

EMBEDDED GATEWAY PLATFORM

- BASIC
- PLUS



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- Powerful Arm® Cortex®-A7 CPU
- WLAN / BT low energy (PLUS)
- Interfaces ETH0, ETH1, RS485 (RS485/422)
- Embedded Yocto Linux platform
- Python scripting including libraries
- EdgeLock© root-of-trust secure element
- No lock-in effect

U-EXPERTEN

A TRUE ONE-STOP SHOP

A true one-stop shop: U-Experten are leading specialists for the realization, industrialization, and production of individual embedded HMI panels, smart connected devices and IoT solutions.

For the consumer and capital goods sectors, our interdisciplinary teams of UX design, engineering, and production are designing, developing, and manufacturing connected products and product lines with perfect user experience.



IOT GATEWAY BASIC + PLUS

RADIO-BASED INTERNET CONNECTION OF FIELD DEVICES

The IoT Gateways Basic and Plus transporting data flexibly and securely between devices installed in the field and an on-site server or an Internet-based cloud service.

Two Ethernet interfaces with separate MAC addresses support a LAN / WAN topology. Two serial interfaces allow the connection to field devices in master and / or slave operation or the parallel operation of two different protocols such as modbus RTU and Mbus. The PLUS gateways communicate wirelessly via WLAN / BT LE or 4G.

The LINUX based open source operating system and the Github maintained YOCTO toolchain offer the greatest possible flexibility for software creation. A Python software development kit supports a quick introduction to programming.

OUR SOLUTIONS

SUCCESSFUL IN MANY INDUSTRIES

- Medical
- Laboratory
- Home automation
- Food and beverage
- Light and building
- Factory automation
- Information systems
- HVAC systems
- Start ups
- and many more!

EMBEDDED GATEWAY PLATFORM

POWERFUL

- Powerful Arm® Cortex®-A7 CPU
- Generous memory expansion
- Two Ethernet interfaces (2x MAC)
- RS485 and RS422 / RS485 interfaces
- 4G cellular modem
- WLAN / BT Low Energy
- Flexible expansion options

