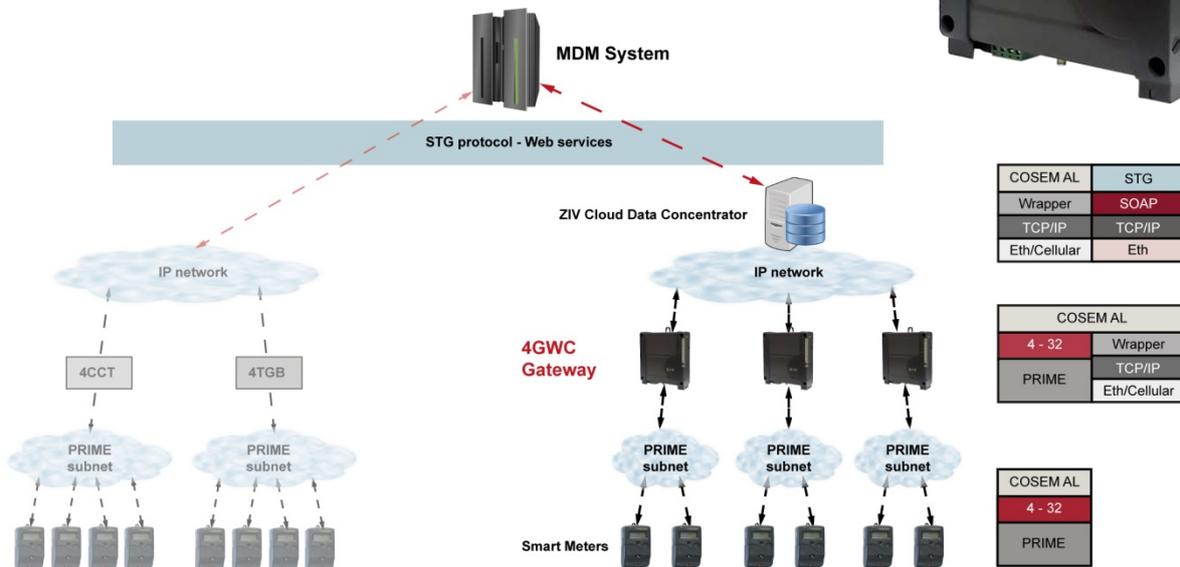




4GWC

IP to PLC AMI Gateway



The 4GWC enables the remote connection of a DLMS client (ZIV Cloud Data Concentrator) through an IP network (Cellular and/or Ethernet) with the meters installed in the field.

The 4GWC is a **purely telecommunications gateway transparent to the upper layers.**

Meter data are not stored on it as in traditional data concentrator architectures where the DLMS client and AMI database are installed locally in every secondary substation. With the 4GWC, a smart telecommunication infrastructure can be implemented, **separating communication service provision from application level functionality** and thus being future proof. Thanks to this architecture the data concentrator function **can be centralized together with the AMI head-end system**, allowing a unified management of the AMI information system.

AMI IP to PLC Communications

The 4GWC includes an internal PLC Base Node able to create a PLC network topology for communicating with PRIME or G3 PLC smart meters.

Different injection strategies and three independent reception channels are the technological basis determining the optimal path to dynamically communicate with smart meters.

Main applications

- Enable direct remote DLMS associations from a distant or virtual data concentrator to smart meters in the field, acting as an-IP to PLC gateway.
- IP connectivity towards the DLMS client can take place through either a 2G/3G cellular WAN interface or the local Ethernet port.
- Automatic meter identification and service provision.

Cybersecurity in AMI network

- Asymmetric cryptography based on certificates.
- TLS support.
- Secure interface support (HTTPS/SSH), security in access.

Equipment interfaces

- 1 Fast Ethernet 10/100Base-Tx port (female RJ-45 connector).
- 5 pole terminal block for power supply and ground (3 phases, neutral, GND).
- 1 serial port (RJ12) for terminal console, RS232/RS485.
- SMA antenna connector.
- LEDs for status indication.

Management system

- Local and remote management through a console or built-in web server (HTTP/HTTPS), SSH and Telnet server.

Technical Information

Cellular frequency range	<ul style="list-style-type: none"> ➤ 2G dual band 800/1800 MHz ➤ 3G dual band 900/2100 MHz
Main characteristics	<ul style="list-style-type: none"> ➤ Dual SIM interface for network carrier redundancy. ➤ Integrated PLC Base node with 3 phase smart signal injection
Meter support	Up to 25 active meter connections can be established simultaneously with the remote DLMS client through the IP interface
Mounting	Wall mount or DIN rail mount
Dimensions	Height: 150 mm; Width: 40 mm; Depth: 140 mm
Weight	500 g
Power supply	<ul style="list-style-type: none"> ➤ Three phase 85-265 V_{AC} ➤ Max. power consumption: 7W
Temperature range	From -25°C to +70°C
Enclosure material	Anodized (RAL 9006) aluminium 6060 T5 alloy and fireproof (UL 94 V0)

