e-terra*gridcom* DIP.net

IEC 61850 Teleprotection for Transmission and Distribution Grids

e-terra*gridcom* **DIP.net** is the optimal software solution for ensuring critical communications in evolving power system automation architecture for advanced substation-to-substation exchanges.

Designed upon proven teleprotection principles while hosting advanced automation technologies, the **e-terra***gridcom* **DIP.net** is a versatile interface between the electrical substation and the telecom network.

Assessing Performance

The **e-terra***gridcom* **DIP.net** provides a dedicated set of link and network quality monitoring features according to protection service requirements in order to detect communication impairments and assess the acceptability of the communication.

Interface Modularity

The **e-terra***gridcom* **DIP.net** bridges the gap between conventional protection communications and the emerging packet network environment in the electrical substation. The product's interface modularity both at substation side and at communication network side facilitates grid transition whichever be the path and pace adopted for the power network.

Example of transition towards IEC 61850 substation
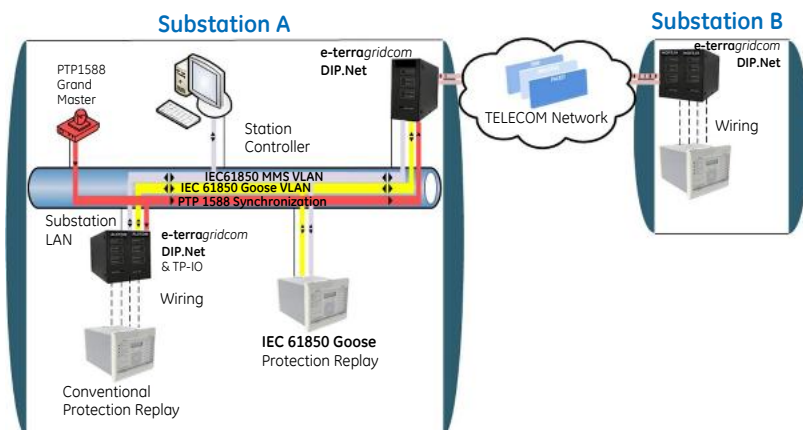
Ready for Future Network

The flexible I/O cross-connect and multiple configuration capabilities provide protection engineers with extensive flexibility and numerous design possibilities without external relaying cubicle logics. Transmission of critical information over an area becomes easier to design, deploy and maintain.

Smooth Migration

The transition toward the digital substation can be performed smoothly with a modular teleprotection. The **e-terra***gridcom* **DIP.net** not only provides IEC 61850 MMS and GOOSE interfaces for your future substation, but also optional I/O modules for wiring to your legacy protection and control devices.

Highlights

- Modular teleprotection to stick with your substation migration plan
- User oriented design for more efficient operations
- Comprehensive GUI to get the best of the product capabilities

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Cyber Security

Bringing remote management capability into the substation may introduce vulnerability in the system. Powerful authentication and encryption protocols incorporated into **e-terra**_gridcom_ **DIP.net** provide secure remote access for operations.

Easy to Use

Deployment and maintenance interventions are substantially facilitated through an adapted mechanical design as well as an advanced set of functional tools embedded in the firmware of the device.

Interoperability

Taking into account the evolution of IEC 61850 in time, **e-terra**_gridcom_ **DIP.net** assures interoperability with earlier versions of the standard already deployed in substations, as well as the present edition and provides for easy upgrades in the future.

Technical Specifications

Communication Interface	
Optical	Up to 250 km
Electrical	Ethernet, V11, E1/T1 or Analogue
Inputs	
Electrical	From 24 to 250 Vdc
Ethernet Goose	Available
Outputs	
Electrical	Solid state & Heavy duty 5A
Ethernet Goose	Yes
Features	
Number of commands	Up to 24
Transmission mode	Point to point or point to multi-point
IEC 61850 transmission	Below 3ms
Cyber Security	
Encryption	SSH, SSL
Authentication	Radius, LDAP
Management	
Local	Via wed-browser
Remote	MMS or SNMP
Standards	IEC 61834 and 61850ed1 and ed2

Protection specific metrics

The performance criteria expected by protection engineering can be set more easily with a comprehensive set of thresholds and alarm settings.

A Complete Portfolio for Mission Critical Telecommunications

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