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STG655 WMBus (Wireless MBus) Gateway

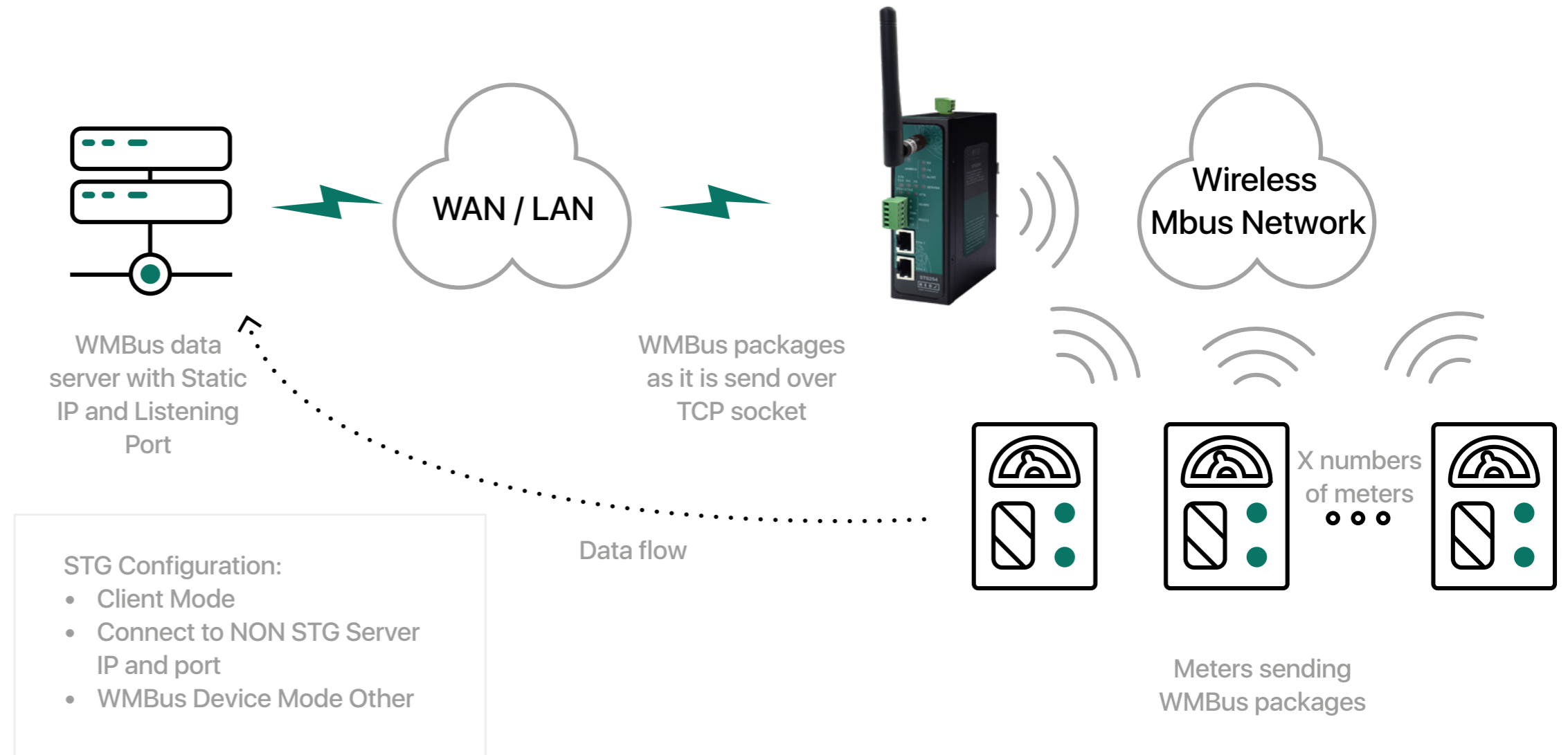
with 2 × 10/100Base-T(x) Ports,
1 × RS232 and 1 × RS485 Serial Ports
and BPL (Broadband Power Line Link)



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.

REDZ Broadband Power Line (BPL) link allows device to communicate with full transparent TCP/IP standard over Low Voltage power lines and



allows easy connection between TCP/IP based terminals without use of extra cables.

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 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 × 10/100Base-T(X) ports + 1 × BPL link
- Wide Range 3 phase input, 110V–240V/50-60Hz wide range power input
- Supports up to 30Mbps PHY rate on BPL with Up to 10 hops and 1000 nodes
- Up to 432 sub-carriers from 2 to 28MHz analog bandwidth on BPL
- Support LDPC-C FEC with 128-bit AES core on BPL
- 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
- Up to 20 client connection in Server Mode
- 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)
- 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)
- 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	~ 380gr
Storage Temperature	– 65 to 150 °C
Operating Temperature	– 40 to 85 °C
Operating Humidity	5% to 95% Non-condensing

BPL (Broadband Powerline) Technology

PHY Data Rate	Up to 240 MHz
MAC Layer Protocol	CSMA/CA
Modulation Technology	OFDM-432
VLAN	IEEE802.1q/ IEEE802.1p/ IEEE802.3d



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
BPL LEDs	<ul style="list-style-type: none"> BPL Activity BPL Link Master Indication (LED ON: Master, LED OFF: Slave)

Power

Input Range	3 phase input, 110 V – 240 V / 50 – 60 Hz
Power and Data	AC Power supply use L1-N only. Phase 2-3 connections are used to BPL signal transmission.

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

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



Ordering Information

STG655
868MHz WMBus gateway,
2 × 10 / 100 T (x) ETH ports
+ 1 x BPL (Broadband Power Line) Link,
1 × RS232 & 1 × RS485,
3 Phase AC Power Input, 110 V – 240 V / 50 – 60 Hz

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	Instant Switch to Client or Server Operating Modes with Button	BPL (Broadband Power Line) Link
STG154	●			●	●	●	
STG254		●		●	●	●	
STG655			●	●	●	●	●