



## HUB-GM200

### Technical data sheet

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## Technical data

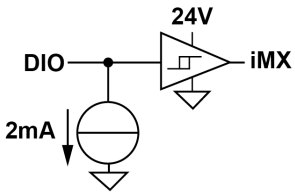
Data	Values
Power supply	24 V DC $\pm$ 10 %
Max. power consumption	120 W
Processor	Colibri IMX7D 1 GB 32 bit, 2 $\times$ ARM Cortex-A7 CPU ARM®, 1 $\times$ Cortex-M4 CPU Core®
Memory	1 GB DDR3L RAM, 4 GB eMMC
Data interfaces	USB1: Host (Micro USB) USB2: Device (USB-A) USB3: Device (USB-A) 2 $\times$ Ethernet: 100 Mbit/s 1 $\times$ CAN 1 $\times$ RS485 3 $\times$ status LEDs Backplane bus
Connections for peripheral devices	6 $\times$ digital input 6 $\times$ digital output 4 $\times$ analogue input
Protocols	OPC UA server + client MQTT broker server + client Modbus TCP/IP broker client + server
Operating system	SIINEOS IIoT operating system for configuration and data visualization (via Micro-USB or Ethernet)
Housing	Plastic (polyamide), black, flammability class UL 94 V0
Protection class	IP20
Dimensions	139 mm $\times$ 100 mm $\times$ 25 mm
Weight	181 g

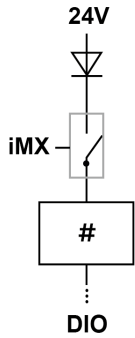
Ambient conditions	Values
Temperature range	Storage: $-40^{\circ}\text{C}$ to $85^{\circ}\text{C}$ Operation: $0^{\circ}\text{C}$ to $50^{\circ}\text{C}$
Humidity	Storage: 10% to 95% RH, non-condensing Operation: 20% to 90% RH, non-condensing
Operating altitude	Max. 2,000 m above sea level

Storage	Values
Recording interval	Minimum 1 second
Storage	Up to 4 GB usable
Data export	VictoriaMetrics

<b>SIINEOS</b>	
Pre-installed software	<p><b>FlexPlorer:</b> Live data visualization</p> <p><b>Azure IoT Hub Connector:</b> Connector to the Microsoft® IoT platform</p> <p><b>Cloud of Things Connector:</b> Connector to the Telekom® IoT platform</p> <p><b>InGraf:</b> Grafana data visualization</p> <p><b>NumCorder:</b> Recording of scanned or entered barcodes / serial numbers</p> <p><b>OPC UA server:</b> Counterpart to the OPC UA client, setting up of a server–client structure with one device</p> <p><b>NodeRED:</b> Graphical programming of interfaces, services or hardware</p> <p><b>PromEx:</b> Database configuration of VictoriaMetrics and Prometheus</p> <p><b>TOSIBOX®:</b> Secure connectivity between the IoT devices</p>
I/O interfaces to third-party systems/devices	<p><b>S7 PLC client:</b> Connector for the Siemens® S7 controller</p> <p><b>Sensirion SPS30:</b> Temperature and humidity sensor</p> <p><b>TBEN-S1-8DIP:</b> TBEN module from TURCK®</p> <p><b>TBEN-S2-4AI:</b> TBEN module from TURCK®</p>

## Specification of inputs and outputs

Configuration of DIO as a digital input	Values
Conformity	EN61131-2 Type 1/3
Switching threshold	Between 5 V and 11 V
Pull-down current	Typ. 2 mA
Bandwidth	From 6 Hz (with 12 channels, 2 edges) to 150 Hz (with 1 channel, 1 edge)*
Permissible input voltage range	-3 to 30 V
Circuit diagram**	

Configuration of DIO as a digital output	Values
Power supply	From 24 V
Conformity	EN61131-2 nominal current 0.1 A
Max. output current	Typ. 120 mA
Switching interval	≥50 ms*
Voltage drop to 24 V	Max. 1 V
Protective functions	Overload protection Reverse-current protection
Circuit diagram**	

Analogue input AIN	Values
Operating modes	Current Voltage
Measuring range	0-11 V / 0-24 mA
Resolution	12 bit
Input resistance	101 kΩ (at 0-11 V)
Sampling interval	≥50 ms*

Analogue input AIN	Values
Permissible input voltage range	-3 to 30 V
Protective functions	Overload protection: in 20 mA mode, the current is limited to 22–30 mA
Circuit diagram**	

\*Only if processor is not busy

\*\*The hash (#) in the circuit diagram indicates the overload protection.

## USB interface specifications

USB connections	Values
Max. power consumption for <b>USB1</b> (Micro-USB on the front)	5 W (1 A) May vary depending on the device connected: <ul style="list-style-type: none"> <li>On a 24 V power supply, the power consumption is 0</li> <li>On a 5 V power supply, the digital outputs cannot be used.</li> </ul>
Max. power output for <b>USB2</b> and <b>USB3</b>	2.5 W (500 mA) with 24 V supply
Support for	Full, high and low speed (480, 12 and 1.5 Mbit/s)
Circuit diagram*	

\*The hash (#) in the circuit diagram indicates the overload protection.

## CAN interface specification

CAN (controller area network)	Values
Voltage output	24 V (0.75 A)
Max. baud rate	1 Mbit/s
Bus termination	120 $\Omega$
Protective functions	Reverse-polarity protection Overload protection

## RS485 interface specification

RS485	Values
Voltage output	24 V (0.75 A)
Max. baud rate	2.5 Mbit/s
Bus termination	120 $\Omega$
Protective functions	Reverse-polarity protection Overload protection

## Backplane bus specification

Backplane bus	Values
Voltage on the backplane bus	Voltage of the power supply unit minus 0.5 V
Communication	Via Modbus RTU
Max. number of extension modules if device acts as master gateway	3
Protective functions	Overload protection



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