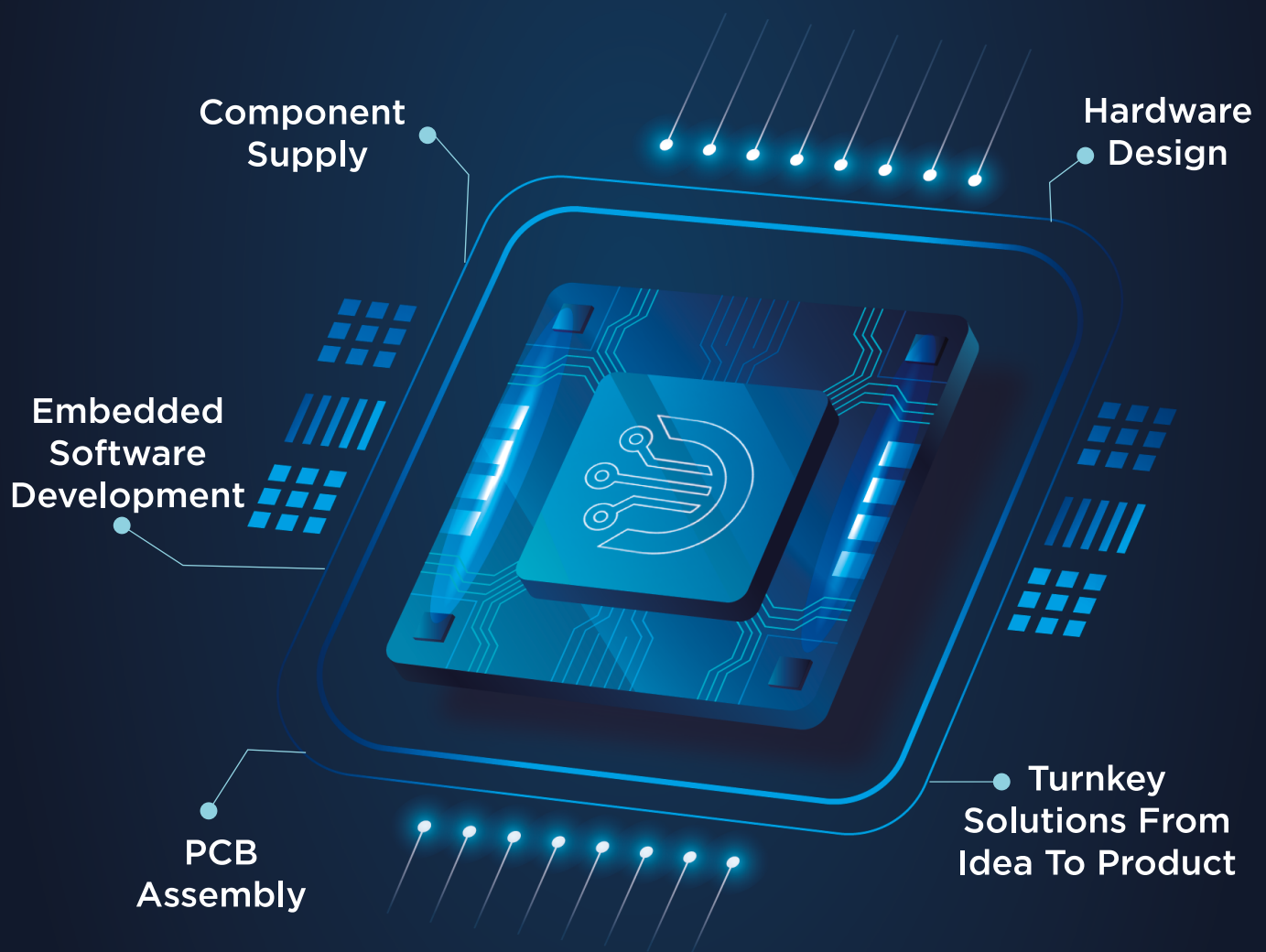




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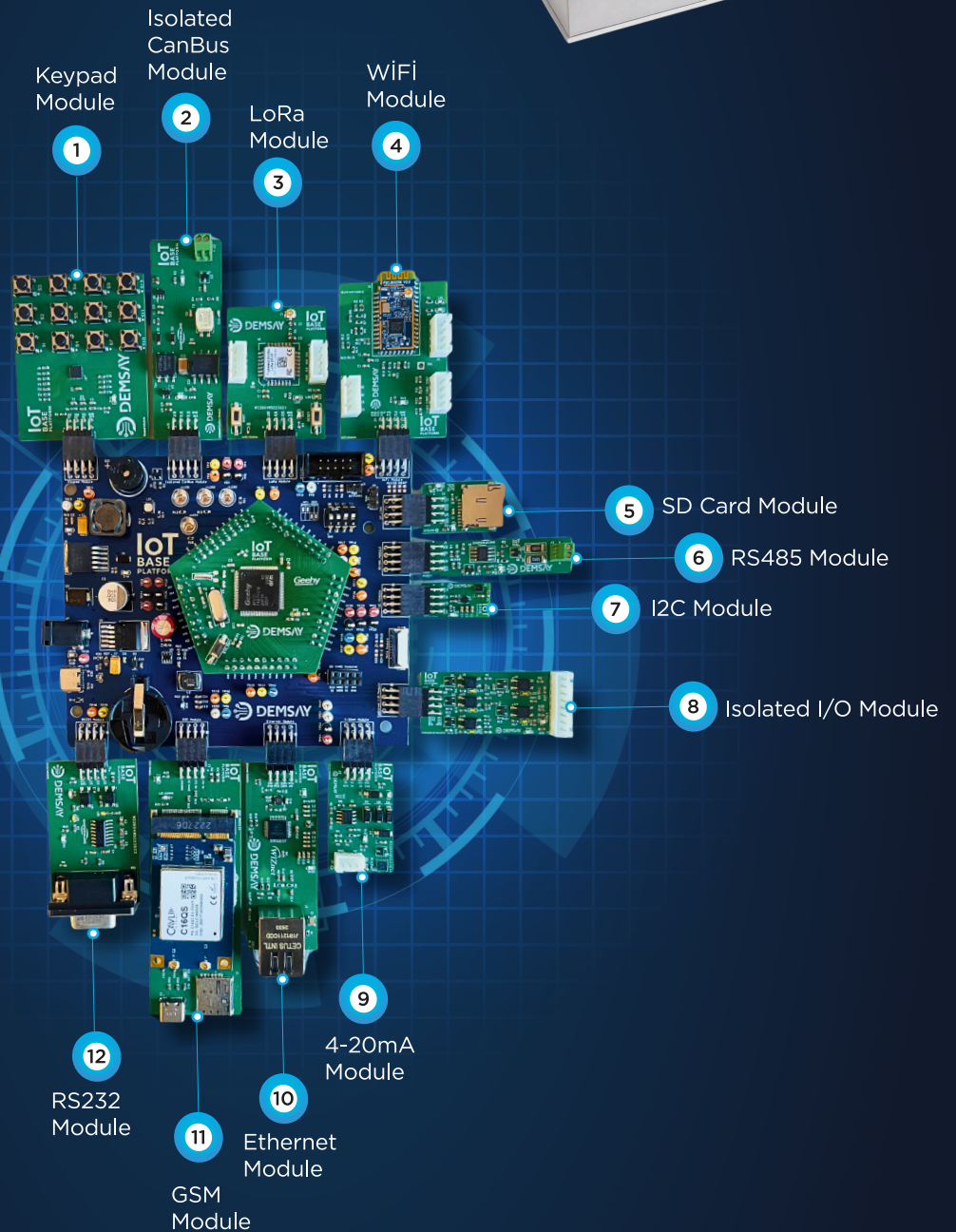


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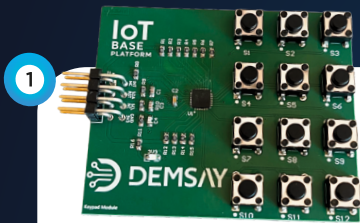
DEMEDUKIT

IOT BASE PLATFORM



DEMEDUKIT IoT Base Platform is an industrial-grade evaluation board developed for testing, validation, and system integration of complex IoT architectures. The platform supports multiple communication protocols, modular expansion boards, and isolated industrial interfaces to ensure stable operation in demanding environments.

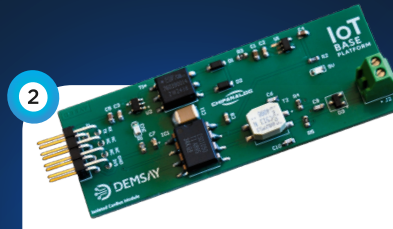
Designed with scalability in mind, DEMEDUKIT enables engineers to configure, test, and adapt system components efficiently, reducing development time while maintaining high reliability and precision.



