



WE ARE EXPERTS IN TELEMETRY SYSTEMS AND TIME SYNCHRONIZATION

We are manufacturing IoT & Telemetry Machine to Machine communications devices. IoT segment covers remote measurement, wireless data transfer (3G/4G/5G), data acquisition and advanced signal processing.



We also prepare
dedicated IoT loggers

Areas of application:

- Financial market
- Air traffic control
- Industry 4.0
- Uniformed services (Army, Police, Border Guard, SP)
- Power engineering
- Telecommunication
- Pharmacy
- Smart Grids
- Autonomous vehicles
- Data Center
- Broadcasting



1. We deliver precise TIME and DATE
2. We stabilize the PPS/10MHz frequency
3. We build a chronology of LOG events
4. We ensure work in a common time and frequency DOMAIN
5. We distribute a common ref. UTC via LAN with any conversion between std. NTP, PTP, IRIG, PPS...

ELPROMA delivers:

- Construction and comprehensive support in the building of distributed systems
 - Cybersecurity (complete Anti-Jamming/Spoofing solution)
 - Experience in building strategic systems for critical infrastructures
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As a recognized and experienced supplier of electromechanical components on the Polish market, Elproma Elektronika represents manufacturers who are leaders in their fields. Our product range includes top-quality solutions that meet the demands of various sectors, including industry, automation, telecommunications, and consumer electronics.

We collaborate with renowned companies such as Carling Technologies, offering durable switches, and Apem, specializing in joysticks and HMI interfaces. Additionally, we provide innovative solutions from Samtec for advanced interconnection systems and Taoglas, a leader in IoT and RF technologies. Our partnership with Telit enables us to supply IoT modules supporting the latest communication standards, including 5G and NB-IoT.



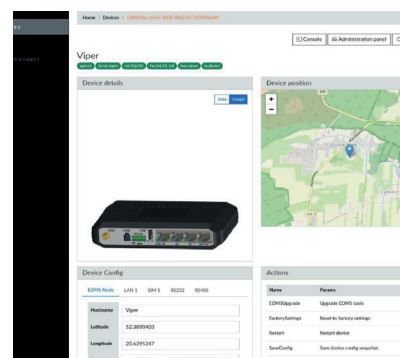
Areas of application:

- **Military**
- **Marine**
- **Automotive**
- **Medical**
- **Railway**
- **Datacom/Telecom**
- **Renewable Automation**



Elproma Device Management System is the system which connect your hardware and software technology in one place, for less money with better solutions made just for you. With EDMS You can measure all the information collected by your hardware and software sensors of your system.

All of it can be supported by Elproma's Time Management System for your better cybersecurity and flexibility. Elproma DMS facilitates the aggregation, analysis and easy management of received data. We can monitor and observe collected data from devices such as metrics, logs, traces. This system will be perfect for applications such as energy, logistics, modern agriculture and industry 4.0. Thanks to EDMS and the collected data in graphical form, managers will be able to make decisions quickly and based on specific and hard parameters.



SYSTEMS - TELEMETRY SENSORS

Vaclog system is designed to receive measuring data from various sensors, e.g: temperature loggers. The system can collect and share data in the form of text or graphics and is a programmable and equipped with remote alarming and remote, periodic, and automatic reporting for monitoring storage conditions in the administrative levels of the cold chain.

User can add and check status of the alarms and acknowledges on several charts. The graphs are divided into few categories: alarms by type, number of alarms by group, acknowledge, current situation, location etc.

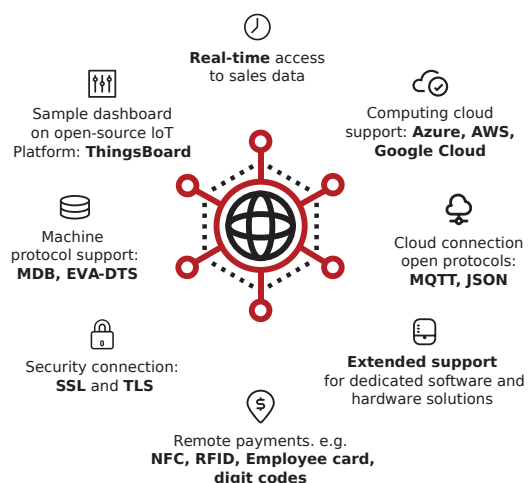


SYSTEMS - VENDING MACHINES MANAGEMENT

The system based on RBVND-LITE modem which is a special device adopted to work with vending machines on reliable GPRS & LTE cat. M1 module is an irreplaceable platform for telemetric applications in vending sector. It caters to all IoT and platform developers, as well as telemetry solutions providers. Modem is ideal for customers requiring remote access and centralized information about vending machines. It is possible to connect the RBVND-LITE modem to most popular IoT platforms on the market. Modem is equipped with standard communication interfaces like Executive, MDB and master MDB. It is compatible with most of machines available on market. Additionally, serial interface allows downloading audit EVA/DTS from vending machine controllers (VMC) or coin collectors.

