



## Product Datasheet

Part Code: ANPR-MPU-240-16GB-XTR

### Mil-Spec ANPR MPU with built-in PoE Hub

#### Key Features

- Intel i7-9700 Main Processor Unit (MPU) with Integrated Z390 chipset
- Pre-installed Windows 10 Professional Operating System
- 7 x Gigabit PoE LAN ports (802.3 af/at) 48V (max 30W per camera)
- Automatic detection of non-PoE Ethernet connections
- Auto-negotiating RJ45 ports supporting Auto-MDI/MDIX
- 1 x Gigabit WAN (uplink) port for full remote management
- Supports dual display configuration by multiple interface: HDMI/DP
- Supports USB3.0 / USB3.1 and USB3.1 Type-C ports
- Ultra-wide operating temperature range
- Industrial Automotive grade 12~24V DC vehicle operation
- Industrial over-voltage and spike protection
- Built-in dual-band WI-FI 802.11 a/b/g/n/ac (2.4 and 5GHz supported)
- Built-in Bluetooth 5
- Built-in 240GB SSD Storage, 16GB DDR4 Memory
- Ultra-high performance 15,152 CPU benchmarked specification.
- Built-in DC-DC UPS with battery back-up
- Industrial grade harsh shut-down protection
- Industrial grade CPU cooling system
- Built-in dead reckoning UDR GPS tracking for harsh urban environments
- IP 54 rated
- EMC / Shock & Vibration Compliance: EN-50155, EN-61373, EN-50121-2-3, e-mark and Mil-STD-202G, Mil-STD-213B, Mil-STD-213a, Mil-STD-201A, Mil-STD-204D and Mil-STD-214A.



#### General Specification

Working temperature	-40°C ~ +75°C
Working humidity	10% - 90%
Certifications	EN50121 (EMC / Interference and emissions)
	EN50155 (Full environmental compliance)
	EN61373 (Extended shock and vibration)
	EN95/54, 2004/108/EC
	Mil-STD-202G
	Mil-STD-213B
	Mil-STD-213a,
	Mil-STD-201A
	Mil-STD-204D
	Mil-STD-214A
Environment	IP54 Rated
Dimensions	W x H x D - 380 x 145 x 195 mm
Weight	2U A/B/C type N.W 6.5kg with packaging 9kg



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#### ANPR MPU Specification

CPU	Intel® Core™ i7-9700 Processor @ 4.7 GHz
Chipset	Integrated Z390
Memory	16GB DDR4
Expansion slots	1 x M.2 Socket 1 with E key, type 2230 for WIFI option 1 x M.2 Socket 3 with M key, type 2242 (PCIe x2 mode & SATA mode) 1 x Full-Length Mini PCIe slot with an on-board Nano-SIM socket
Storage	1 x SATA 240GB + M.2 SSD 1 x mSATA slot (shared with Mini PCIe) 1 x Micro SD Card slot (on-board)
Display	Multi-VGA output support :DP/HDMI ports
USB	4 x USB3.1 Gen2 Type-A ports 4 x USB2.0 connectors (optional)
Internet	1x RJ-45
Audio	Realtek ALC887-VD2 High Definition Audio CODEC
Internal I/O	1 x Chassis fan header 1 x Clear CMOS jumper 1 x LPC Debug header 1 x SMBus header 1 x I2C header
BIOS	128 Mb Flash ROM, UEFI AMI BIOS, PnP, DMI 2.0, WfM 2.0, SM BIOS 3.0, ACPI 6.0, Multi-language BIOS, ASUS EZ Flash 3, Last Modified Log, ErP
Operating system option	IoT Enterprise or Windows 10 Pro Standard

#### ANPR DC PSU / UPS Key Features

- Input between 9 ~ 32V DC
- Programmable voltage thresholds
- Dual output voltages +12V & 19V DC
- Anti Thump output in automotive mode
- Motherboard startup/shutdown control by ON/OFF pulse or USB
- Highly customizable startup/shutdown timers via simple DIP switch config
- Low Power consumption
- HID-USB connection
- Built-in intelligent UPS / DC battery charger
- Built in 12V back-up battery (1200 mAhLiFePO4)
- Intelligent thermostatic fan temperature control
- Programmable relay output
- Programmable Spread Frequency
- Modulation for reduced EMI

#### ANPR DC PSU / UPS Specification

The PSU is able to send ON/OFF 'pulse signals' to motherboards based on ltered input voltage levels or Ignition sensing, making it an ideal device for automotive or battery powered installations.