1

Keypad Module

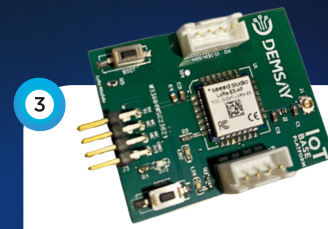
User interface module designed for local system control and operator interaction.



2

Isolated CANBus Module

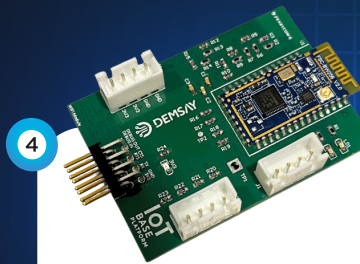
Electrically isolated communication module for industrial CANBus applications.



3

LoRa Module

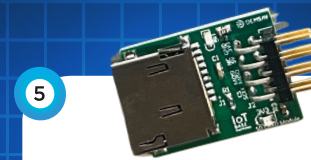
Communication module enabling long-range, low-power wireless data transmission.



4

Wi-Fi Module

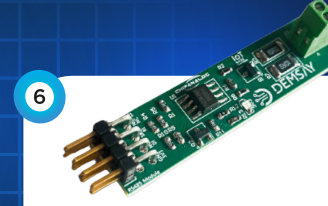
Wi-Fi module for wireless network connectivity and IP-based communication.



5

SD Card Module

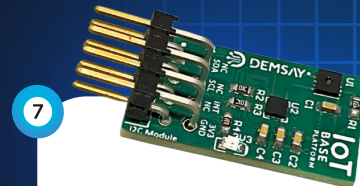
SD card module for local data logging, storage, and archiving.



6

RS485 Module

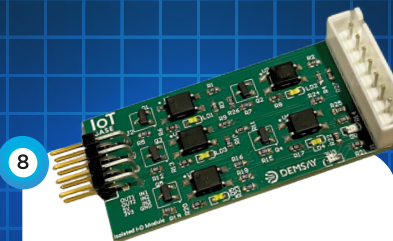
Industrial serial communication module for long-distance and noise-resistant data transfer.



7

I2C Module

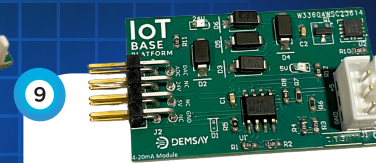
I2C interface module for communication with sensors and peripheral devices.



8

Isolated I/O Module

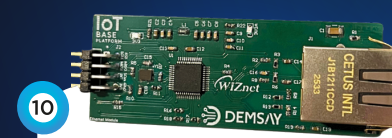
Isolated I/O module for safe and reliable digital input-output signal handling.



9

4-20 mA Module

4-20 mA communication module for industrial analog signal measurement.



10

Ethernet Module

Ethernet module providing wired network connectivity and high-speed data transfer.



11

GSM Module

GSM module enabling mobile data communication, remote access, and SMS notifications.



12

RS232 Module

RS232 interface module for communication with legacy serial devices.

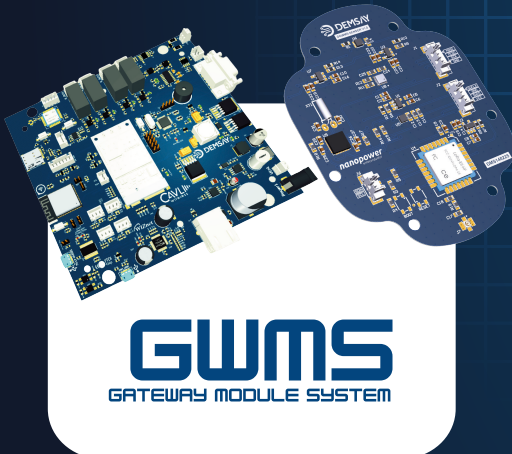


The evaluation board is equipped with versatile features for a wide range of applications. It includes 4 relay outputs, RS232 and MicroUSB ports, and Telit LE910C1 4G GSM Module for robust communication. It supports ESP32 WiFi/Bluetooth module, CanBUS, and RS485 connections, along with Telit USB connection port. The board integrates 6 digital sensor inputs, ARM Cortex-M4 MCU, I2C, SPI, and External UART ports. It is powered by a 40V max isolated power input, making it suitable for industrial use. Additional features include 2 temperature sensors for accurate monitoring.

