

Smart Grid

Smart City

Industry 4.0



Data transmission in HES, MDM and SCADA systems

Communication terminals

Device population management

## M2M/IoT: WIRELESS DATA TRANSMISSION

LTE, LTE450, LTE CAT-M1, NB-IoT, 5G

### SMART GRID

#### Data transmission in billing and control systems

*comander* solutions support:

- collecting metering data from utility meters,
- managing a large population of distributed devices,
- detecting failures.

### SMART CITY

#### IoT in urban areas

*comander* solutions contribute to the interactive infrastructure of the smart city. They increase the efficiency and security of communication and automate technological processes by ensuring reliable data exchange.

### INDUSTRY 4.0

#### Automation of data processing and exchange

Our solutions ensure flexible adaptation of machines, devices and systems to changing functional requirements.

For multiple industrial sectors:

- we design communication devices,
- we implement required interfaces and protocols,
- we develop embedded applications to meet our customers' requirements,
- we integrate the solution with cloud platforms.

### MANAGEMENT SOFTWARE

#### Effective management of field equipment population

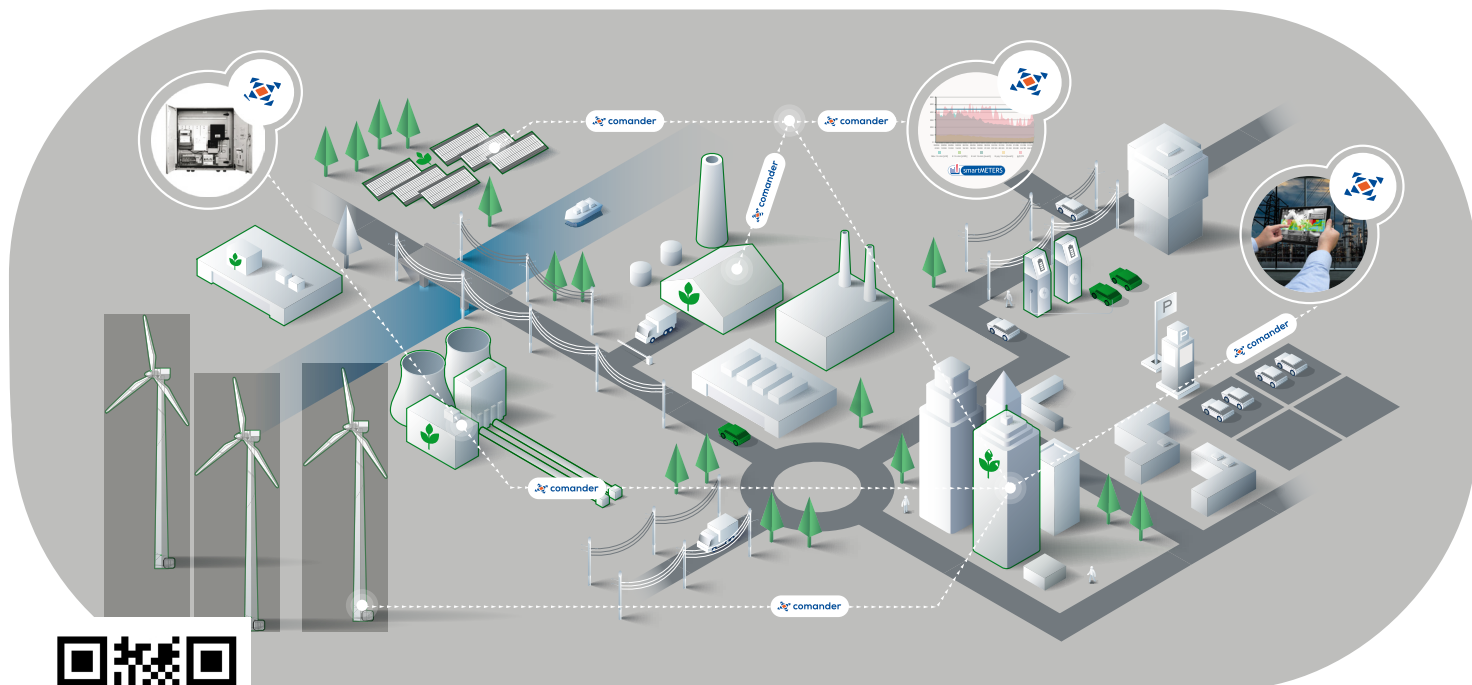
- swift detection of failures and events that disrupt data transmission efficiency,
- real-time diagnostics of network parameters,
- streamlined, automated hardware functionality updates,
- compatibility with equipment from other OEMs.

More than 500 000 *comander* devices are currently used by power grid operators in Poland and Europe.



In the era of Industry 4.0, the measurement, diagnostic, control, and security infrastructure involves thousands of distributed devices. How can we ensure effective and stable communication and data transmission between these devices and central systems?

The *comander* platform enables wireless data transmission wherever cable connections are not possible. The complete system includes transmission terminals (modems and routers) together with utility software and application for monitoring and diagnostics of the entire population of devices.



#### COMMUNICATION TERMINALS

LTE \* HSPA \* GPRS \* CDMA \* WIRELESS M-BUS

##### Industrial routers

##### General purpose modems

##### Dedicated modems

##### Data concentrators

Wide range of supported communication protocols and interfaces  
 Reliable last mile communication  
 Modular architecture  
 Application support for SCADA, Smart Grid, Smart City systems  
 Security of data transmission  
 Conformity with industrial standards  
 Compact size  
 Visualisation of operating status  
 Design as per individual specifications

#### MONITORING AND MANAGEMENT SOFTWARE

Remote management of device population:

- » Configuration
- » Diagnostics
- » Upgrade
- » Reporting