in × 90 in
Operational dimensions (L × W × H)	103.3 in × 112.8 in × 276 in

Total base unit weight	2,205 lb
Mast height	23 ft
Mast rotation	350°
Floodlights	4 × 90 W LED
Lighting output	57,600 lumens
Maximum wind rating	62 mph
Inverter / charger	3 kVA UL-approved inverter/charger
Battery type	6 × 150Ah deep-cycle AGM batteries; CE and UR marked
Battery pack voltage	24 V @ 450 Ah
Expected battery cycle	3,100 cycles at 25°C
Solar panels	2 × 550 W bifacial panels (maximum rating)
Solar panel efficiency feature	Bifacial design provides up to 31% greater light capture than traditional monocrystalline panels, per manufacturer documentation
Solar panel positioning	Multiple orientations to improve solar capture in different environments
Run time at 65 W	28–32 hours
Run time at 90 W (full power)	20–24 hours
Battery charging time from AC grid	9 hours
Dusk-to-dawn sensor	Included; automatic operation
Outriggers	5
Exterior / mast construction	Powder-coated steel exterior and galvanized mast
Additional operating mode	Can also function as an electric light tower

Standard surveillance cameras

Quantity	2
Camera model	AXIS P3748-PLVE
Sensor configuration	4 × 8 MP sensors per camera
Video resolution	4 × 3840 × 2160 (4K) per camera
Frame rate	Up to 12.5/15 fps per channel
Horizontal field of view	360° total (103°–41° per sensor)
Pan / tilt / roll	Remote PTRZ adjustment
Low-light performance	IR illumination; 0 lux B/W with IR on
IR range	20 m at 0 lux; 30 m at 0.2 lux
WDR	Forensic WDR up to 120 dB, scene dependent
Video compression	H.264, H.265 and Motion JPEG
Analytics	Edge-based AI analytics including human/vehicle detection, line crossing, object-in-area, occupancy and motion scenarios
Environmental rating	IP66 / NEMA 4X / IK10
Camera operating temperature	-40°C to 50°C; PTR functionality to -30°C
Camera power	PoE, IEEE 802.3af/802.3at Type 2 Class 4; typical 10.9 W, max 23.6 W per camera

LTE communications

Gateway type	CAT4 LTE IoT Ethernet gateway
Cellular performance	Up to 150 Mbps downlink / 50 Mbps uplink over air
LTE bands	B2, B4, B5, B12, B13, B14, B66, B71
WCDMA bands	B2, B4, B5

Ethernet	10/100/1000 Mbps Gigabit Ethernet
USB	USB 2.0
Networking	IPv4 / IPv6, TCP, UDP, DHCP, HTTP, SNMP, FTP, DNS, MQTT and related network protocols
Security	Firewall, ACLs, VPN, IPSec, GRE / VPN tunnelling, HTTPS and access controls
GPS	Integrated GPS support; up to 5 Hz update rate
Operating temperature	-40°C to +85°C
Dimensions	Approx. 1.75 × 1.75 × 1.35 in

Video control & alarm bridge

Video channels	8
Video alarm zones	8
Alarm handling	Real-time video alarms and notifications
Integration	ONVIF event messaging; integration with AI cameras and server platforms
Audio	IP and analog audio output
Central monitoring	Supports live video monitoring, live audio broadcasts and remote control with additional hardware
Network	10/100 Ethernet, RJ45
Power	12 VDC or PoE, IEEE 802.3af Class 3
Peak power consumption	10.5 W
Security	TLS / SSL
Dimensions	150 × 98 × 35 mm (5.9 × 3.86 × 1.38 in)
Weight	265 g (0.6 lb)

Audible warning & communication

Speaker type	15 W outdoor IP horn speaker
Environmental protection	IP67 waterproof
Maximum SPL	113 dB
Frequency response	300 Hz–8 kHz
Amplifier	Built-in 15 W amplifier
Network interface	10/100 Base-TX, RJ45
Protocols	SIP, ONVIF, HTTP, IPv4, DHCP, RTSP, RTP, TCP, UDP and related network protocols
Audio	Network audio with support for multiple common audio codecs
Alarm input	1 channel
Power	PoE or 12–24 VDC
Operating temperature	-30°C to +60°C
Humidity	5–85%
Dimensions	285 × 205 × 290 mm
Weight	1.3 kg

On-board computer

Computer type	Fanless mini PC
Processor	4-core / 4-thread processor, up to 3.6 GHz, 8 W TDP
Memory	16 GB RAM
Storage	512 GB SSD
Storage expansion	M.2 2280 SATA/NVMe expansion; microSD support

Networking	Dual-band Wi-Fi 5, Bluetooth 5.1, Gigabit Ethernet
Video outputs	2 × HDMI 2.0 plus USB-C video output
Data I/O	USB 3.2, USB 2.0, USB-C, RJ45 Ethernet, 3.5 mm audio
Unattended operation	Auto power-on, Wake-on-LAN, PXE/iPXE boot and RTC wake support
Physical dimensions	Approx. 5.2 × 3.2 × 0.7 in
Weight	Approx. 0.44 lb

Lighting & warning

LED strobe lights	Integrated LED strobe warning lights
Tower lighting	4 × 90 W LED floodlights; 57,600 lumens; automatic dusk-to-dawn sensor

System integration

Standard configuration	2 × AXIS panoramic multi-sensor cameras + CAT4 LTE gateway + 8-channel video control bridge + 15 W IP horn + on-board fanless mini PC + LED strobe lights
Camera customization	Camera quantity, model and analytics configuration can be customized
LTE customization	LTE hardware and connectivity configuration can be customized
Monitoring	Networked surveillance and alarm architecture suitable for integration with remote monitoring services

Notes & limitations

1. Specifications describe the stated configuration and are subject to configuration, component availability and manufacturer revisions. Confirm the final configuration with Mirtek before procurement.

2. Component ratings apply to the named component, not to the entire assembled surveillance unit. Cellular throughput is a stated maximum; actual speeds depend on coverage, carrier and network conditions.

Discuss your configuration

Calgary, AB, Canada · +1 (825) 882-6553 · info@mirtek.io