SATConnect Offshore + 5G Mobile Private Network over Satellite (MPN)

Photo: Patric Niederprüm, ESP

Communication Solution for SCADA Smart Grid | Metering | 5G Backhaul | Broadband and Leased Line.

Networks of utilities – electricity, oil or gas need a robust communications infrastructure for monitoring and controlling the flow of energy in areas with no or bad IT infrastructure. In this case the first choice for communication is a satellite solution to support the transmission from SCADA applications.

This solution is a economically equivalent alternative. The most important factor in the use of one system for all required applications.
This includes IEC 60870-5-101 and IEC 60870-5-104 that are required for SCADA applications. ESP Support with the Satconnect platform every type of connection.

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What is 5G Satellite Backhaul

The backhaul connects the provider's core network to the edges of the network – i.e. the cell towers. in the case of offshore systems, the connection via cable connections is often restricted.

To counteract this, EuroSkyPark relies on satellite technology with the appropriate bandwidths for the connection to the telecommunications provider.

Overview – 5G Satellite Backhaul

The SatConnect is a satellite-based, bi-directional communication system for SCADA applications as remote control stations such as wind or solar plants, gas pipelines or for other difficult to reach locations that are accessed and controlled via remote acces.

The system consists of two units, the indoor unit and the outdoor unit. EuroSkyPark combines its satellite system with a powerful 5G base station. This combination creates an absolute autake solution that can even be installed offshore and promises an autake communication solution.

Monitoring | Operating | Controlling

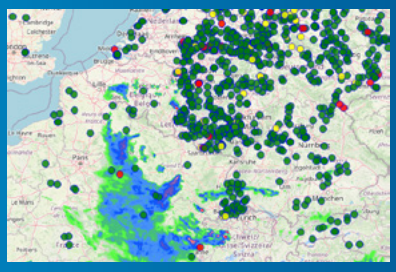
The typical application is the integration of remote sites.

Availability

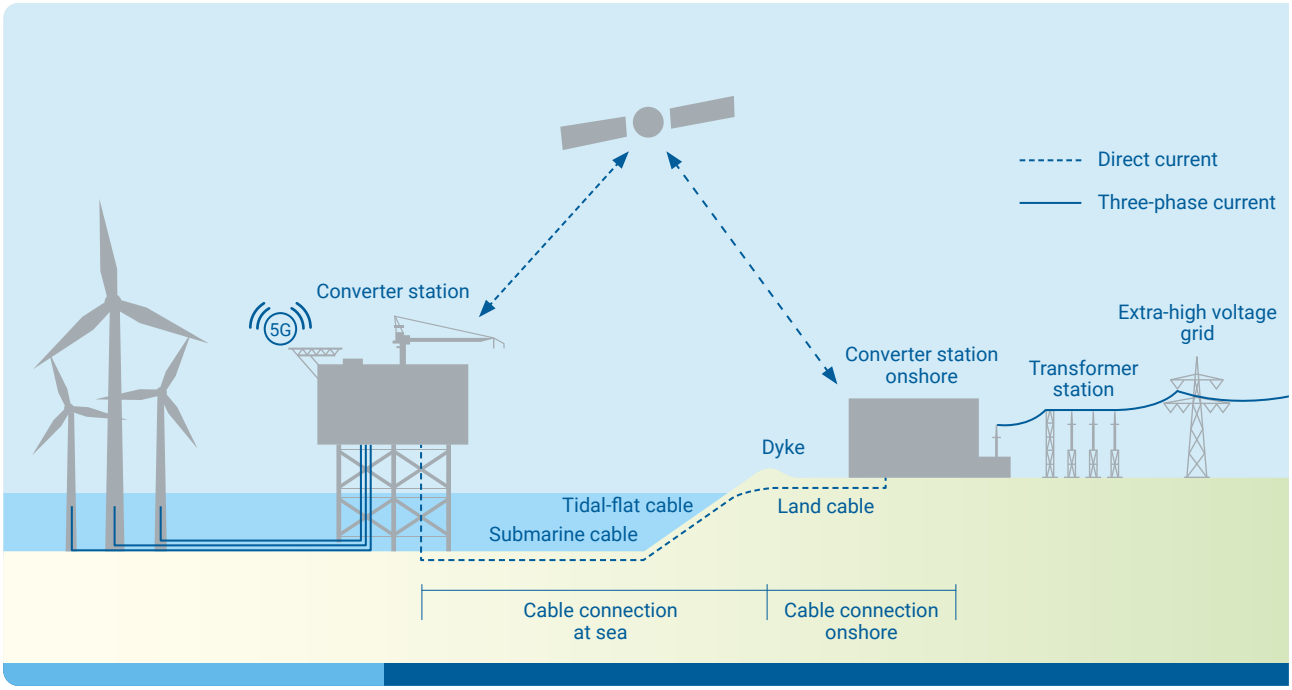
SATconnect is available in Europe, Africa, Asia and USA.

