

BITMOTECO Edge fully integrated on IPC (2,5 GHz, 8 GB RAM, 128 GB Storage) incl. Node-RED, Grafana, MQTT, OPC-UA, MTConnect, Modbus, SDK for own module development

BITMOTECO Edge enables companies to connect, individually analyze and visualize data from different sources with minimal effort. BITMOTECO Edge is designed for decentralized connectivity and pre-analysis close to the data sources and is available fully integrated on different IPCs. Each variant is compiled for concrete application purposes, so that project-specific the suitable systems are available, whether individually or combined. The Edge variants differ in the modules installed and the performance of the hardware.

BITMOTECO Edge contains preconfigured software modules (e.g. B.connect, B.broker, B.storage, B.visualize) and can easily be extended by additional software modules. Customers and partners can use the provided SDK to develop their own modules to bring new or existing applications to the edge and server systems. This gives them the basis for implementing individual AI applications, for example. In this way they can benefit from the existing functions of the BITMOTECOsystem.

As a fully integrated overall system, simple connection between and within the automation levels is made possible. On-the-edge data processing allows a decentralized network to be set up for complex functionalities, in which the user retains complete control over his data.

BITMOTECO OS – IoT-operating system

The IoT operating system **BITMOTECO OS**, developed by us, creates the basis for long-term successful IoT applications. The browser-based user interface offers user management as well as update functionalities in order to be able to fix security gaps or import function extensions easily and uncomplicatedly. In addition, a firewall is integrated to protect connected systems, such as machines or plants, from unauthorized access.

- Browser-based GUI
- Update function
- User Management
- Firewall

BITMOTECO Module – IoT-software modules

- B.connect: fully integrated development tool Node-RED with many additional function blocks.
 - Via the pre-installed industrial interfaces (MQTT, OPC-UA, MTConnect, Modbus, REST-API), the system can communicate with a variety of sensors, machines and higher-level systems (MES, ERP)
 - IO-Link and LoRaWAN ready
 - Web Scraper - automatic reading of content from web pages
 - Notificator - automatable notification functions adjustable
 - Own analyses and functions programmable with JavaScript
 - Extensive range of function modules can be retrofitted
 - Import-export function - transfer of created configurations to other systems in a few steps
 - AI- and Cloud-ready
- B.broker: Fully integrated MQTT broker
 - Central node in the MQTT network
 - Receives, manages and provides data/information from the clients
- B.storage: Decentralized time series database
 - Storage of raw values and analysis results
- B.analyze: Fully integrated function module in B.connect with over 30 analyses for statistical processing of data
 - Select function: output e.g. max, min, last or first value from definable time windows
 - Aggregation function: form mean, median or sum within definable time windows, for example
 - Transformation function: convert raw values within definable time windows, e.g. into absolute values or round them off
- B.visualize: fully integrated graphical development tool Grafana for individual dashboards
 - Compile dashboard from a variety of chart templates
 - Display current values and time histories through integrated database
 - Dashboard visualization anywhere in the company network
 - Generate role or user specific dashboards (incl. password protection, admin control and groups)

BITMOTECO SDK

With the BITMOTECO SDK (Software Development Kit) customers and partners get the possibility to develop individual applications as an independent module. This enables, among other things, the integration of further inter-faces or individual (AI) calculations/analyses with their own user interfaces.

Due to the intelligent integration in the BITMOTECO OS, new modules benefit from the functions of the existing BITMOTECO Modules, such as the data connection via B.connect or the integrated database in B.storage.

With the help of the SDK, any container-ready software components can be packaged as module. It does not matter whether one or more container images are used.

Hardware - edge industrial PC:

- Processor: Intel Apollo Lake N4200, 4 Cores, 2,5 GHz (Turbo), fanless
- Graphics/GPU: Intel HD Graphics 505
- Interfaces: 2x Gb LAN, WLAN
- Interfaces (disabled): 4x USB 2.0, 2x USB 3.2 Gen 1, 1x USB Type C, 2x DP
- Regulatory information: FCC 47 CFR Part 15, CE, RoHS 2 (2011/65/EU), RoHS 3 (2015/863/EU), EN 55022, EN 55024, EN 55032, EN 55035, EN 60950-1, EN 62368-1
- Input voltage 9-24 VDC
- Included in delivery: power adapter, 2x Wi-Fi - dual band terminal antenna 161 mm
- Optionally available: mounting kits (DIN-rail mounting, wall mounting)
- Dimensions (WxHxD): 196 x 36,75 x 120,8 mm

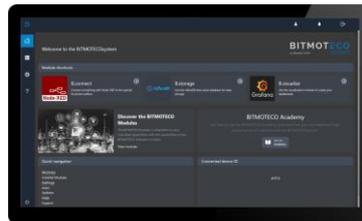


Illustration: BITMOTECO Edge