



AVAILABLE MODEL

MS-UG56-LTE

8-channel industrial LoRaWAN® gateway with integrated 4G LTE Cat-4 cellular backhaul, plus Ethernet (PoE PD) and Wi-Fi 2.4 GHz — frequency band specified at order.

KEY FEATURES

- SX1302 8-channel concentrator — supports ~2,000 LoRaWAN® nodes per gateway with low power draw (typ. 1.8 W)
- 4G LTE Cat-4 cellular backhaul (Mini SIM) — keeps sensors connected on remote sites without fixed Internet
- Triple-backhaul redundancy with WAN failover across Ethernet (PoE PD), Wi-Fi 2.4 GHz and 4G LTE
- Built-in LoRaWAN network server + integrations with The Things Stack, ChirpStack, Actility, AWS IoT Core
- BACnet/IP, Modbus TCP & MQTT(s)/HTTP(s) APIs — drop sensor data straight into BMS or PLC
- Rugged metal enclosure, DIN rail / wall / desktop mounting — designed for industrial cabinets

Cellular-Ready by Design

Quad-core 1.3 GHz ARM Cortex-A35 with SX1302 silicon and an embedded 4G LTE Cat-4 module — drop the gateway anywhere with a SIM card and have the LoRaWAN® fleet online in minutes.

AT A GLANCE

Capability	MS-UG56-LTE
End-device capacity (10-min uplink)	~ 2,000
LoRaWAN® line-of-sight range	up to 15 km
LoRaWAN® urban range	~ 2 km
Concentrator	Semtech SX1302 — 8 channels (half-duplex)
Backhaul options	Ethernet · Wi-Fi · 4G LTE Cat-4 (optional)
Built-in LoRaWAN® network server	✓
BACnet/IP, Modbus TCP, MQTT(s), HTTP(s)	✓
Power options	802.3af PoE · USB-C 5 V / 2 A

TECHNICAL SPECIFICATIONS

Parameter	Specification
LORAWAN®	
Concentrator	Semtech SX1302, 8 channels (half-duplex)
Frequency Bands	EU868, US915, AU915
Tx Power	27 dBm max
Sensitivity	-140 dBm @ 292 bps
Antenna	1 × 50 Ω SMA Female (external)
Protocol	LoRaWAN® v1.0 / v1.0.2 — Class A/B/C
LBT	Supported (except AU915, US915)
Capacity	~2,000 end-devices (10-min uplink interval)
CELLULAR (OPTIONAL)	
Network	4G LTE Cat-4
Tx Power	Class 3 (23 dBm ± 2 dB)
SIM Slot	1 × Mini SIM (2FF)
Antenna	1 × 50 Ω SMA Female (external)
HARDWARE	

LORAWAN FREQUENCY BANDS

Region	Band
Europe	EU868
North America	US915
South America	AU915

NETWORK & SECURITY

Parameter	Specification
Network protocols	PPPoE, SNMP v1/v2c/v3, TCP/UDP, DHCP, DDNS, HTTP(S), DNS, ARP, SNTP, Telnet, SSH
VPN tunnels	OpenVPN, IPsec, PPTP, L2TP, GRE, DMVPN, WireGuard
Firewall	Access control, DMZ, port mapping (DNAT), MAC binding, IP/domain filtering
Reliability	WAN failover across Ethernet / Wi-Fi / LTE
User authority	Multi-level user roles
Diagnostics	Ping, traceroute, tcpdump, QXDM, log server

ORDERING INFORMATION

ATEK Part Number	Description
MS-UG56-LTE	8-channel industrial LoRaWAN® gateway with integrated 4G LTE Cat-4 cellular backhaul, Ethernet (PoE PD) and Wi-Fi 2.4 GHz — frequency band specified at order

Each unit ships with 50 Ω SMA LoRaWAN® antenna, USB-C power adapter (5 V / 2 A), wall mounting kit and DIN rail clip (new hardware revisions). LTE antenna kit included when the cellular option is configured. Contact ATEK for additional accessories or customisation.

EMBEDDED NETWORK SERVER & INTEGRATIONS

- Built-in LoRaWAN® v1.0 / v1.0.2 network server with the ATEK codec library and custom decoder support
- Compatible with The Things Stack, ChirpStack, Actility, AWS IoT Core for LoRaWAN, and the ATEK Cloud LNS
- Northbound APIs: MQTT(s), HTTP(s), BACnet/IP, BACnet/SC, Modbus TCP, Modbus RTU over TCP
- Multicast downlink and FUOTA firmware updates for end-devices
- Packet filter (whitelist / blacklist) and noise analyzer per channel for clean spectrum management
- Gateway fleet mode — act as the network server for secondary blind-fill gateways on the same site
- Python SDK and Node-RED for on-device logic and rapid integrations

ATEK PLATFORM INTEGRATION

- Zero-touch provisioning — gateway DevEUI is pre-linked to your account; comes online automatically
- Real-time gateway status, RSSI/SNR per device, and uplink/downlink counters in the ATEK dashboard
- Centralized OTA updates and configuration push across the entire gateway fleet
- Event alarms — power on/off, network up/down, VPN up/down, cellular signal — via email, SMS, webhook
- Audit-grade logging — every config change and remote action stored in tamper-evident audit logs
- GxP / 21 CFR Part 11 aligned — user-level audit trails, e-signature, ALCOA+ data integrity