

WUM-CDC-W

Advanced Wireless IIoT Controller and Data Concentrator for Smart Metering and Management Systems



WUM (Wireless Universal Multi-Mesh) Controllers and Data Concentrators are multifunctional wireless devices for collecting, storing, and transmitting data.

Wi-Fi Mesh technology integrates wired and wireless networks into a unified system, providing reliable communication between meters, controllers, and central hubs.



connects
up to 64 meters



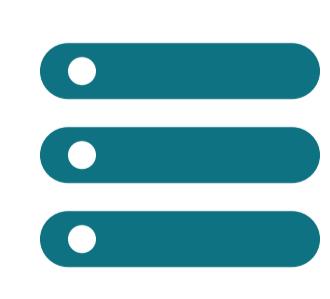
communication technology
Wi-Fi Mesh



integration with
various devices



remote management
& configuration



secure data
transmission & storage



flexible operation
& power supply



The **WUM** controller and data concentrator can integrate various types of meters, as well as controllable controllers, modules, and devices from different manufacturers.



SPECIFICATIONS

MULTI-MESH ARCHITECTURE

Integrates wired (RS-485) and wireless nodes (Wi-Fi Mesh) into a unified system. Ensures reliable communication between meters, controllers, and gateways, as well as overall network scalability.

DEVICE CONNECTION

Two RS-485 buses can connect up to 32 devices each, supporting up to 64 meters per concentrator.

SUPPORT FOR PULSE INPUTS

Two dry contact ports for pulse reading and connecting additional sensors.

TIME SYNCHRONIZATION

Constant time synchronization with the central system, ensuring the accuracy of primary data collection, processing, and storage.

DATA PROCESSING AND STORAGE

The device creates an hourly archive for each meter and stores data in its internal memory for 30–45 days, including periods of power outage.

SECURITY AND ENCRYPTION

Data transmission is carried out using the AES-256 (Advanced Encryption Standard) algorithm, which prevents unauthorized access.

POWER SUPPLY AND INSTALLATION

Interface for direct power supply from 220 V or 12/24 V source. The compact housing is designed for DIN-rail mounting.

AUTONOMOUS OPERATION

Concentrator keeps accumulated data during power outages.

DATA COLLECTION AND TRANSMISSION

- Support for major communication protocols: DLMS/COSEM, IEC 62056-21, Modbus. Capability to integrate proprietary, yet publicly available protocols.
- WUM Data Concentrators use wired connection via RS-485 for reading data from smart electricity meters and connecting controllers, modules, and various devices.
- The device uses Wi-Fi Mesh technology to send data to other concentrators and gateways (WUM-CDC-W, WUM-CDC-WL, WUM-CDC-WG, and WUM-CDC-WLG), which ultimately, send it through mobile internet (GSM/LTE) to the central management system (HES) for processing, storage, and analysis.



DIMENSIONS

| | |
|----------------------------|-------------------|
| Enclosure with | DIN-rail mounting |
| Dimensions | 55 x 68 x 111 mm |
| Weight including enclosure | 95 g |

OPERATIONAL CHARACTERISTICS

| | |
|-----------------------|-----------------------------------|
| Operating Temperature | -30...+80 °C |
| Humidity | up to 92% without condensation |

POWER SUPPLY

| | |
|-------------------|------------------|
| Voltage | 220 V or 12/24 V |
| Power Consumption | 3 W |