DemeduKit is designed for use in embedded systems applications. Supports ESP32 programming via MicroUSB/TTL and STM32 programming via STLINK for fast development and flashing. For analog applications, it includes connections for adjustable resistors (trimpot), NTC temperature sensors, and LDR light sensors. I2C support enables connections for a 3-axis accelerometer and OLED TFT display. With ESP32, you can develop Bluetooth and WiFi applications. It features 5 LED connections, RGB LED for digital/PWM outputs, and a buzzer connection. Additionally, it provides 3 button inputs and 3 external connectors for digital/analog input-output applications. The kit also allows the development of RTC (Real-Time Clock) applications.

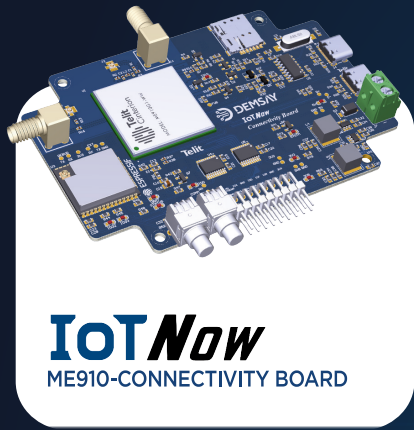


The Demsay Gateway Module System (GWMS) is a master-slave based industrial IoT architecture designed for remote monitoring, automation, and smart infrastructure applications. Acting as a central gateway, GWMS integrates multiple wired and wireless communication technologies—including LoRa, Wi-Fi, Bluetooth, LTE, Ethernet, CANBus, Modbus, and RS232—to collect, process, and manage field data from a single platform. DGWMS slave modules operate as low-power sensor nodes using NanoPower smart power management with time- and event-driven data transmission. Powered by ESP32-S3 and industrial-grade microcontrollers, the architecture enables secure communication, edge processing, long-term battery operation, and a scalable, energy-efficient IoT solution.



WiBETH is a versatile IoT control board equipped with an ESP32 microcontroller and a W5500 Ethernet controller, supporting both wired and wireless communication. With integrated Wi-Fi, Bluetooth, and Ethernet interfaces, it offers flexible connectivity options and can operate in either wired or wireless configurations depending on application requirements. It provides a reliable, compact, and high-performance solution for industrial and embedded system projects.



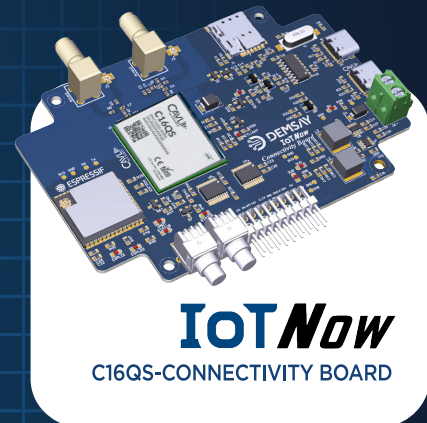


The IoTNow ME910 Connectivity Board is designed as a multi-communication development platform that enables Telit ME910 GSM/LTE modules to operate on a unified hardware architecture powered by an ESP32 microcontroller. The board provides a common infrastructure for cellular connectivity, integrating SIM card support, antenna interfaces, power management circuitry, and USB communication units. In addition to GSM/LTE communication, the platform supports simultaneous Wi-Fi and Bluetooth operation, enabling flexible and hybrid connectivity scenarios. Developed through integrated hardware–software R&D, the ME910-based IoTNow board offers a compact and user-friendly solution that accelerates prototyping, simplifies module integration, and provides a reliable platform for field testing and real-world IoT deployments.

The IoTNow C16QS Connectivity Board is a versatile IoT development board created to support Quectel C16QS GSM/LTE modules on a single ESP32-based hardware platform.

Within the project scope, a standardized hardware structure is implemented to support cellular modules, combining SIM card interfaces, antenna connections, power regulation, and USB communication capabilities. The board allows Wi-Fi, Bluetooth, and GSM/LTE communication technologies to run concurrently, enabling advanced multi-network IoT applications.

With its compact form factor and integrated hardware–software design approach, the C16QS-based IoTNow board reduces development time, enables rapid module switching, and serves as a robust solution for prototyping and field-level IoT testing.



