TR-2300 Gateway

DESCRIPTION

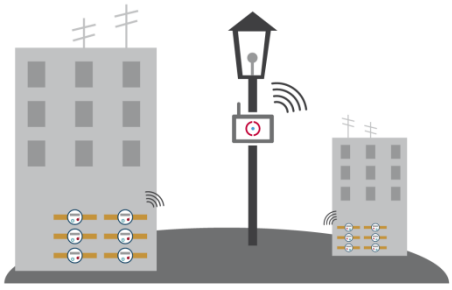
The Gateway TR-2300 from IoTsens allows to collect information from devices that transmit with the protocol EN 13757-4 (WMBUS) from up to four receivers simultaneously and transmit the data through mobile or fixed networks for further analysis.

BENEFITS

- Collects data from different types of devices: water, gas and electricity meters among others that use protocol EN 13757-4 (WMBUS).
- Able to manage more than 2.500 meters (coverage restriction) *
- Efficiency: A reduced number of gateways are required to control many meters.
- Storage of the data temporally for queries and next data upload.
- The device is compatible to different models and brands of meters and to the encryption of its data.
- The decryption of the data is not performed at the gateway, increasing the device security, since it does not know the decryption keys.
- Full configurable mobile and fixed network parameters
- Upload support FTP/FTPS, HTTP/HTTPS and MQTT protocols.
- Web manager interface

OPERATES IN WIDE ENVIRONMENTAL CONDITIONS

The device is able to withstand harsh working conditions due to its wide humidity and temperature range and high insulation level.



INSTALLATION

The Gateway should be installed in places with optimal coverage conditions.

TECHNICAL SPECIFICATIONS

PRODUCT

Dimensions:	30x22x6 cm
Weigh:	1800g
Temperature range:	-30 to +60 °C
Housing:	- Environment Resistance: IP67 full protection from dust and water ingress - Body and Cover - Die Cast Aluminium
Wind Survival	120 km/h
External Connectors:	- Up to 4 connectors type N female for WMBUS antenna - Antenna connector type N female for mobile network (4G / 3G / 2G) - Gland for input power - Ethernet connector - Connector type N female for GPS (optional) (antennas not included: ordered separately)
Internal Connectors:	- Micro SD until 32GB (optional) - Console port for management purposes (optional USB cable for this connection)

COMMUNICATION INTERFACES

MTE Connectivity	- Mobile networks (4G / 3G / 2G) - Delivers M2M optimized data with up to 10 Mbit/s
Ethernet PHY	Fast Ethernet 10 / 100 Mbit/s

CPU CORE

CPU Type	Texas Instruments Sitara Cortex A8 1GHz
RAM	512MB DDR3
Storage	8GB eMMC (7,5 gbytes free)
RTC	Backup battery: CR1220

WIRELESS MBUS

Radios	4 radio modules EN13757-4 compliant
Frequency	433MHz or 868 MHz (configurable on demand)
Sensitivity	-102 dBm typical
Image rejection	30 dBm typical
Operating modes	Supports modes S, T and C
Chipset	Based on Texas Instruments

POWER SUPPLY

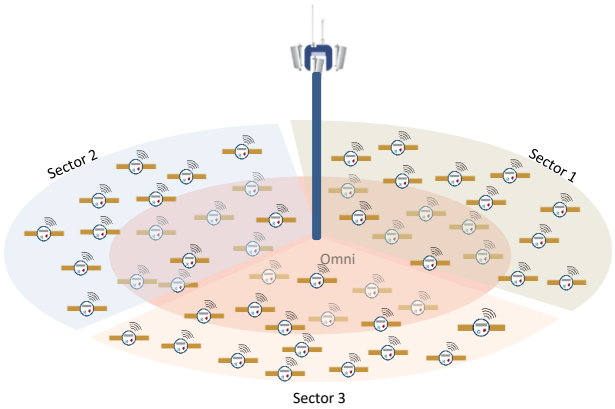
Direct Current	Power supply with 12-24 VDC, 20W max. Optional power supply: 12V,20W
POE	IEEE 802.3 AF (15.4W) compliant Optional: POE injector 15W

RECOMMENDED WORKING CONDITIONS

Omnidirectional Antenna	Up to 850 meters with 64bytes frame size every 15 seconds
Sector Antenna	Up to 850 meters with 64bytes frame size every 15 seconds
Omnidirectional and sector antenna	Up to 1500 meters with 64bytes frame size every 15 seconds
Omnidirectional and 2 sector antennas	Up to 2000 meters with 64bytes frame size every 15 seconds
Omnidirectional and 3 sector antennas	Up to 2500 meters with 64bytes frame size every 15 seconds

FULL WORKING CONFIGURATION

1 4G/3G/2G antenna
1 Omnidirectional 868MHz antenna
3 Sector 868MHz 120º antennas



Estimated coverage areas with full antenna capability