

# KET-RTU-310



APPLICATIONS
monitoring consumption
Building management system
Smart City
Thermoregulation



MAGGIORI CONTENUTI ONLINE



## Advanced X-Monitor gateway with 4G/LTE-M modem and Wi-Fi™

- 4G/LTE-M, Wi-Fi™ and X-Monitor (X-MP) connectivity
- Bidirectional RS485 port
- ModBUS TCP/IP Server
- Native integration with X-Platform

The **KET-RTU-310 Gateway**, the central core of the **X-Monitor** network, stands out for its **advanced functions** and **large memory capacity**, key elements for efficient data management.

Connection flexibility is ensured by the **integrated 4G/LTE-M modems (optional)** and **Wi-Fi™ support**, eliminating the need for a LAN connection and expanding installation possibilities even in environments without cabling.

Thanks to the **Linux** operating system, the gateway utilizes standard libraries to ensure a high level of security and reliability in data transmission.

The installation and management of sensor networks, even complex ones, are extremely simple thanks to the included **X-Manager** software and the intuitive **integrated web interfaces**. These allow for quick configuration of the necessary parameters and real-time monitoring of acquired measurements.

In addition to the ability to export data to external platforms like **X-Platform**, the device offers a **large internal SD memory** capable of storing data for periods exceeding three months, ensuring operational continuity and the availability of measurement history.

The integrated **RS485 port** supports both **Master RTU** and **Slave RTU** modes, offering dual functionality: direct connection of devices to the gateway or access to the registers of connected devices via an external Master RTU.

The **ModBUS TCP/IP server** incorporated in the KET-RTU-310 facilitates the integration of the **X-Monitor** network with **SCADA systems**, **PLCs (programmable logic controllers)**, and **HMI (human-machine interface) systems**, expanding data control and visualization possibilities.

Interoperability with proprietary data collection systems is further enhanced by support for data transmission via **REST / JSON web services** and the **IEC 60870-5-104 protocol**, ensuring flexible and standardized communication.

TECHNICAL FEATURES	
GENERAL SPECIFICATIONS	<b>Protection Range:</b> Front: IP40; Screw Terminals: IP20 <b>Operative Temperature:</b> -20 ÷ +70 °C <b>Storage Temperature:</b> -20 ÷ +85 °C <b>Relative Humidity:</b> MAX 80% not condensing
CASE	<b>Dimensions:</b> 106 x 90 x 60 mm (W x H x D) <b>Mounting:</b> Wall mounting or on DIN rail <b>Required DIN modules:</b> 6 DIN modules <b>Electric Board Type:</b> Industrial or switchboard <b>Material:</b> Blend PC/ABS self extinguishing UL94-VO
POWER SUPPLY	<b>Supply Voltage:</b> 100 ÷ 240 VAC (50-60 Hz) or 12 ÷ 24 VDC, 12 ÷ 20 VAC <b>Consumption:</b> 6 W @ 100 ÷ 240 VAC / 6 W @ 12 ÷ 24 V AC/DC <b>Connectors types:</b> Removable screw terminals
UPS	<b>Battery Type:</b> Internal lithium 1 Ah <b>Approximate Battery Life:</b>
DATALOGGER FUNCTION	<b>Memory Type:</b> Flash up to 128GB internal microSD card not accessible, 1GB RAM DDR3 <b>Data Storage Capacity:</b> For a period of over 3 months
PROCESSORS	<b>Processor Type:</b> Allwinner A20 CPU for the Linux operating system
RS485 INTERFACE	<b>Channels:</b> <b>Supported Protocols:</b> Master or slave ModBUS RTU <b>Communication Rate:</b> <b>Isolation:</b> <b>Connectors types:</b> Removable screw terminals
ETHERNET INTERFACE	<b>Supported Protocols:</b> 10/100/1000 Base-T <b>Communication Rate:</b> <b>Connectors types:</b> RJ45
ANALOG OUTPUTS	<b>Output Type:</b> Video: HDMI output for OEM use; Touch: a dedicated USB for OEM use; 2 USB ports for FW upgrade and data transfer
RADIO MODULE	<b>Supported Protocols:</b> X-Monitor Protocol (X-MP) / IEEE 802.15.4 <b>Radio Frequency:</b> 2.4 GHz ISM Band <b>Output Power:</b> +3 ÷ +20 dBm <b>Sensitivity:</b> -104 dBm <b>Antenna Type:</b> RPSMA connector, 90° antenna supplied <b>Max Distance (Free Air):</b> Over 1000 m
MODEM	<b>Supported Protocols:</b> 4G/LTE-M <b>Radio Frequency:</b> <b>Antenna Type:</b> SMA connector <b>SIM Type:</b> Mini-SIM
WI-FI	<b>Supported Protocols:</b> IEEE 802.11b/g/n standards: 64/128-bit WEP, TKIP, AES, WPA, WPA2 <b>Radio Frequency:</b> 2.4 GHz ISM Band <b>Antenna Type:</b> RPSMA connector, 90° antenna supplied
FUNCTIONALITY	<b>Radio Signal Indicator:</b> <b>Output Power Adjustment:</b> <b>Firmware Upgrade:</b> Remotely <b>User menu:</b> <b>Support for public environment:</b>
INTEGRATED FUNCTIONS	<b>Services:</b> Gateway function between X-Monitor™ network to Wi-Fi™, Ethernet and cellular; ZigBee™ network coordinator; Server ModBUS TCP/IP; ModBUS RTU master and slave on RS485 port
CERTIFICATIONS	<b>Referends Standard:</b> 2014/35/UE, 2014/30/UE, 2014/53/UE, 2011/65/UE <b>Approvals:</b> CE <b>Security:</b> EN 61000-6-2 / -6-3 / -4-2 / -4-3 / -4-4 / -4-5 / -4-6 / -4-11; EN55022 (cl. B), EN55016-2-1 / -2-3 <b>Metrology:</b>