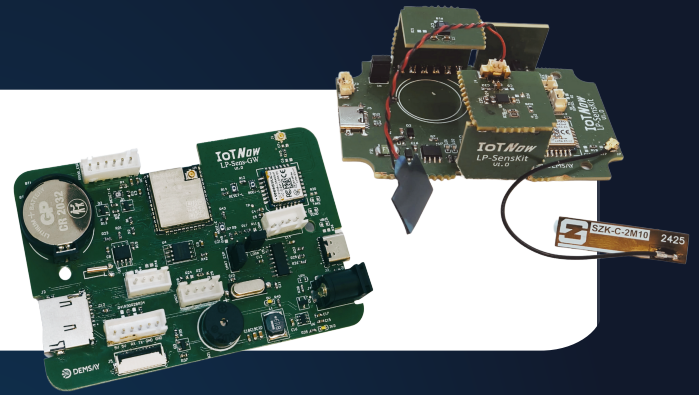
The ESP32-S3 E-Paper-based solution provides a low-power display infrastructure that enables wireless remote updates of screen content via Wi-Fi. E-Ink displays consume energy only during content updates and retain static images without power consumption, while the ESP32-S3 operates actively during data transmission and automatically switches to sleep mode once the process is completed, minimizing overall power usage. This architecture offers a technically efficient and sustainable solution for multi-display systems, information boards, and remotely managed display applications that require long battery life.

The Wi-Fi Mesh Controlled Digital Label Project was developed by Demsay Elektronik R&D Center to digitalize labeling processes in manufacturing, logistics, and retail sectors. Thanks to its Wi-Fi Mesh architecture that operates without the need for internet infrastructure, OLED-based digital labels can be remotely and instantly managed via a central control unit, software, and a mobile application. By replacing paper-based labels, the system enhances traceability, reduces manual workload and error rates, and provides a sustainable and environmentally friendly labeling infrastructure.



LPKIT

LOW POWER KIT



The LPKIT-Sensor and LPKIT-Gateway provide a reliable data collection and communication infrastructure for your industrial IoT solutions. Equipped with temperature, humidity, motion, presence detection and accelerometer sensors, the LPKIT-Sensor precisely measures environmental data and transmits it to the LPKIT-Gateway via LoRa. The LoRa and ESP32-S3-based LPKIT-Gateway transmits this data securely and seamlessly, allowing you to monitor and control your systems remotely.



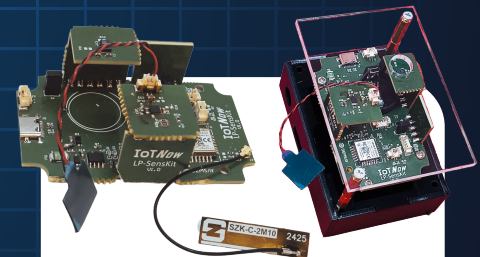
GATEWAY

The LPKIT-Gateway is a low-power, long-range communication unit developed for industrial IoT and data monitoring applications. Based on ESP32-S3 architecture, it establishes point-to-point communication with LPKIT-Sensor nodes via LoRa protocol and enabling secure data transmission to monitoring systems.

It is powered by an ESP32-S3 high-performance microcontroller and integrates a LoRa E5 module for long-range, low-power wireless communication. The system features a DWIN smart screen with UART interface for real-time data visualization, Micro SD card support for local data logging, and a USB Type-C connection for fast data transfer and power supply.

LPKIT-Sensor is a low-power sensor board designed for IoT and environmental data collection applications. It offers a wide range of use cases through its versatile sensor integration and reliable wireless communication capabilities, making it suitable for long-term field deployments and industrial monitoring scenarios.

The board integrates a LoRa E5 module for long-range, low-power wireless communication and includes multiple sensors such as temperature and humidity monitoring, infrared-based motion and presence detection, and a 3-axis accelerometer for vibration analysis. Additionally, the MAX17048G+ battery monitor enables precise battery level measurement via I2C, while the integrated NFC/RFID reader supports contactless identification and data communication.



SENSOR

SYSTEM COMMUNICATION FLOW



The Industrial IoT Control and Monitoring System is an innovative IoT solution designed for monitoring and managing industrial processes. Thanks to its modular structure, it easily adapts to different industrial needs. The system stands out with its long-distance data communication, low energy consumption and cloud integration features.

Flexible Connection Options: Reliable communication with WiFi, GSM and LoRa.

Remote Management: Relay-based control of devices and systems.

Cloud Integration: Remote monitoring and analysis of data.

Low Power Consumption: Optimized structure for long-term field use.

Real-Time Monitoring: Instant monitoring of environmental and operational data.





OUR MANUFACTURERS



OUR MACHINE TRACK



SMT1



SMT2



SMT3

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