

Product data sheet e3m-Box RACER 2

Your advantage for increased energy efficiency

The e3m Box can be used in buildings and properties for the purpose of remote meter reading, even in small building management systems with simple control functions. The e3m Box consists of a powerful, compact and maintenance-free embedded hardware platform. The accompanying software includes performance data from technical facilities, with which the energy consumption in buildings and facilities can be consistently recorded and evaluated. The system can also be upgraded to a completely web-enabled control system. Thus, one single system enables you to monitor and optimize your facilities and buildings efficiently.

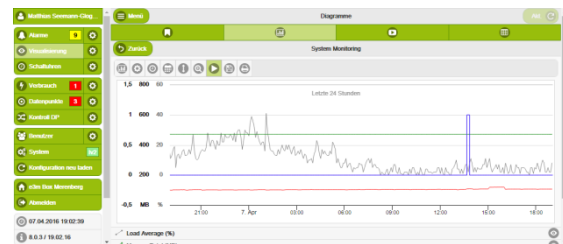


Areas of use

The e3m Box can exchange data via interfaces using the process control system (cooling, heating, ventilation, room temperature, security, measuring scales). As such, operating conditions, target values, control parameters, alarm systems and malfunction alerts are detected, recorded and transmitted to the e3m Data Center. Target values, control parameters and switch states can also be set via the data interfaces. The various drivers required for the integration of your systems are already included within the basic module. These include the BACnet/IP, Modbus/IP/RTU, M-Bus und KNX/EIB. Optionally, further drivers such as Siemens S7 or modern IoT interfaces like MQTT and the open source environment Node-RED can be added.

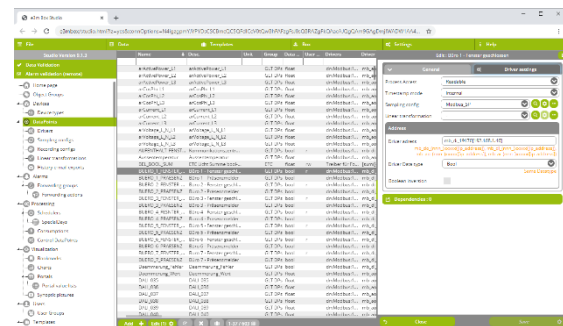
Energy consumption

Energy consumption is registered by the meters via external impulse input or data interfaces, and periodically stored in a SQL data base (load profile). Applying threshold values, daily consumption can be constantly monitored. If these threshold values are exceeded, an alarm is immediately activated.



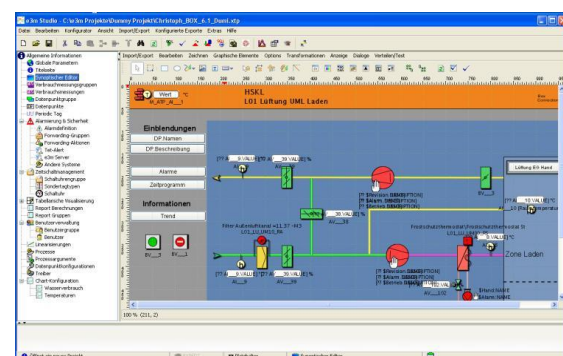
Project information

The e3m Box can manage up to 10000 data points. The available drivers are already integrated and can be activated with a validation code. A development studio handles the engineering of the data points and visualization via the network connection; this configuration is then subsequently down-loaded to the e3m Box. At all relevant data points, it is possible to program alarms, which, when activated, can be transmitted either to the e3m Data Center or directly to an e-mail address, depending on the particular event. It is also possible to program timers on the e3m Box in order to optimize energy consumption.



Overview of functions

- Scalable (up to 10'000 data points)
- Data buffer in the event of link failure (SQL data base)
- HMI/SCADA web visualization
- Alarm management
- Diagrams
- Charts
- Reports
- Process displays
- Timer programs
- IEC 61131-3 SoftLogic
- Central version management (e3m Data Center)
- Central user management (e3m Data Center)
- etc.



