



Smart solutions.
Strong relationships.



DISTRIBUTION AUTOMATION SOLUTIONS (DAS)

- SMART METERS & DCUs
- SMART GRID COMMUNICATION IEDs
- SUPERVISION & AUTOMATION RTUs
- SMART CABINETS & SYSTEMs
- EV CHARGING STATIONS





Our Smartgrid laboratory allows our devices to be tested under real operating conditions, as well as to adapt and evolve our technology to the complex and diverse requirements of the field environment.

TRANSFORMING THE EXISTING DISTRIBUTION GRID INTO THE SMARTGRID

The electricity distribution grid in MV and LV is diverse and complex.

We supply equipment, systems and solutions to make the Smart Grid a reality:

- AMI systems
- MV supervision and automation
- LV supervision and quality of supply monitoring
- Communication technologies adapted to the distribution grid
- Distributed generation integration solutions
- Electric vehicle charging stations.

We provide integral solutions to improve the efficiency and operational management of electricity distribution and smart metering systems.



Reference supplier of Smartgrid and AMI Systems with comprehensive customer references in Europe, Asia and the Americas.



DISTRIBUTION GRID AUTOMATION SYSTEMS

MV supervision and automation RTU

Broad RTU range (compact, modular, cellular) for different automation applications.



TCA
Compact RTU

Compact RTU with the following functions:

- MV supervision for U, I, P, Q (with appropriate sensors)
- Directional through fault detection
- ANSI protection functions available
- Automation (digital I/O, logics and algorithms for secondary substation automation)

IEC 60870-5-104/101, modbus and DNP3 protocols.

Modular RTU USP20 includes analog inputs, LV supervision modules, digital I/O and MV supervision functions.



USP20
Modular RTU

Remote control RTU with integrated cellular communications

RCU - Compact micro RTU with integrated cellular communications. Equipped with digital I/O and battery backup to enable autonomous operation in the absence of AC power. IEC 60870-5-104 and DNP3 protocols.

Power supply with battery backup



BCC

Robust uninterruptible power supply backup system with integrated battery charger for MV/LV automation cabinet applications. The DC supply output is regulated and protected against over-voltages and short-circuits. Suitable for 48 / 24 Vdc battery systems (Lead-gel high performance kits).

Sensors

ACA DRMT SCXI

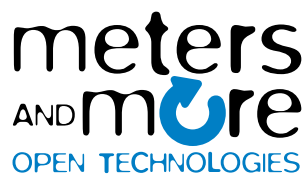


Broad range of voltage (capacitive and resistive) and current sensors, integrated PLC signal couplers for air insulated and SF6 switchgear applications. High precision (IEC 60020 classes 1 and 2).



Over two thousand secondary substations already implement ZIV automation systems





CCT - First data concentrator certified by the PRIME Alliance.



AMI GLOBAL PROVIDER

Meter data concentrator



CCT

Smart metering Data Concentrator for secondary substations

The CCT concentrator includes an advanced low voltage supervisor and PLC communications controller with advanced network monitoring functions, in addition to remote smart meter management functions.

The CCT implements protocols widely accepted in smart metering such as DLMS to carry the readings and web services to communicate with the utility MDM.



Compact CCT with integrated WAN communications



SPN

LV supervisor with PLC / radio communications in the last mile (DCU to the meters)

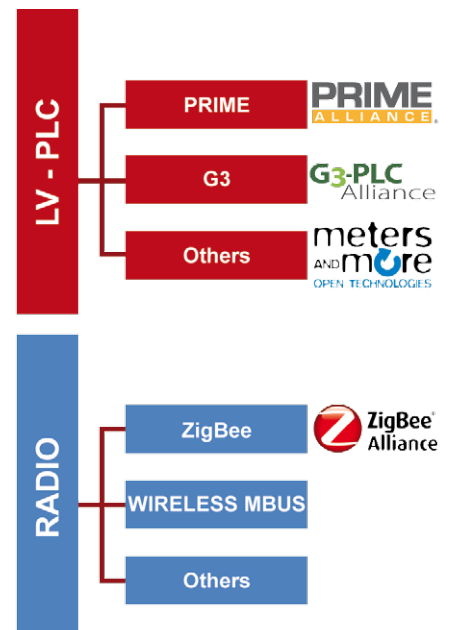
Metering integration of Gas / Water /Electricity

LDC - Enables the integration of Gas/Water meters in PLC systems using different communications technologies (such as M-Bus, wireless M-Bus, ZIGBEE).

PLC / Radio access device



PBN - Base node to enable meter connection via radio or PLC.



SMART METERS



**Single and
Three-phase
Smart Meters**



CTM and CTD

Aimed at residential revenue metering, reading and remote management (AMM) functions are performed through the integrated PRIME PLC modem, TOU, recording, load shedding and events. Class C in active energy (IEC 62053-21) and class 2 in reactive energy (IEC 62053-23).

