

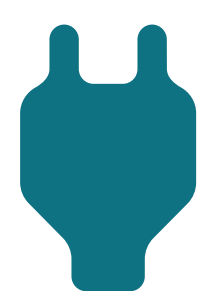
# WUM-CDC-WG

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



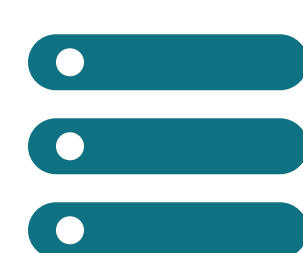
communication technology  
Wi-Fi Mesh, GSM/LTE



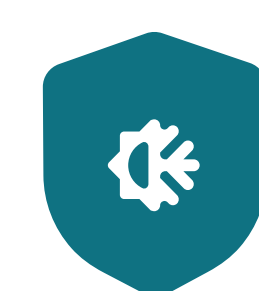
integration with  
various devices



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 other controllers, modules, and devices from different manufacturers.



# SPECIFICATIONS

## MULTI-MESH ARCHITECTURE

Integrates wired (RS-485) and wireless nodes (Wi-Fi Mesh, GSM/LTE) 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.
- Wi-Fi Mesh wireless technology for data transmission between devices within a single network segment.
- WUM Data Concentrators use GSM/LTE wireless technologies for transmitting data to the central management system (HES) for further processing, storage, and analysis. In addition to being a data concentrator, it can also perform the role of a gateway.





## DIMENSIONS

|                            |                   |
|----------------------------|-------------------|
| Enclosure with             | DIN-rail mounting |
| Dimensions                 | 55 x 68 x 111 mm  |
| Weight including enclosure | 110 g             |

## OPERATIONAL CHARACTERISTICS

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

## POWER SUPPLY

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

## COMMUNICATION SPECIFICATIONS

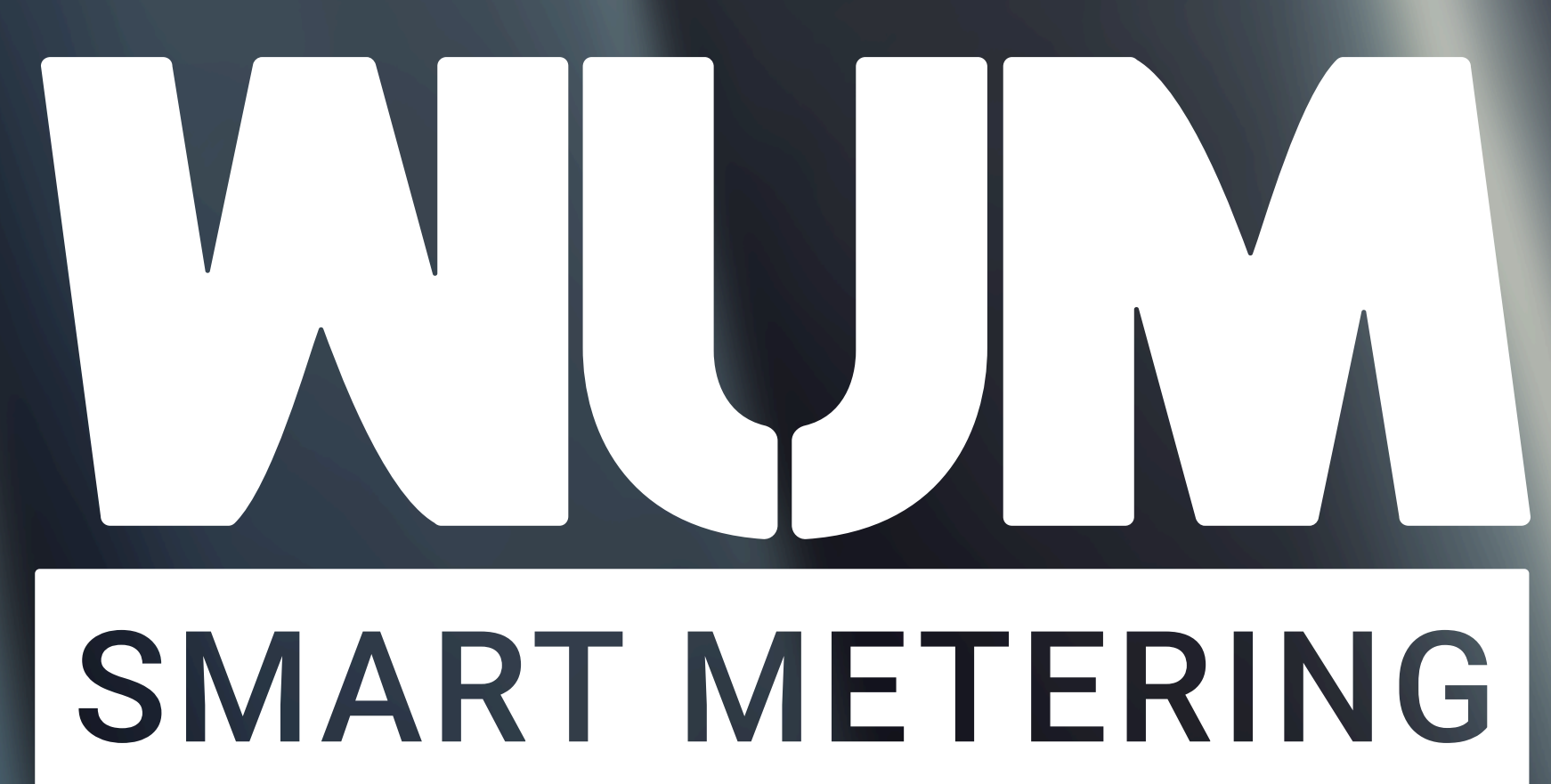
|                               |                                      |
|-------------------------------|--------------------------------------|
| Supported Protocols           | DLMS/COSEM<br>IEC 62056-21<br>Modbus |
| Number of meters<br>connected | up to 64<br>32 per RS-485 bus        |

## 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.







## CONTACTS

iDomus Company S.R.L.  
<https://idomus.pro>  
[info@idomus.pro](mailto:info@idomus.pro)