



Naywer

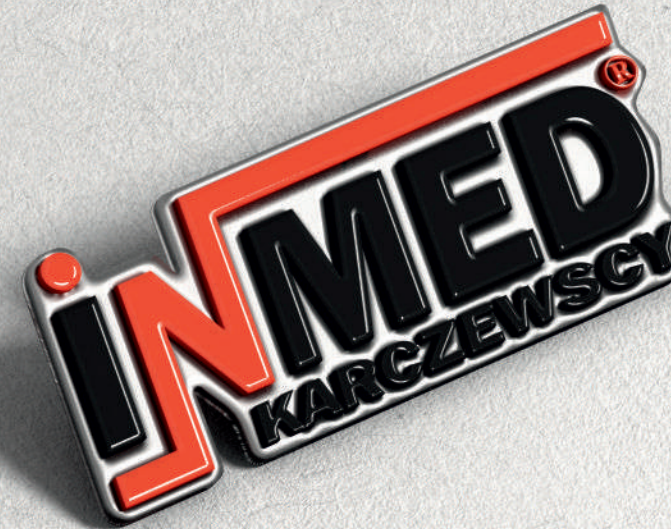
Sensors



HERITAGE OF INNOVATION

INMED logo, both in its classic and modern form, is a symbol of our brand, combining style and the highest quality. Recognized worldwide, it reflects our commitment to innovation and our contribution to improving global standards. Each product and service means striving for excellence, which shapes the future of medical sector.

Our heritage – the foundation of our identity – is extremely important to us. With respect for the past and passion for the future, we are constantly creating new, exciting chapters in the history of INMED.



FACTORY

INMED factory is located in Krępice, next to Wrocław. Using over 5000 m² production, storage and office space, more than 100 employees come here every day to create hundreds of products for our customers worldwide. INMED is a friendly place – both for employees and the environment. We use renewable energy sources and strive to balance technology with nature. There is also a pond in our premises that attracts birds resting on its banks what also reflect the core value of harmony with environment and ensures comfort and peace of mind for our employees.