Automated 'graceful shutdown' of the ANPR processor via USB using intelligent ignition OFF sensing.

If ignition is considered to be OFF, the PSU will wait 15 seconds before sending the shutdown pulse to the motherboard.

This shutdown signal can be sent through the ON/OFF pins or through USB, depending on the con guration of the CONFIG1 PSU set-up / shutdown menu



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#### PoE Switch Specification

Standards	IEEE 802.3 10 Base-T Ethernet
	IEEE 802.3u 100 Base-TX Fast Ethernet
	IEEE 802.3ab 100 Base-TX Fast Ethernet
	IEEE 802.3x 10 flow control
	IEEE 802.3af/at
Protocol	CSMA/CD
Transmission rate	Ethernet 10Mbps (half duplex), 20 Mbps (full duplex) 10 Base-T:14,800pps/port
	Fast ethernet 100Mbps (half duplex), 200Mbps (full duplex) 100 Base-TX:148800pps/port
	Gigabit ethernet 2000Mbps (full duplex), 1000 Base-T:1488000pps/port
Topology	Star
Network medium	10 Base-T:cat 3 or above cat.2 UTP (≤100m)
	100 Base-TX: cat 5 UTP (≤100m)
	1000 Base-T: cat 6 or above cat.5 UTP (≤100m)
Number of ports	8 x 10/100/1000M RJ45 ports
PoE number of ports	7 x PoE / LAN ports
Uplink	1 x WAN (uplink) port
Transmits method	Store and forward
Over voltage/current/short protection	The output can be shorted permanently without damage
Switch capacity	18G
LED indicators	1* power LED (power: green), 9* port LEDs (Link/Act:green), 8* PoE LED
PoE supply power	DC input voltage 48V - 56V 30W per camera

#### PoE DC Power Specification

Input voltage:	DC 12V-24V DC
Input Current:	15A (Max)
Output voltage:	DC 12V-80V continuously adjustable
Output current:	10A (Max) adjustable
Output power:	600W(Max)
Conversion efficiency:	up to 95%
Short-circuit protection:	fuse
Over-current protection:	Yes



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### Mil-Spec ANPR MPU with built-in PoE Hub

#### UDR GPS Specification

Connector:	USB 2.0 Type-A male
Chipset:	u-blox NEO-M8U
Frequency:	GPS: L1, 1575.4200 MHz GLONASS: L1, 1602 (k x 0.5625) MHz BEIDOU COMPASS: B1, 1561.0980 MHz GALILEO: E1, 1575.4200 MHz QZSS: L1, 1575.4200 MHz
Accepts the signals of up to 72 satellites at the same time	Yes
Supports AssistNow online / offline, SBAS (WAAS, EGNOS, QZSS and MSAS)	Yes
Supports NMEA 0183 protocols: GGA, GSA, GSV, RMC, VTG	Yes
Supports UDR from NMEA 4.1	Yes
Auto Baud Rate up to 115200 bps	Yes
Update rate:	up to 20 Hz
Sensibility max.	-160 dBm
IPX6 protection class	Yes
Magnetic, non-slip on the bottom	Yes
LED-indicator for GPS status	Yes
Operating temperature:	-20 °C ~ 60 °C
Cold start in ca. 26 seconds	Yes
Hot start in ca. 1 second	Yes
Positioning accuracy:	2.5 m CEP (Circular Error Probable) and 2 m CEP with SBAS
Cable length: ca. 1.5 m	Yes
Dimensions (LxWxH):	ca. 65 x 45 x 22 mm