/Lansen GW5 Series — Wireless MBus to LTE Gateway

The Lansen GW5 Series is a versatile family of Wireless MBus to LTE gateways designed for modern metering and IoT infrastructures.

Whether you need continuous high capacity data handling with mains operation or flexible longterm monitoring with battery operation, the GW5 Series offers versatility and dependable performance.

With support for up to 2000 meters, secure MQTT communication, and multiple LTE modem options, the GW5 Series ensures reliable data delivery, strong reception performance and straightforward installation - giving confidence that metering data will be collected and transmitted securely and efficiently.

LAN-WMBUS-GW5-SERIES

MQTT **LTE-M** **M-Bus wireless** **OMS®**

LANSEN GW5

General purpose and submetering

The Lansen GW5 is a compact and reliable Wireless M-Bus to LTE gateway available in both indoor and outdoor configurations.

It supports 230 VAC mains power or long-life battery operation, and offers internal or external SMA antennas depending on model. With ingress protection up to IP65/IP67, GW5 is suitable for demanding environments while maintaining a discreet form factor.

It collects Wireless M-Bus data and securely transmits it via LTE to cloud or backend systems using the MQTT, FTP or HTTP(S). With low power consumption, flexible configuration and dependable performance, GW5 supports submetering, building management and general IoT applications - offering scalable communication for installations where reliability and adaptability matter.

Available in various hardware configurations to suit your specific needs.

KEY BENEFITS

- Compact, adaptable design for varied installation environments
- High RF sensitivity for reliable meter collection in challenging conditions
- External SMA antenna options for optimized reception performance
- Supports up to 2000 Wireless M-Bus meters for scalable deployments
- Up to 20-year battery life for low-maintenance installations
- TLS 1.2 and AES128 security for protected data transmission
- USB-C, wMBus dongle, or MQTT provisioning for flexible configuration

CLOUD CONNECTIVITY - LTE MODEM OPTIONS

- **CATM1 (LTEM)**:
  Narrowband LTE optimized for low power IoT.
  Ideal for battery operaterd low data-rate applications.
- **CAT1/4G (LTECAT1)**:
  Full LTE bandwidth with higher data rates.
  Suitable for mains operation.

Data is securely delivered using the MQTT protocol, with TLS encryption and certificatebased authentication.

INSTALLATION

- Plug-and-play design for quick setup
- Configurable via USB C, LAN-WMBUS-D2-TC dongle, or remote MQTT
- Compatible with Lansen Configurator software
- Optional accessories: pole mounting kit, sealing kit, magnet tool, antennas, cables

FIRMWARE

INPUT MODE	T+C-mode (default) or S-mode (max bit rate error ± 3%)
OUTPUT MODE	C-mode (default), T-mode or S-mode
MAX SENSORS	2000 sensors
MAX WMBUS LENGTH	255 bytes
FILTERING	0 min to 127 hours suppression timer, RSSI, manufacturer, white listing, etc.
SECURITY	Supports recieving of Security Profile A , B and D according to OMS 4 or any message with a wM-Bus header.
STATUS TX INTERVAL	60 seconds on wM-Bus interface

GENERAL INFORMATION

POWER SUPPLY	M: 100-240 VAC, 50/60Hz
OVERVOLTAGE CATEGORY	III (Up to 2000m)
BATTERY	BE: 3.6V, 38000mA battery pack 2xER34615+SPC1550/W Li-SOCl² (replaceable)*
APPROVALS	2014/53/EU (RED) 2014/35/EU (LVD) EN 13757-3/4:2013
CLOUD PROTOCOL	MQTT 3.1 (M-Bus compatible data) FTP HTTP(S)

CELLULAR

LTE-M1 BAND	B1/B2/B3/B4/B5/B8/B12/B13/ B14/B18/B19/B20/B25/B26/B27/ B28/B66/B85
LTE-CAT1 BAND	LTE-FDD: B1/B2/B3/B4/B5/B7/ B8/B12/B13/B18/B19/B20/B25/ B26/B28/B66 LTE-TDD: B34/B38/B39/B40/B41