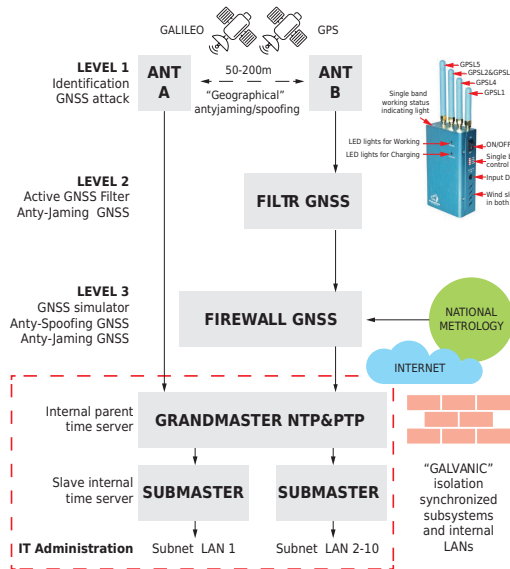


KEY BENEFITS



SYSTEMS - eTIME.PL

Secured National Time Pattern System. Special EU directives NIS2 and US EO13905 recommend that national economies strengthen their security by using alternative UTC time sourced from National Metrology Institutes (NMIs). Distribution of the national UTC pattern is completely secure. Distributed using NTP and PTP, the official time is cryptographically authenticated and is completely independent of GNSS, including GPS.

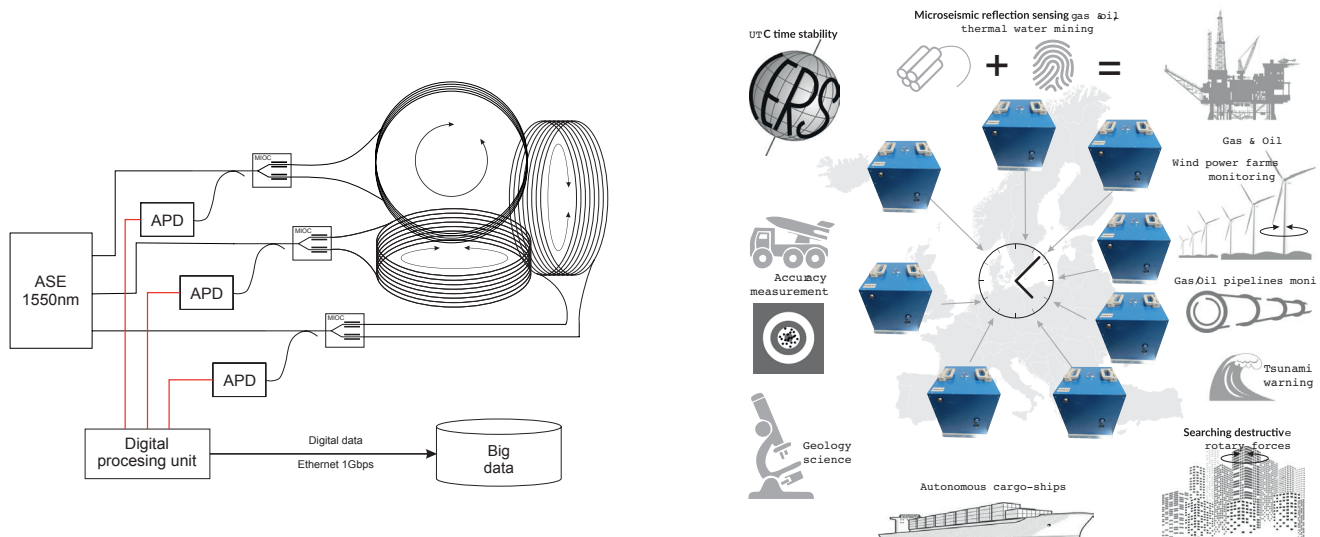


RECIPIENTS OF THE SERVICE:

- **Banking**
- **Telco**
- **Energy, gas & oil**
- **IT systems in transport**
- **Broadcasting**
- **Data processing centers**
- **Industrial automation**
- **Qualified electronic signature and timestamp services**
- **Public procurement, working time records, competition proceedings**
- **Smart grid & smart cities**