Clear status of the satellite terminals

Accurate details of data transfer rates



Live weather data monitoring



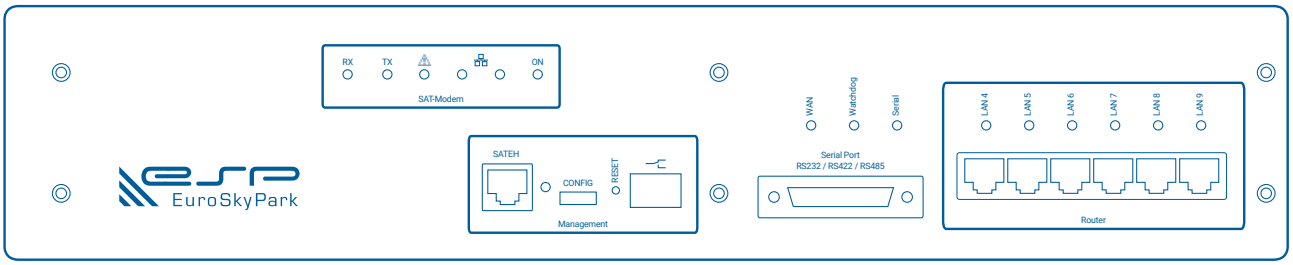
Technology (SAT) Outdoor Unit

The outdoor unit consists of satellite dishes (70 –150 cm) and mounted, bi-directional LNB. This device is connected with the TX and RX lines of the electronics of the integrated indoor unit.

The standard transmit power of the uplink run amount to 6–40 watts (Depending on the required bandwidth). The power for the outdoor unit will be supplied via coaxial cable.

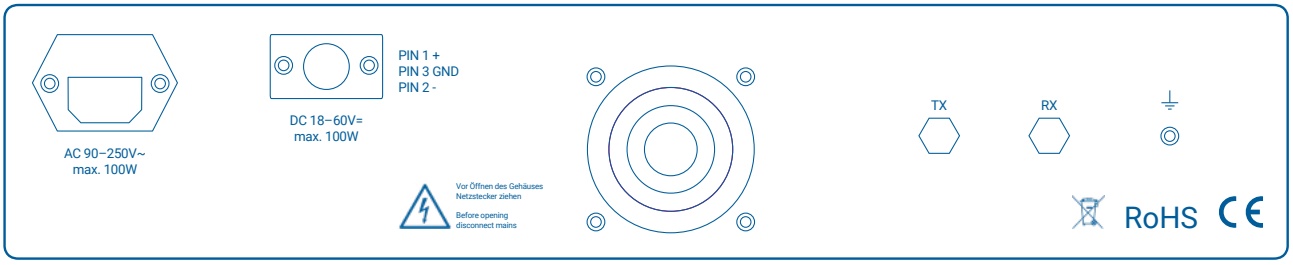
Technology Indoor Router

- DVB-S/S2 compatible Terminal
- Support TCP/IP (IEC 60870-5-104) and seriell (IEC 60870-5-101)
- up to 6 Port Ethernet (104) and 1 Port seriell (101), can use similar
- Serial Interface RS.232 (V.24), RS.422 (V.11) or RS.485 (optional)
- 19” Version 2HU and DIN Rail Version
- Power Connectivity 90–250 V AC or 18–60 V DC
- VPN on IP-Site
- Encryption over VPN (expl. IPSEC)
- SCADA Bandwight 6Mbit/s uplink, 6 Mbit/s downlink
- Extended Bandwight 20Mbit uplink, up to 70Mbit downlink
- Monitoring and diagnostic via Web Browser possible



Interfaces Front

- 6 Modem LEDs
- SAT-ETH port
- Configuration Switch
- Reset button
- Potential free watchdog alarm output (1–3: NC and 1–4 NO)



Technical Data

Power supply

- Redundant AC/DC
- 230 V AC 50/60 Hz
- 18–60 V DC, Power max. 100 W

Dimensions and Environmental

- 19“ rack mount (2 HU) 482 x 240 x 90 mm
- Weight 4,8 kg
- Operating Range 0°C–50°C, storage temperature -20°C–65°C
- Humidity range <80 %, non-condensing

Ethernet Interfaces

- 6 RJ-45 ethernet ports, LAN4–LAN9
- any port configurable as additional WAN port for backup connection, default: LAN9

Serial Port

- Serial Interface RS.232, RS.422 or RS.485

Note: In normal operation mode (default, LAN ports active), the Config Switch is “Off”. There are no other user serviceable parts.

The configuration shall be done only by ESP or by qualified personnel with authorization from ESP, on site or remotely.

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