Software

Modell	Basic modul	Visualisierung
e3m-BSW-75	e3m Box for 75 data points incl. BACnet/IP, MBus, KNX (EIB) and Modbus/IP/RTU	e3m-75-VISU
e3m-BSW-150	e3m Box for 150 data points incl. BACnet/IP, MBus, KNX (EIB) and Modbus/IP/RTU	e3m-150-VISU
e3m-BSW-300	e3m Box for 300 data points incl. BACnet/IP, MBus, KNX (EIB) and Modbus/IP/RTU	e3m-300-VISU
e3m-BSW-500	e3m Box for 500 data points incl. BACnet/IP, MBus, KNX (EIB) and Modbus/IP/RTU	e3m-500-VISU
e3m-BSW-1000	e3m Box for 1000 data points incl. BACnet/IP, MBus, KNX (EIB) and Modbus/IP/RTU	e3m-1000-VISU
e3m-BSW-2500	e3m Box for 2500 data points incl. BACnet/IP, MBus, KNX (EIB) and Modbus/IP/RTU	e3m-2500-VISU
e3m-BSW-5000	e3m Box for 5000 data points incl. BACnet/IP, MBus, KNX (EIB) and Modbus/IP/RTU	e3m-5000-VISU
e3m-BSW-10000	e3m Box for 10000 data points incl. BACnet/IP, MBus, KNX (EIB) and Modbus/IP/RTU	e3m-10000-VISU

Product options

Software

e3m-Box-SIM	Driver Simatic S7 / Industrial Ethernet
e3m-Box-WRM	Driver Wurm/IP cooling systems
e3m-Box-DAN	Driver Danfoss cooling systems
e3m-Box-ERH	Driver Elreha cooling systems
e3m-Box-AK2	Driver Danfoss AK2/IP cooling systems
e3m-Box-SNMP	Driver SNMP
e3m-Box-SQL	SQL Datenbanken
e3m-Box-MQTT	MQTT
e3m-Box-NR	Node Red

Hardware-Module*

e3m-Box-iDoor-LAN	iDoor GB LAN Modul (1x RJ45)
e3m-Box-iDoor-WLAN	iDoor WLAN Modul (802.11 a/b/g/n)
e3m-Box-iDoor-RS232	iDoor RS-232 Modul (2x DB9 Anschluss)
e3m-Box-iDoor-RS485	iDoor RS-422/485 Modul (2x DB9)
e3m-Box-LTE	iDoor LTE Modul

*When extended with an iDoor module, the overall height increases by 30 mm

Technical Data

Hardware properties

Processor	Intel E3845 Quad Core, 1.91 GHz
System Memory	4 GB RAM
Data Memory	32 GB mSata Drive
Ethernet	2x10/100/1000 Mbps
Graphic	HDMI + DisplayPort
USB Ports	1x USB 3.0 / 3 x USB 2.0
Serial Ports	4x RS-232/422/485

Acceptable environmental conditions

Operating temperature	-0 ~ 60°C (by air flow)
Humidity	max. 95% RH @ 40°C, non-condensing
Ingress Protection	IP40
case material	Aluminium

Installation

Dimensions B x H x T	150 mm x 105mm x 35 mm
Net/gross weight (kg)	1,0
mounting	stand, wall, DIN-Rail

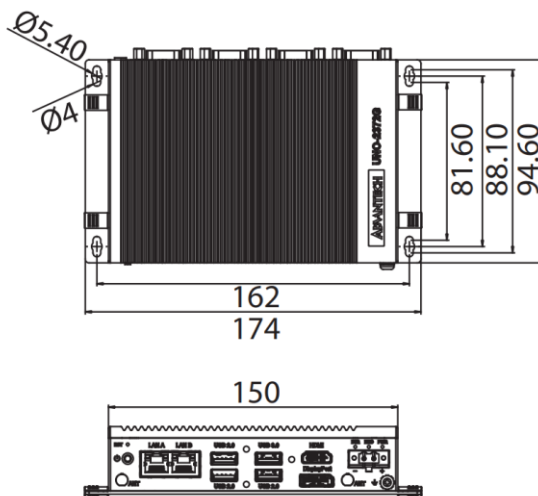
Electrical supply

External power supply	10-36 VDC
Power-consumption	30 W (normal), 42 W (max)

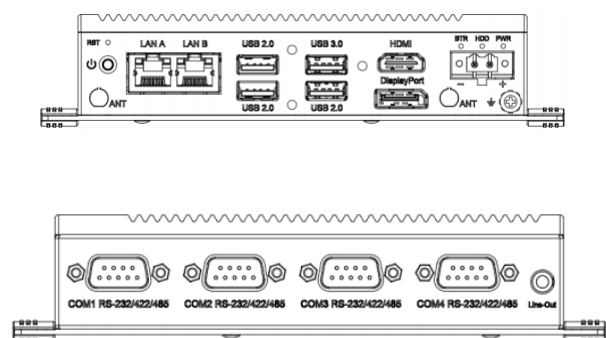
Standard specification

certificate	CE FCC UL CCC BSMI
-------------	--------------------

Dimensions



Connections



No responsibility is taken for the correctness of this information.