

5G communication system

In June, HMF Smart Solutions presented its 5G Smart Box at the E-World exhibition in Essen, Germany. It is an autonomous 5G stand-alone radio system which transmits data in real time. The 5G router provides a CAN interface.



A communication Eco system for the energy industry (Source: HMF Smart Solutions)

According to the company, the communication ECO system provides monitoring and control of devices (smart metering, smart grid, smart city) or spaces (object and traffic monitoring of critical facilities), data transmission and analyses in real time, automation, as well as efficiency increase in energy transport.

HMF's private 5G solution, due to its own network sovereignty and cybersecurity, also ensures communication capability in the event of a blackout, explained the company. The product is based on an O-RAN (open radio access network) architecture and has the following main parts:

- 5G Radio Access Network (RAN) with radio unit, distributed unit, and centralized unit
- 5G core
- PTPv2 time server
- Management and performance monitoring system
- 5G router with CAN

The solution enables both indoor and outdoor radio cells to be connected. Both can be combined. This means that the system can be expanded depending on requirements. The system has standardized interfaces to connect private 5G stand-alone networks to the customer's own local applications and servers. The integrated 5G router also offers a wide range of interfaces including CAN as well as support for Node-RED and dockers for running own applications.

"No matter what requirements our customers have for their private 5G solution today or in the future – we can meet individual technical needs in a targeted manner with our expertise and our services. To achieve this, we bring more than 40 years of experience in the development, implementation and long-term support of customized, mission-critical radio systems – from small networks for medium-sized businesses to nationwide radio systems," explained Martin Hucke, Chief Innovation Officer at HMF.

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