**Three phase
transformer rated
Smart Meter**



CTD X/5

5CTD product family has been designed for revenue metering applications where indirect current measuring is required (connection through current transformers). All 5CTD models include metering, TOU, recording and remote reading functions.

**High accuracy
meter**



CTE

5CTE is used in Utility Interconnections where high accuracy energy metering is required. The 5CTE is 0.2S class for active energy (IEC 62053-22) and 0.5 for reactive energy. It integrates measuring functions, recording and TOU and provides remote data reading.

**LV Three phase
line supervisor
& feeder
detector**

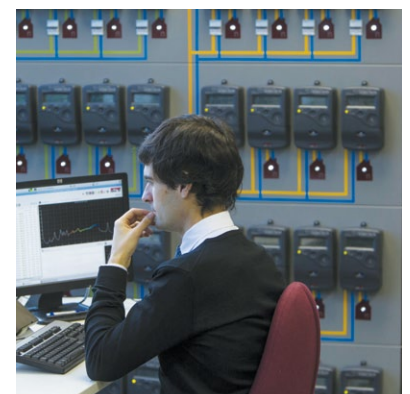


CTI

CTI is a new three phase meter family (accuracy class 1), designed to enable advanced supervision of LV lines in secondary substations. This device continuously monitors voltages, currents, power and quality of service parameters for each phase. The line detection function indicates to which line the meters are connected, thus assisting in the planning of the deployment.



*Over two million
ZIV smart meters
deployed.*





To inject PLC communication signals in MV powerlines, ZIV presents a complete range of capacitive and inductive couplers which adapt to different types of switchgear (both air and gas insulated).

COMMUNICATIONS

WAN Routers

Different industrial routers for smartgrids applications.



DRA – 2 Communications node for secondary substations

Industrial router with different WAN interface options, such as cellular radio interface (GPRS or 3G), number of SIMs supported (1 or 1+1), xDSL, Ethernet ports (6/4 x 10/100BaseT + 2/0 x 1000Base), and advanced software features such as dynamic tunneling, TCP/IP routing and QoS in WAN links. Optimized format and power supply for secondary substation applications.



Compact cellular router equipped with Ethernet and serial ports

PLC over MV

Industrial Routers equipped with a PLC over MV WAN interface and ethernet ports (6 x 10/100BaseT + 2 x 1000Base).

MV PLC takes advantage of the existing medium voltage cable to transmit up to 20 Mbps up to 1 Km, using only couplers.

PLC over MV and LV terminals for Telecontrol and Teleprotection



NDLC / NDLV

Devices that integrate RTU, teleprotection and communications functions in a compact format . They are a complete solution for small remote facilities in electricity distribution companies.

Switches and modems



Compact and industrial Ethernet Switches (IEC 61850-3).

Different port configurations (8 x 10/100BaseT/FX + 2 x 1000Base SFP).

Industrial modems equipped with cellular and PSTN line interfaces. Both the HW and SW have increased robustness (auto reset, self recovering from operator failures). Efficient encapsulation of serial utility remote control protocols into IP available with serial and Ethernet ports.

SYSTEMS

ZIV systems portfolio includes solution design, cabinet assembly and connection, as well as the engineering and the on-site commissioning of the whole project.

We can provide integral solutions based only on ZIV and CG products or from third party suppliers.



Smartgrids cabinet Compact CCT with WAN communication (pole mounted distribution transformer)



SMARTGRID complete cabinet for underground secondary substation: CCT data concentrator, compact RTU (TCA), power supply with battery backup (BCC) and communications node (DRA – 2)

ELECTRICAL VEHICLE



Charging Station OEM solutions

ZIV offers a complete portfolio of electric vehicle (EV) charging solutions ranging from 3.7 to 43 kW. The stations include advanced metering, communication and control functions (intelligent charge modulation in mode 3, etc.).



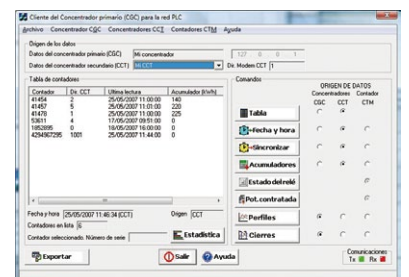
EV charging station solutions: Indoor and outdoor; wall and ground mounted.

SOFTWARE TOOLS

ZIV PRIME Manager monitoring and management of PRIME PLC networks (acquisition and display of the physical layer, MAC frames and network topology).

ZIVerQ local or remote connection to metering devices for configuration download/upload, Sequence of Events access, time synchronization, firmware upgrade, and control commands.

ZIVeim (equipment inventory management) assets management tool, highly customizable.





Smart solutions,
Strong relationships.

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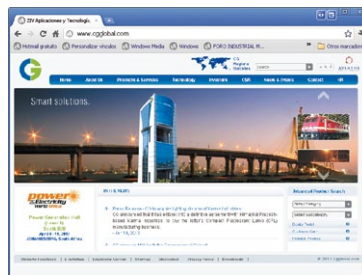
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