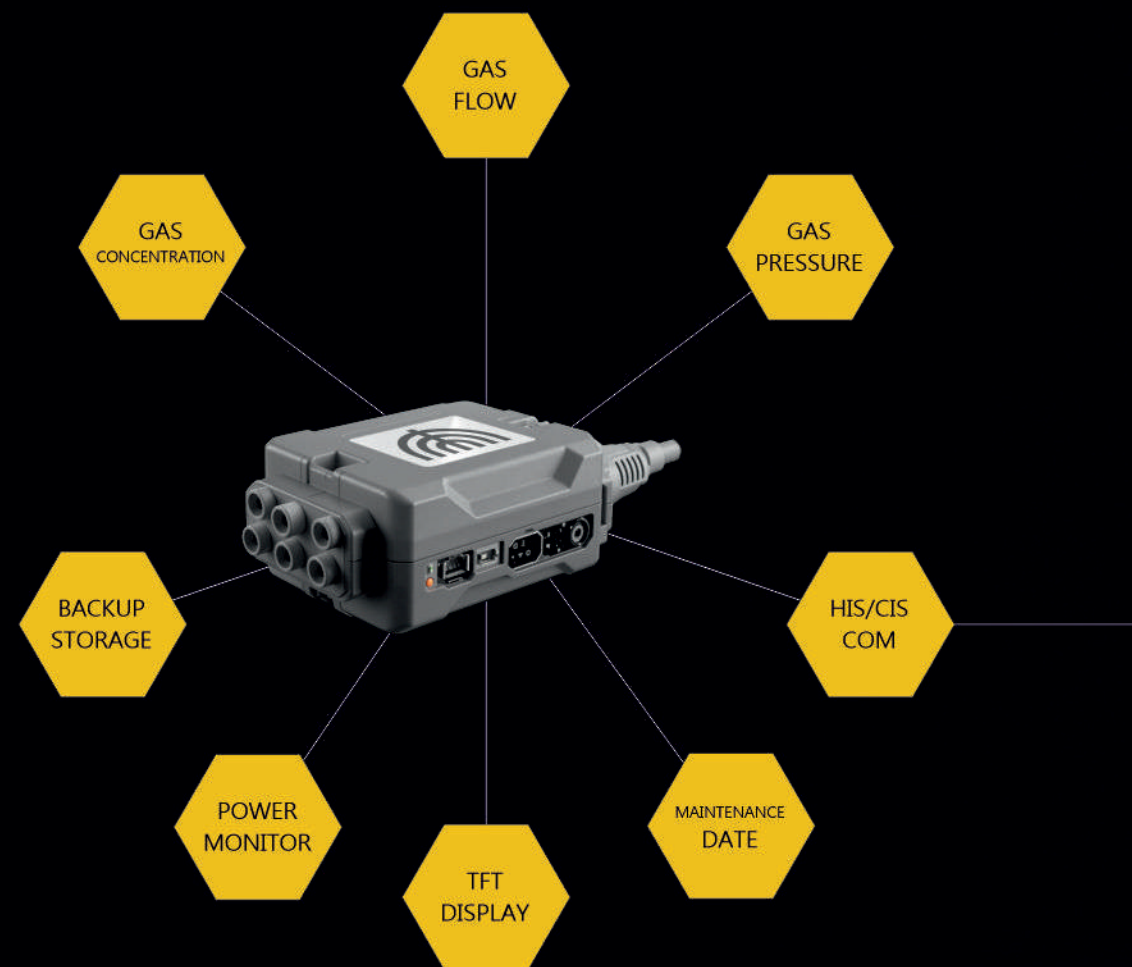


6. IoT Cuddy Medical Module

Monitoring the flow and pressure of medical gases



We introduce Naywer Sensors ecosystem modules, that provide active monitoring and precise data recording of administered drugs. The system automatically collects, stores and transmits data in the appropriate format to external Hospital Information System (HIS). By complying with international standards of interoperability, Naywer Sensors modules enable integration with the medical infrastructure, providing full control over the therapy process and patient safety. In addition, the modules comply with the Cuddy® standard, developed by the SPSRGM organisation, what guarantees their compatibility with modern medical systems and the highest level of precision and reliability in medical gas therapy monitoring.



Cuddy Ecosystem

The Cuddy module accommodates sensors for flow, pressure and concentration of medical gases such as oxygen, compressed air and nitrous oxide delivered to the patient. The system continuously measures and counts the amount of therapeutic products given, recording them in an internal memory that can store up to 255 unique patient records. The collected data can be sent according to standards to the HIS system or read directly from the unit's memory. The module comes with a TFT touchscreen display, which allows to monitor in real time the amount of medical gases supplied and to view the history. In addition, the system automatically backups data to a dedicated memory device, providing independent access to data in the event of failure or interruption of power supply. Data is saved in a format compatible with HIS/CIS systems and transmitted to the communication module, enabling integration with distributed IT systems to build an electronic patient record. In addition, the system monitors the status of the unit's electrical power supply, detecting possible failures of electrical sockets and records the exact date and time of both scheduled services and sensor calibrations.

Compatibility

Cuddy is fully compatible with the Electronic Patient Card applicable in Poland and many other countries. It is based on the HL7 standard, which is the basis of the P1 e-Health system, allowing seamless data exchange between medical facilities. The data recorded by the system complies with the LOINC 3151-8 standard, which specifies the measurement of medical gas flow rates (L/min). By using precise algorithms to mitigate measurement errors, the system accurately determines the administered gas dose for each patient, increasing the safety and accuracy of therapy. Data is saved in XML or JSON formats, allowing its easy integration into information systems. With support for FHIR (Fast Healthcare Interoperability Resources), the system enables direct data transfer to HIS/CIS, as well as recording in standardised CDA (Clinical Document Architecture) format, meeting medical record requirements. The Cuddy system ensures compliance with current regulations regarding the scope, type and processing of medical records, becoming a key component in the monitoring and reporting of administered drugs in medical facilities.

LOINC
from Regenstrief


Cuddy[®]

<xml />

 **HL7 FHIR**

 **zdrowie**

{JSON}

 **HL7 CDA**

Technical characteristics

Legal basis

In compliance with Regulation of the Minister of Health of 6 April 2020 on the types, scope and models of medical records and the way of their processing, healthcare entities are obliged to maintain Electronic Medical Records (EMD), including, among others, information on the quantity of administered drugs.

Under the current regulations:

- Oxygen, compressed medical air and nitrous oxide are recognised by the GIF (General Pharmaceutical Inspectorate) as medicinal products, and their precise dosing and monitoring is an essential part of the EDM.
- The entry in the patient's chart should contain accurate information about the amount of medical gases administered and their clinical consequences.
- The Cuddy module fulfils documentation requirements by transmitting data in accordance with HL7, FHIR and CDA, which enables integration with the P1 eHealth system and HIS/CIS systems.

Modules specification:

Flow, pressure and gas concentration modules

- Active device installed on the pipeline system delivering gases to the patient.
- Accurately measures and counts the flow, pressure and concentration parameters of medical gases.
- Transmits data to HIS/CIS systems in a standardised manner, enabling them to be recorded in the EDM.

Display module

- Resistive TFT display, immune to electromagnetic interference.
- Resolution: 640x480 pixels
- Glove-operated for use in a medical environment.
- Allows review of patient data and monitoring of live gas flows.
- Allows real-time monitoring of gas flow.
- Allows viewing historical patient records.
- Personalisation of file naming (default format: YEAR.MONTH.DAY.HOUR.next-patient).

Cuddy module

- Internal memory for 255 patients - data is overwritten when full
- Additional 16 GB memory device to store approximately 65,536 patient records.
- Powerful 225 DMIPS processor for fast data processing.

HIS/CIS communication module

- Supports HL7 standards, according to 10.2956.1 code (Vital Signs Monitoring).
- Transmits data on administered drugs and gases to HIS/CIS systems.
- Compatible with FHIR, ensuring easy data exchange in EDM systems.

Voltage monitoring of electrical sockets and electronic tag.



USAGE

The Cuddy system is mainly applied in operating theatres and intensive care units, where precise defining of doses of medicines is a key requirement for Electronic Medical Records based on HIS/CIS systems. INMED S.A. adapts each of manufactured units, in standard version, including CARO beams and LISSA ceiling pendants, to be fully integrated with Cuddy system. Thanks to this solution, all products from INMED S.A.'s portfolio not only meet the highest standards of clinical medicine, but also comply with current legal regulations regarding monitoring and documenting medical gas dosing. The use of Cuddy system guarantees that both today and in the future, medical infrastructure will be prepared for the growing technological and regulatory requirements, ensuring the highest level of safety and precision in patient therapy.

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POLAND

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