



GEDLux

ELECTRICAL SYSTEMS AUTOMATION
SINCE 2008

Communications
& Telecontrol

www.gedlux.com

Communications & Telecontrol

Overview

- The importance of communication cannot be overlooked, regardless of whether the system in question is a compact SCADA setup, a remote control system, an metering solution or a large control office.
- It is, therefore, crucial to prioritise the planning and deployment of the communications network, ensuring our control system operates without disruption and with optimal efficiency and effectiveness.
- At GEDLux, we have the equipment and experience to design and implement industrial communication systems, both within plants and between facilities.
- Our solutions are based on strengthening the three pillars of communication systems in critical environments: versatility, safety and reliability..



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Versatile Solutions

We provide an optimal combination of different protocols (industrial, redundancy, SDH, MPLS, etc.) and different media (fibre, 4G, radio links).

Secure Solutions

We supply the necessary security mechanisms for electrical distribution, where a safety problem in communications can have severe economic and human consequences.

Reliable Solutions

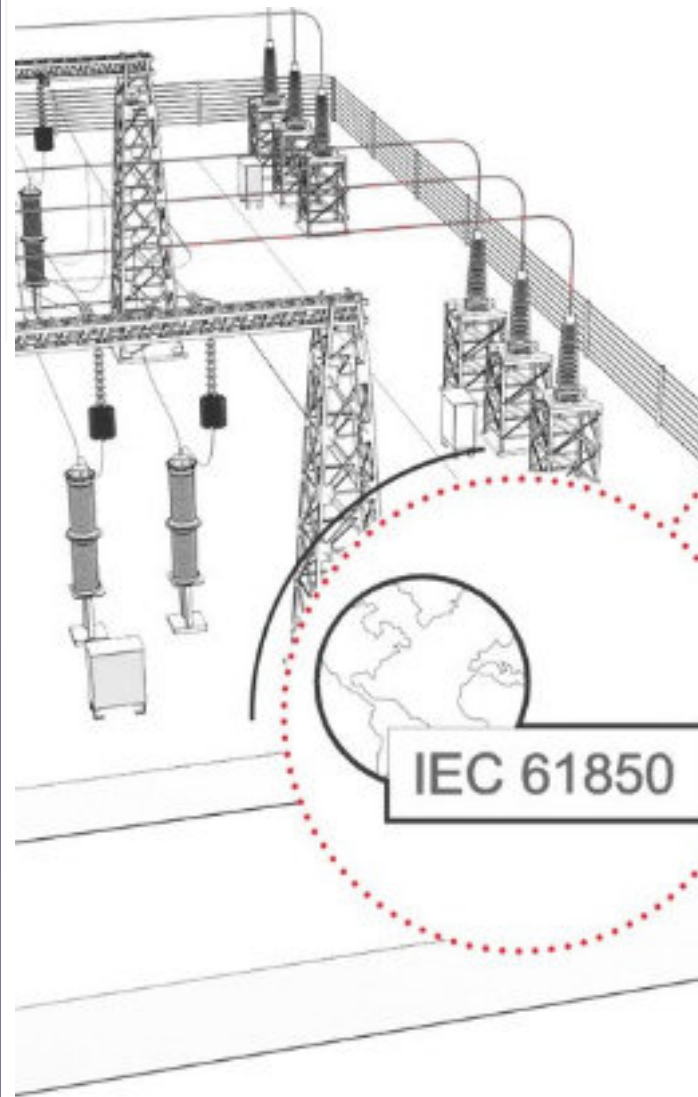
We only use equipment from trusted manufacturers to ensure a long, failure-free equipment lifetime. We utilise redundancy and high availability mechanisms to provide a backup path or equipment in the event of an unexpected failure.

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Software, Protocols, SNMP, ICCP, OPC, Monitoring

- Our product offers **multi-protocol support** for any type of communication.
- SNMP **monitoring** is available.
- ICCP **dispatch** links.
- OPC **gateways**.
- Electrical **market industrial protocols**: IEC61850, IEC104, IEC101, Modbus-RTU, Modbus-TCP, DNP3, DNP3 over TCP, LON, etc.
- Bespoke **solutions** for multi-protocol integration.
- Network **extensions made simple** by keeping old and new protocols coexisting in parallel.
- Personalized **consultancy**.



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Cellular

- Low implementation cost.
- Monthly charge cost.
- Dependent on third party infrastructure.
- Robust equipment for harsh conditions.
- Requires VPN architectures to provide security.
- M2M architecture solution.

Radio Links

- High implementation cost.
- No recurring toll costs.
- Dependent on own infrastructure.
- Greater control over network issues.
- Robust equipment for adverse conditions.
- Encryption of data transmitted for cyber security.
- Solutions in free or licensed bands.
- Customized bandwidth and capacity solutions for each case.
- Electromagnetic feasibility studies included.
- Networks for data and/or voice.



TELTONIKA

ABB




**Cambium
Networks**

SATEL
Mission-Critical Connectivity



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Cybersecurity, Firewalls & VPNs

- It is imperative that cybersecurity is embedded in today's communications systems.
- It is of the utmost importance to have robust security measures in place to prevent an attack from leading to an outage in the service provided in critical infrastructures.
- The number of cyber attacks is increasing year on year, as the majority of business operations are now digital.
- A range of solutions to suit different architectural requirements.
- Firewalls, VPNs, antivirus software and data backups.

EMSISOFT

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Mission-Critical Connectivity

ABB



F-Secure.



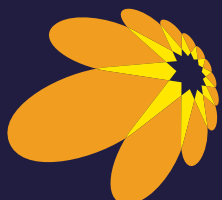
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Multiplexores, ETL y Teleprotecciones

- It is important to note that **certain applications** require specific communications conditions in order to **function properly**.
- It is possible that **certain parameters**, such as latency, delay, jitter, and packet loss, **may prevent** a system from functioning as expected, even when they are within the **normal range** for a standard communications network.
- Optical **multiplexers** such as the FOX615 are used to **limit the variation** of these communication link parameters and to **optimise link performance**.
- One of the **critical applications** that require **stable** communications is **tele-protection** in substations.
- In some instances, **communication between substations** is only possible via the **high-voltage line** itself (OPLAT, on Power Line Carrier).



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Compliance
Policy