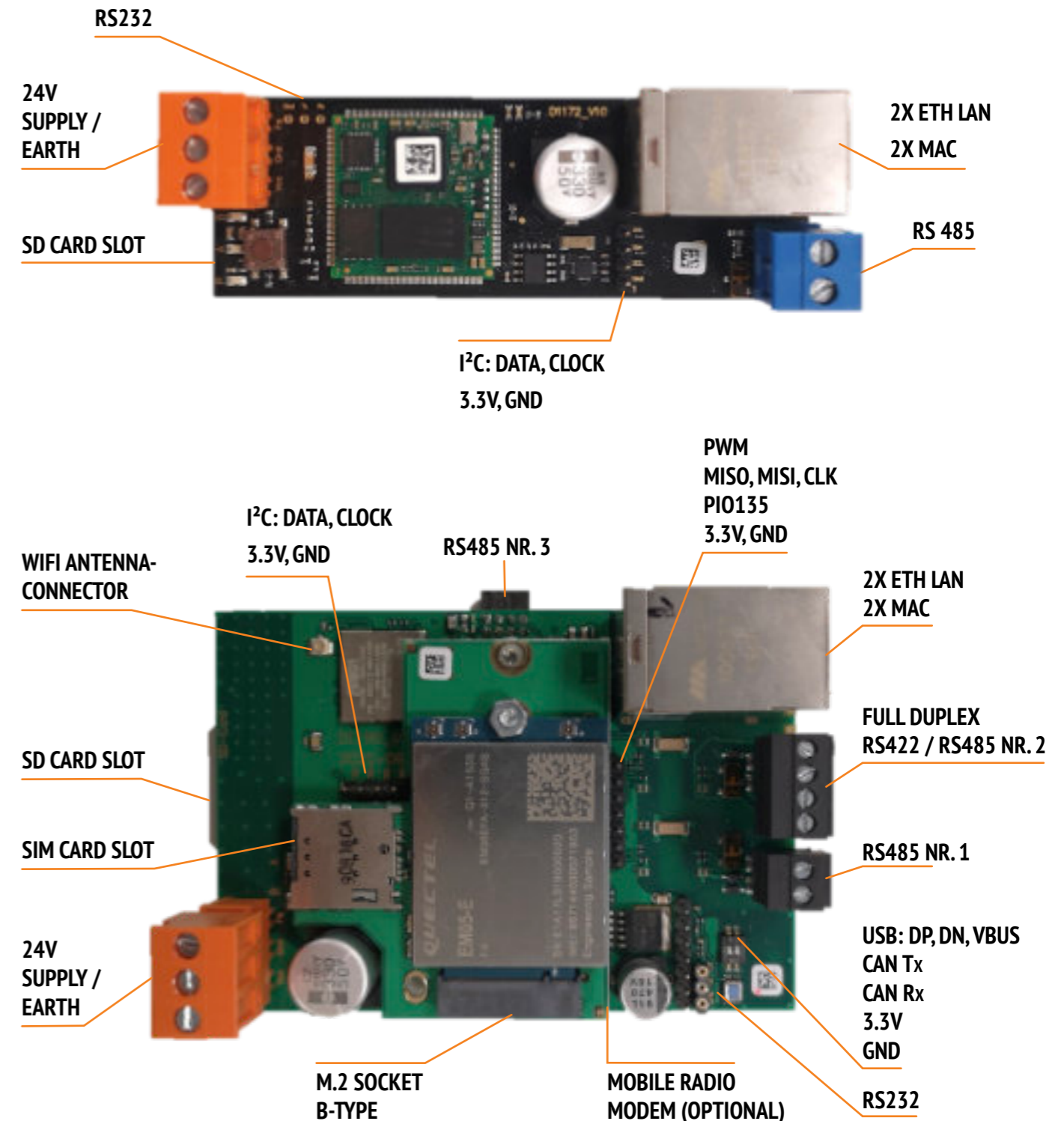
OPEN SOURCE

- GitHub-maintained embedded Linux platform for customer-specific application programs
- YOCTO toolchain for easy creation of your own OS image
- Plug & Play image for Python scripting with pre-installed Python libraries such as pymodbus

IOT WITH SECURITY

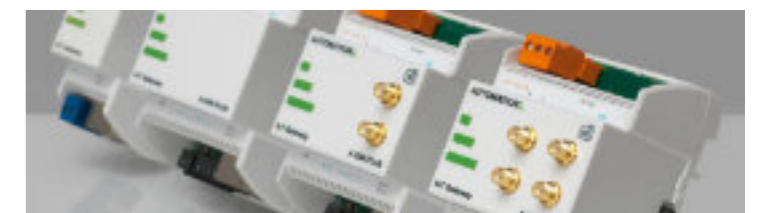
- EdgeLock® plug & trust IoT secure element
- Root-of-trust option at IC level
- Advanced edge-to-cloud security for IoT applications
- EAL 6+ security certification up to the OS level

Part number	Basic	Plus
CPU	i.MX 6ULL(Cortex®-A7 @800 MHz), 512MB DDR3-RAM, 1MB NOR-Flash , 512MB NAND-Flash	
Real-Time clock	buffered by lithium battery	
Ethernet interface	2 x 10 / 100BaseT, 2x MAC address, RJ45 connectors, link and traffic LEDs	
Serial interface	1 x RS485 galvanically isolated	1 x RS485, 1 x RS485 / RS422 galvanically isolated
WLAN / BT LE function	-	WLAN and Bluetooth low energy communication (Redpine chipset)
5G Mobilfunk function	-	Cellular connection to 5G network
SD card interface	1 x microSD card, SD / SDHC, push/push slot	
I2C interface	Internal pin header for connecting additional functions via I2C bus	
M.2 interface	-	Internal M.2 socket to accommodate expansion modules (occupied with optional cellular function)
IoT security	EdgeLock® plug & trust secure element, separate circuit for encryption and identification of the hardware	
USB, CAN, I2C, PWM, SPI	Internal pin header with additional interfaces of the i.mx6	
Power supply	24 VDC, max. 5W	24 VDC, max. 7W
Operating temperature (Top)	-5 °C to +55°C (K55)	
CE conformity	2014/35/EU, 2014/53/EU, IEC 61000-6-3, IEC 61000-6-2, IEC 62368-1, RoHS	
Software	Comment	
Operating system	YOCTO Linux distribution a1-embedded-linux-platform for creating your own operating system images (https://github.com/Automation-One)	
Python SDK	Ready-to-go image for installation on the gateway with Python3 and useful Python libraries for IoT applications such as pymodbus and paho-mqtt	



SDK AVAILABLE

ASK FOR INDIVIDUAL SOLUTIONS



ALSO AVAILABLE AS STANDARD SOLUTION