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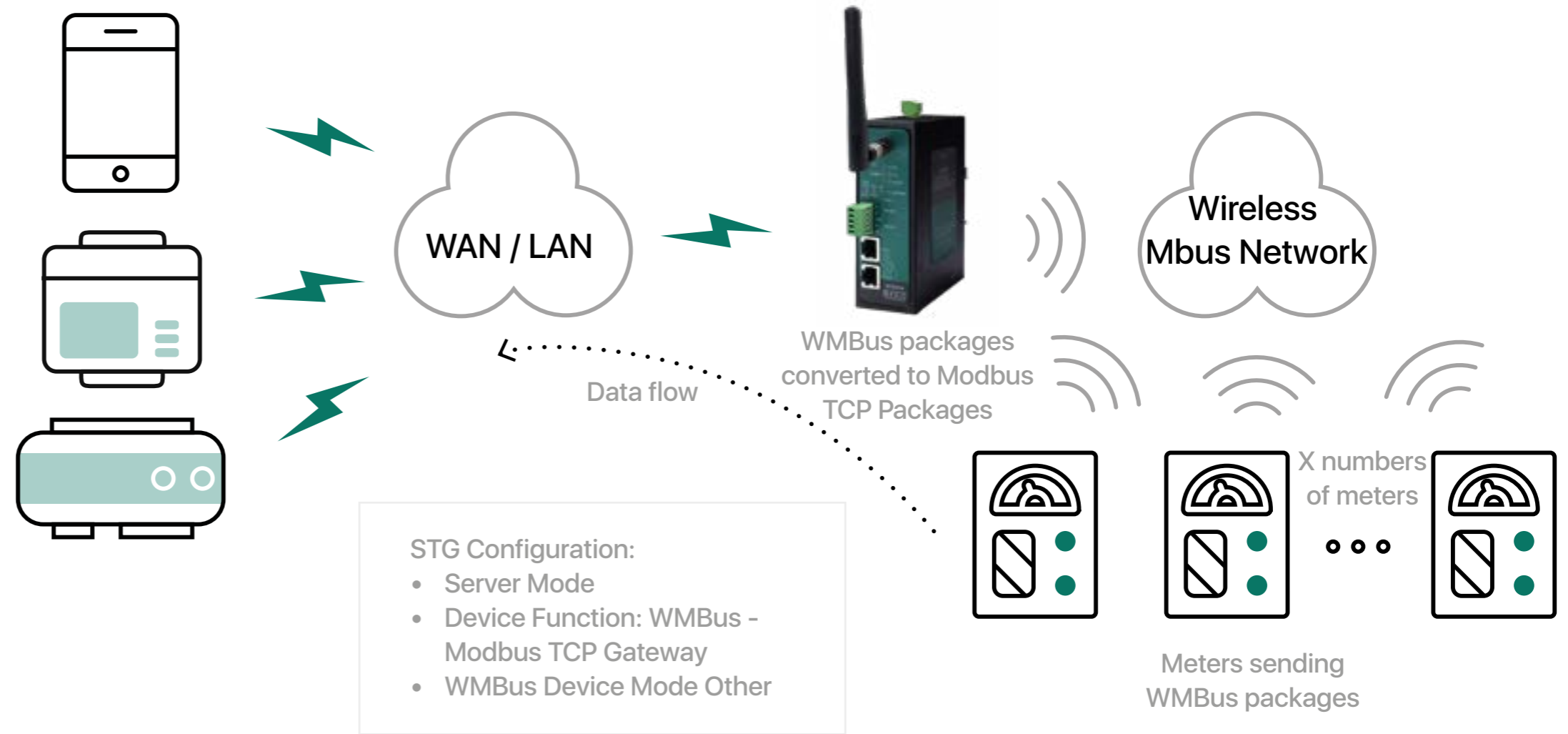
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STG154 WMBus (Wireless MBus) – Modbus TCP/RTU Gateway

with 2 x 10/100Base-T(x) Ports,
1 x RS232 and 1 x RS485 Serial Ports



STG Series WMBus Gateways are designed for industrial-grade Radio Frequency (RF) communication. STG Series WMBus Gateways are tailored to perform various features such as wide temperature range, wide power input range and several connectivity ports



Thus, STG Series WMBus Gateways are the best choice for facility management, power utility, telecommunication and all other applications that require industrial Wireless MBus Radio Frequency connectivity.

STG Series WMBus Gateways can create a WMBus RF network and connect Serial and/or ETH based devices with Wireless MBus devices. All

communication can be done over Radio Frequency network based on WMBus standard. STG Series WMBus Gateways can operate in 3 main modes: Transparent Mode, WMBus OMS Converter to Modbus RTU packages, WMBus OMS Converter to Modbus TCP packages. STG Series WMBus Gateways can act as TCP to WMBus Gateway as TCP Server, TCP to WMBus Gateway as TCP Client

or Serial to WMBus Gateway all in one device. Typical applications: Automated Meter reading, Home – Building – Industrial Automation, Wireless Sensors, Telemetry...

