



## M2M/IOT: WIRELESS DATA TRANSMISSION

**ALSO, ACCORDING TO THE LATEST LTE STANDARDS:  
LTE 450 MHZ, LTE CAT -M1, NB-IOT, 5G AS A TARGET STANDARD**

### SMART CITY

#### IoT in urban areas

comander solutions contribute to the interactive infrastructure of the smart city. They improve the efficiency of communication security and automate technological processes, thus ensuring reliable data exchange.

More than 350 000 *comander* devices are currently used by power grid operators in Poland and Europe.

Our customers include TAURON Dystrybucja, TAURON Dystrybucja Pomiary, ENERGA-OPERATOR, Enea Operator, innogy Stoen Operator, PGE Dystrybucja, AB „Energijos skirstymo operatorius”.

### SMART GRID

#### Data transmission in billing and control systems

Tasks supported by comander solutions:

- acquisition of readout data from utility meters,
- managing a large population of distributed devices,
- failure detection.

### 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

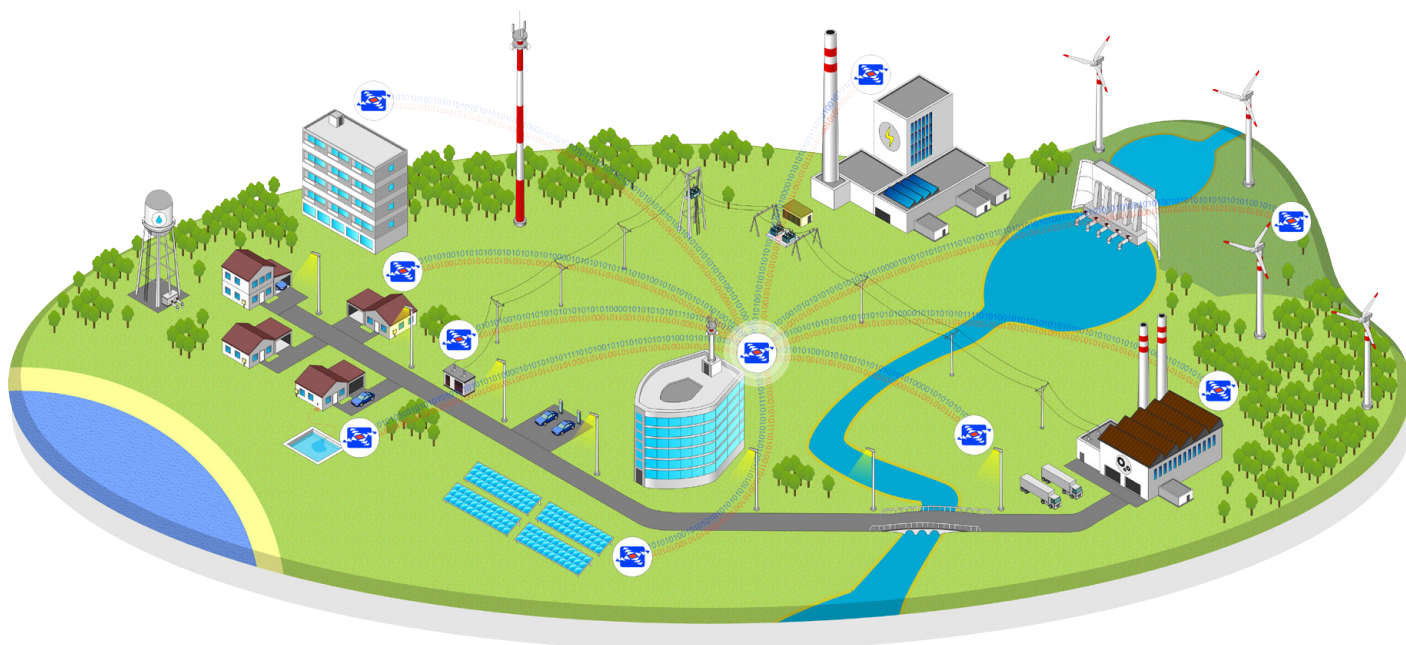
#### Effective management of field equipment population

- Fast location of failures and events impairing the effectiveness of data transmission
- Real-time diagnostics of network parameters
- Simple, automated update of hardware functionality
- Interoperability with equipment from other OEMs



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

The commander 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 handling  
of hardware population:

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