SYSTEMS - FOSREM

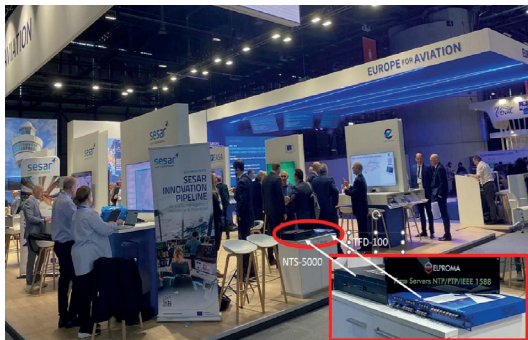
Multipurpose Earth & Space Photonic Sensor with Big Data output. A new approach to the nano measurement of an gularvelo city and angles. FOSREM is based on a Highly Accurate Fibre Optic Sagnac Interferometer. FOS-6 is a 3-axial Fiber Optic Seismograph for Rotational Seismology. The FOSREM technology implemented as the FOS-6 seismograph is mature. The FOS-6 sensor is commercially available here and now. A network of synchronized FOS-6 sensors providing the new Doppler measurement localizing coordinates of industrial events is finalized now. This makes the solution helpful in the non-invasive search for natural deposits, detection of geological threats to the geological terrain, and building structures.



SYSTEMS - HOURGLASS

The HOURGLASS system is a complete autonomous corporate UTC time scale system. It provides the highest cyber-security and stable synchronisation of the entire critical air traffic control ATC infrastructure. Hourglass system demonstrates resistance to cyber-jamming (GPS jamming), spoofing (GPS spoofing) attacks, and is even immune to GNSS satellite signal shutdown and complete loss of signal.

In the HOURGLASS system, every component used matters. The system offers separation of synchronised ATC systems, multi-level redundancy, both local within a single ATC centre and nationwide. In this case, all ATC centres support each other - creating a backup time source shared with another centre.

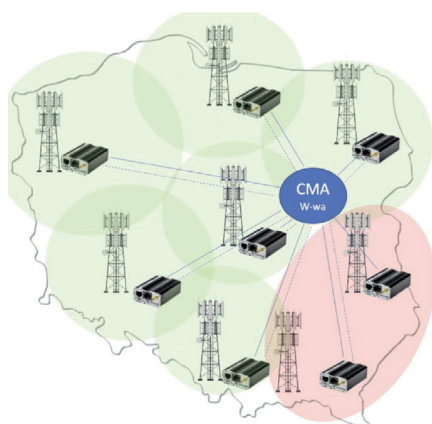


SYSTEMS - ARGOS

GNSS Jamming / Spoofing Monitoring System. Main advantages of the ARGOS System are identification of GNSS (GPS) signal interference, transmission of alarms to critical institutions, dense sensor mapping, prediction of attacks based on AI, affordability of the system.

An important feature of ARGOS is that it is an industrial solution in the Operational Technology (OT) class, and therefore with features of continuous 24/7 operation, fault tolerance, reliability and operational stability. The system is based on a tried-and-tested, the Elproma NTS-PICO3 time synchronisation server, used in autonomous solutions (robots, cars, industry 4.0).

ARGOS is a stationary system, so it does not depend on the state of destruction of the transport infrastructure, which can be important in the event of armed conflict.



GNSS sensor array with 1-4 sensors with LAN and/or GSM connectivity option

Single sensor measurement Jam/Spf GNSS detection

SELECTED PROJECTS

Philippines (2019/2020) energy utilities
- delivery over 300 pcs time servers
NTS-5000 class

NATO (2018-2022) – delivery over 100 pcs
time servers NTS-3000 class to NATO
structures

Telecom sector (2020/22) – delivery
and implementation of a synchronization
system for Orange

Telecom sector (2021) T- Mobile delivery
and implementation of synchronization
system

Air Traffic Control/PANSA (2008-2023)
- delivery and maintenance of a time
synchronization system for polish Air Traffic
Controller agency

Thailand (2022) energy utilities
- delivery 50 pcs time servers working
in production systems (power plants)

Egypt (2021) Energy utilities - delivery
80 pcs time servers NTS-4000 class

Poland (2022/2023) Central Office
of Measures (GUM) – implementation
of the eTimePL project

THEY TRUSTED US



WHO WE ARE

Elproma main points:



Established
in 1992



Number
of employees: 50+



100%
Polish capital



ISO 9001
certification



Production
proces in Poland (EU)



ELPROMA DELIVERS

- Construction and comprehensive support in the building of distributed systems
- Cybersecurity (complete Anti-Jamming/Spoofing solution)
- Experience in building strategic systems for critical infrastructures, examples:
 - **Power Distribution System** - Philippines,
 - **Hourglass Project** - control system of Air Traffic Control of Poland,
 - **The eTimePL Project** - pattern of National time distribution on the territory of the Poland,
 - **Argos** - complete GNSS anti-jamming/anty-spoofing system for country/region,
 - **Telemetry monitoring systems** for various sensors with dedicated managing system (EDMS).
- Certificate and NATO number: (NCAGE Code: 9ATKH)



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