Main Features

- Supports 2 x 10/100Base-T(X) ports
- Supports Full/Half-Duplex, auto MDI/MDI-X on each port
- Supports 1 x RS232 and 1 x RS485 Serial Connection up to 921600 Baud
- Embedded web interface for ease of use
- REDZ special design, plug and play Server-Client Operating Modes
- Instant switch between operating modes with buttons
- 3 Main Device Functions:
 - WMBus OMS to Modbus TCP Converter
 - WMBus OMS to Modbus RTU Converter
 - Transparent Mode (Sends/Receive WMBus Packages to/from TCP/IP or Serial Side)
- Unlimited Numbers of WMBus device connectivity
- Up to 20 device connection in Modbus TCP or RTU conversion
- Easy monitor of parsed WMBus OMS data on web interface
- DHCP Server Capability
- Easy to follow Device Status on web interface
- 868MHz Wireless MBus (WMBus) Radio Frequency (RF) Communication
- WMBus device mode Configurable (Meter or Other Device)
- WMBus link mode Configurable (S1, S2, T1, T2, R2, C1, C2...)
- WMBus Radio Power Level Configurable (-8dBm to 14dBm)
- AES Decryption of Received Frames (Mode 5), Up to 16 devices
- AES Encryption of Transmitted Frames
- Easy to follow WMBus data packages on web interface
- Black List and White List based WMBus package filter
- Firmware Upgrade over Web
- 2 firmware storage capability on same device (1 active only)
- 5-60V DC wide range power input
- Wide operating temperature range from -40 to 85 °C
- Rugged Metal IP-40 housing design
- DIN-Rail mounting

Technical Specifications

Connectors and Ports

SMA Antenna Connector for WMBus	1 Standard SMA female interface, 50 ohm
Console Port	Micro USB connection for LOG in 115200 baud
10/100T(X) RJ45 Ports	Ethernet Connection on 2 ports
Serial Ports	5 pin wired Terminal Connection Tx, Rx, GND for RS232 A and B for RS485
Reset Buttons	Reset to Client and Reset to Server Operating modes buttons



Physical & Environmental Characteristics

Enclosure	Metal, IP 40
Dimensions	43 × 95 × 124 (w × d × h) mm
Weight	~ 380 gr
Storage Temperature	– 65 to 150 °C
Operating Temperature	– 40 to 85 °C
Operating Humidity	5% to 95% Non-condensing

Led Indicators

Power indicator	Power LED
10/100T(X) Indicators	Activity LEDs: ETH1, ETH2 and STG (Activity of device itself)
WMBus Indicators	Alive (Keeps ON during normal operation), Tx and Rx of data LEDs
System Indicators	Status LED, Tx and Rx of data LEDs and Server LED (LED ON: Server Operating Mode, LED OFF: Client Operating Mode)
Console Indicators	Tx and Rx of data LEDs

WMBus Technology

WMBus Module	Pre-Certified according to EN 300 220
Output Power level	Up to 14dBm
Link Budget	Up to 130 dB
Communication Distance	Up to 3km (Line of Sight)
Typical Communication Distance Indoor/Urban	>100m
Link Modes	S1; S1-m; S2; T1; T2; R2; C1, Telegram Format A; C1, Telegram Format B; C2, Telegram Format A; C2, Telegram Format B
Device Mode	Meter: Sends WMBus packages only Other: Sends and receives WMBus packages

Power

Input Range	5-60V DC input
Reverse Polarity Protection	Available
Thermal Shutdown and Current Limit Protection	Available

Ethernet Switch Technology

Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-T(X) IEEE 802.3x Flow Control
Mac Table	1K MAC address entry
Processing	Store-and-Forward
Memory	448K bits packet buffer memory

Modbus Characteristics

Modbus Protocol	Modbus TCP or RTU Selectable by User
Modbus Devices	Up to 20 Modbus can be defined by User
Modbus Address	Independently selectable by User
Modbus Function Code	Read Holding Registers (FC=03)



Ordering Information

STG154
868MHz WMBus – Modbus TCP/RTU Gateway,
2 × 10 / 100 T (x) ETH ports,
1 × RS232 & 1 × RS485,
5–60 V DC Power Input

Product Selection

Model	5 – 60V DC Power input	90 – 265V AC (100 – 370V DC), 47Hz to 63Hz AC Power Input	3 Phase AC Power input, 110 V – 240 V / 50 – 60 Hz AC Power Input	2 × 10/100 T(x) ETH ports	1 × RS232 and 1 × RS485 Serial Ports	BPL (Broadband Power Line) Link
STG154	●			●	●	
STG254		●		●	●	
STG655			●	●	●	●