M-Bus/WM-Bus support for Moduino

M-Bus module expansion for Moduino

Moduino based on ESP32 can now be equipped with TECHBASE's original mBus10/60/400 converter module. The converter operates as a M-Bus Master and allows user to connect up to 400 standard M-Bus receivers (Slaves) through M-Bus Master output or fewer devices at a higher M-Bus load over long distances. Moduino, as a fully capable Industrial IoT device, can now be used with every device equipped with M-Bus interface, e.g. heat meters, electricity meters, gas meters, executive modules, recorders, measuring instruments.



Wireless M-Bus support

TECHBASE has added high performance module for **wireless M-Bus** connectivity and multi-hop networking into Moduino series expansion options. The module is configured as an embedded micro system or simple data modem for low power applications in the metering specifically allocated band of **169 MHz** or in the ISM band of **868 MHz**. The device is can be configured for interoperability in a WMBus network for Industrial IoT applications.

The RF implementation guarantees best-in-class performance in terms of covered area and power consumption. The output power can be increased **up to +30 dBm on the 169 MHz band** (+27 dBm on optimized version for highest power efficiency) and **up to +15 dBm on the 868 MHz band**. The extremely reduced power consumption gives access to long lasting battery life requirement (up to 2 μ A in sleep mode for wireless M-Bus module with an RTC clock running).

The Moduino devices can be provided with a W-MBus stack specifically developed by Embit for the platform that allows to integrate the module in the desired system without effort and simplify the interaction in WMBus networks.

http://moduino.techbase.eu/

New IoT Gateway based on NanoPi Neo

NanoPi Gateway platform expanded

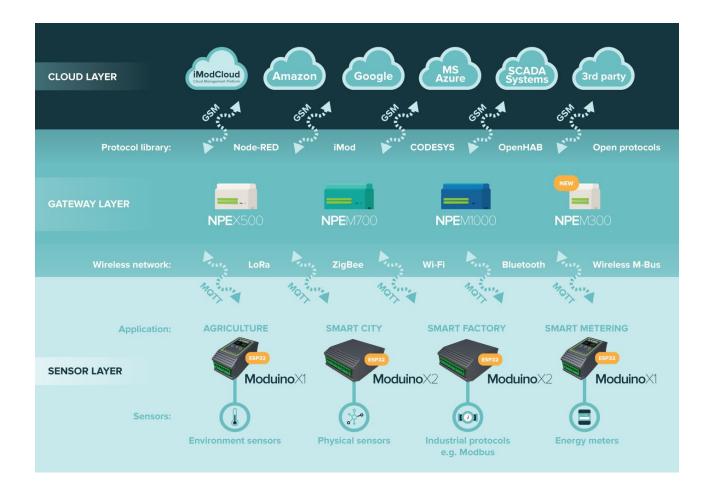
In October 2017 TECHBASE introduced newest economical addition to their M-Bus/Modbus Gateway family. Success of **ModBerry 500 series** based on Compute Module 3 and **ModBerry M700** based on NanoPi M2 drove to further development of this efficient platform. TECHBASE proudly presents **ModBerry M300** powered by **NanoPi NEO**.



- CPU: Allwinner H3, Quad-core Cortex-A7 Up to 1.2GHz
- **DDR3 RAM**: 512MB
- Connectivity: 10/100M Ethernet, RS-232, RS-485
- USB Host: ext. Type-A x1
- Wireless communication: Wi-Fi, Bluetooth, LoRa, NB-IoT (LTE cat. NB1) /GPRS/EDGE, 3G/GPRS, ZigBee, Sigfox support
- Working Temperature: -40°C to 70°C
- OS/Software: u-boot, UbuntuCore, Debian and Android
- http://www.a2s.pl/products/ModBerry/ModBerry_M300_EN.pdf

ModBerry M300 is designed for easy integration of Modbus RTU and TCP/MQTT/SNMP networks. With this device, Modbus serial slave devices can be seamlessly added into an existing Modbus TCP network, and Modbus TCP slaves can be made accessible to serial masters. It also has a remote web access panel that allows you to manage groups of devices. That makes integration customizable and easy.

http://modberry.techbase.eu/



Wide range of protocol support

All TECHBASE's solution can be empowered with iMod software incl. protocol support for industrial interfaces, e.g. M-Bus, Modbus, SNMP, MQTT. iMod software works seamlessly with Node-RED using MQTT protocol, allowing use of **bacnet** and direct control over devices I/Os with **Google's** platform-neutral **protobuf** - extensible mechanism for serializing structured data and **zeroMQ** controls to connect the code in any modern language, on any platform. The protocol drivers library can be expanded with **CODESYS** development system to support PROFIBUS, CANopen, EtherCAT, PROFINET and EtherNet/IP.

iMod	M-Bus, Wireless M-Bus, Modbus TCP/RTU, SNMP, MQTT, SMS, E-MAIL, SQL/CSV
CODESYS	PROFIBUS, CANopen, EtherCAT, PROFINET, EtherNet/IP
Node-RED, etc.	MQTT, bacnet, eISCP
OpenHAB	Commercial product integration
Other open-source protocols	IEC 61850, IEC 60870-5-104, DLMS/COSEM, KNX, eHz meters, IEC 62056-21, REST



IP67 protection for IoT Gateway

To expand application possibilities and provide water/dust protection for industrial devices, TECHBASE introduced optional IP67 casing. All our products can be manufactured this kind of protection, according to user's needs. For example, sealed **M-Bus Slave Gateway** can be battery powered - Independent of the power grid thanks to 13000mAh Lithium battery. It provides direct reading of M-Bus compatible meters, logging and remote access to information for pumping stations of Waterworks and Sewage Systems, dispersed residential buildings, peripheral industrial facilities.

The devices support **NarrowBand-IoT** communication technology, also known as LTE Cat NB1 (NB-IoT) and LTE Cat M1 (eMTC) with EDGE / GPRS compatibility to provide data access to spreaded sensors across the installation.

More information

http://a2s.pl/products/gateway/NBIoT Wireless Gateway EN.pdf