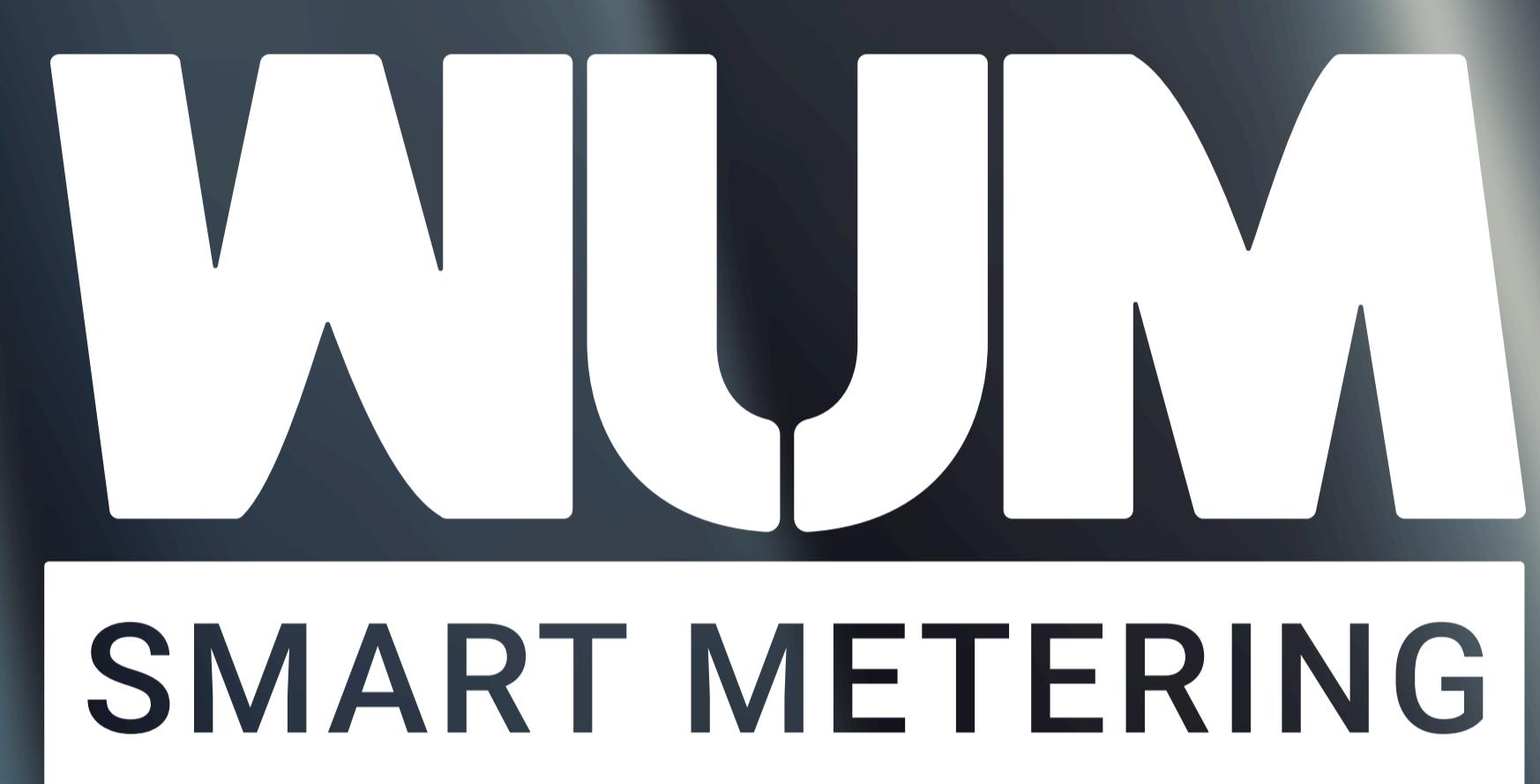
COMMUNICATION SPECIFICATIONS

| | |
|----------------------------|--------------------------------------|
| Supported Protocols | DLMS/COSEM IEC 62056-21 Modbus |
| Number of meters connected | up to 64 32 per RS-485 bus |

AREAS OF APPLICATION

- ✓ Advanced Metering Systems (AMI) and Automated Commercial Electricity Metering System.
- ✓ SCADA Systems, as an integrated component for operational control and data acquisition.
- ✓ BMS (Building Management Systems) and Smart Home systems, serving as a nodal communication gateway for managed devices and/or a data concentrator for telemetry.

WUM



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