ANTENNA	Standard: Built-in wide bandwidth antenna. X-version: External SMA connector.		ENCLOSURE	
SIMCARD SIZE	4FF/Nano-SIM		DIMENSIONS	150x150x53 mm,
			COLOR	RAL 9003 (signal white)

STORAGE

TYPE	Flash (survive power loss)
SIZE	~128 Mbit ~270000 wM-Bus packets can be stored if size is ~50 bytes

POWER

WM-BUS RADIO	12mA
LTE-M1	Typical 120 - 150 mA in transmission Max 600mA
LTE-CAT1	Typical 120 - 150 mA in transmission Max 900mA

WM-BUS RADIO

RECEIVER CLASS	2
HARDWARE FILTER	For LTE/GSM/GPRS and other disturbances.
RADIATED POWER	~14 dBm (< 25mW)
SENSITIVITY	Down to S/T,C GW5: -110 dBm/-107 dBm**
INPUT RF LIMIT	18 dBm
ANTENNA	Standard: 2pcs built-in diversity antennas X-variant: External SMA connector

CLOUD SECURITY

ENCRYPTION	Off or TLS 1.2
CLIENT CERTIFICATE	Supported
SERVER (ROOT CERTIFICATE)	Supported

WIRELESS SECURITY

ENCRYPTION	AES128

ENCLOSURE

DIMENSIONS	150x150x53 mm,
COLOR	RAL 9003 (signal white)
MATERIAL	UV-resistant PC/ABS
FLAMMABILITY RATING	UL 94 HB

ENVIRONMENT

POLLUTION DEGREE	3
TEMPERATURE	Enclosure:-20°C to + 60°C. Radio: -30°C to +60°C.
ENCLOSURE IP-CLASSIFICATION	M: IP40 (A1), IP65 (A2) BE: IP40 (A1) BE: IP65 (A2), external antennas BE: IP65 & IP67 (A2), internal antennas

ACCESSORIES

LAN-WMBUS-D2-TC	Configuration dongle
LANSEN CONFIGURATOR	Configuration software
LAN-A-PMB-KIT-ID58-78	Pole mounting kit
LAN-MAG-R4	Magnet with telescopic shaft
LAN-R4-IP-KIT	Sealing kit for A2 enclosure Antennas Antenna cables

EXPECTED BATTERY LIFETIME

LISTEN/DAY	HOW OFTEN	UPLOAD INTERVAL	TELEGRAMS	BATTERY LIFETIIME***
5 hours	15 times/month	15 times/month	2000	~9 years
15 minutes	every day	every day	2000	~14 years
60 minutes	2 times/month	2 times/month	2000	~20 years

CONFIGURATION OPTIONS

			OPTIONS FOR LAN-WMBUS-GW5 GATEWAY				
LAN-WMBUS	SERIES	POWER OPTION	RECEIVER SENSITIVITY	ENCLOSURE IP-CLASS	ANTENNA (wM-Bus)	CLOUD INTERFACE	ANTENNA (CLOUD)
	GW5 Gateway gen.5	BE 3.6V/38Ah+ supercap	LR Improved receiver sensitivity for fantastic robustness and range	A1 IP40. Suited for indoor use	(Blank) Internal antenna	CATM1	(Blank) Internal antenna
	GW5 Gateway gen.5	M 230 VAC		A2 IP65 & IP67. Suited for indoor and outdoor use	X SMA connector for external antenna	CAT1/4G	X SMA connector for external antenna

*Lithium < 5g/cell, UN3091 class 9
**The sensitivity can be enhanced using the range extender LAN-WMBUS-FAMP868
***The expected battery lifetime stated is based on simulations and true measurements at 25 C° and is valid to the best of our ability but not a guarantee. The calculations and measurements can be sent upon request for your reference.

Specifications in this document are subject to change without notice.

V 3.0

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