

Datasheet: com.tom M-BUS 6.1

The com.tom M-BUS 6.1 is a ready-to-use gateway and edge cloud controller for the rapid development of IoT application specific solutions. The device contains several communication interfaces like a 3.5G modem, Ethernet, M-Bus and a serial port, as well as a secure industrial-proven portal connection.

The device includes a local web server for parametrization, programming logic (WEB-PLC, with a graphical editor) and alarm functions.

With the WEB-PLC editor and the integrated com.tom PORTAL communication this device offers turnkey solutions for process data acquisition, process automation and remote service.



Technical data

IPC@CHIP®	SC1x3-LF Embedded Controller
Add-On	GM02 modem - Quad Band GPRS (850/900/1800/1900 MHz) - Tri Band UMTS (850/1900/2100 MHz) (SIM-card inserted at the back)
Ethernet interface	1 x 10/100BaseT, RJ45 connector with traffic and link LED
Serial interface	1x RS232, RS485 or RS422 (selectable) with DSUB9 connector
SD card interface	MMC/SD memory card
M-Bus-Interface	max. 32 devices max. distance 5 km 300 bit/s AWG15
Digital S0-Inputs	2 x 10 mA max. frequency 50 Hz
Digital Outputs	2 x Transistor (high-side) 24 V DC, max 500 mA short-circuit and overload resistant, no potential isolation, mating connector Weidmüller BL 3.50/10 included in the delivery scope
Supply voltage	24 VDC (-15% / +15%) mating connector Weidmüller BL 3.50/03 included in the delivery scope
Active current	max 200mA (at 24VDC) + current of digital outputs
Antenna / Antenna Interface	SMA female socket

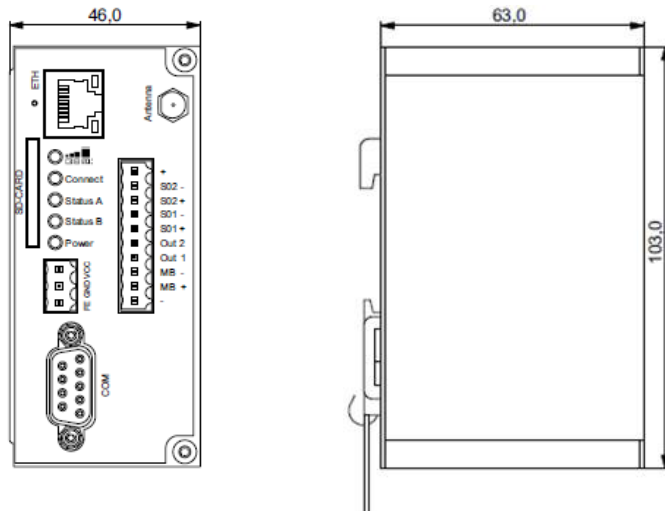
Software engineering

Operating System	IPC@CHIP® RTOS
WEB-PLC - Editor and Runtime	<p>Web based Editor, installed on the internal WEB-SERVER</p> <p>Up to 786 I/O values</p> <p>Up to 64 portal variables</p> <p>PLC function units:</p> <ul style="list-style-type: none"> - Binary: AND, OR, XOR - Bits and Bytes: Extract, Pack, Put Bit, Shift register, Unpack - Controllers: On/Off, P, Shade - Messages: Send, Receive - Numerical: Addition, Subtraction, Multiplication, Division, Minimum, Maximum, Counter, Compare, Signal Limiter, Signal Converter, Signal Smoother, Signal Tracker - Special: First Cycle, OpenVPN, Portal Status - Storage, selection, edge detection: Demultiplexer, Multiplexer, RS Flipflop, T Flipflop, Trigger, State Machines - Timing: Local Clock, UTC Clock, TON, TOFF, TP, Timer, Compare Time, Time Switches <p>PLC diagram:</p> <ul style="list-style-type: none"> - Up to 256 function units, I/O values, portal variables and constants - IPO cycle time: 25 – 1000 ms
WEB-PLC – Additional functions	<p>Event Log: System events are logged with timestamp and message</p> <p>Simple Network Time Protocol (SNTP) synchronization of the system clock</p> <p>OpenVPN: Integrate the com.tom device into a virtual private network</p> <p>DHCP Server: Up to 100 clients, up to 10 static leases</p> <p>Messages – Sending and receiving short messages, up to 4 templates receiving and sending respectively</p> <p>Update – Over com.tom PORTAL or local WEB page</p> <p>Export – Export the diagram and/or the settings of your com.tom device as an “Update” package</p> <p>NAT: Route traffic between a local (internal) and a global (external) network, up to 500 mappings, up to 10 static mappings</p> <p>Firewall: Filter incoming traffic, up to 500 rules (including dynamic rules for outgoing traffic), up to 30 static rules</p> <p>Messages: Send and receive short</p>

	<p>messages (up to 10 templates respectively)</p> <p>CODESYS network variables: Up to 32 lists and 256 values</p> <p>COM Server: According to RFC 2217</p> <p>Modbus: RTU master and TCP client, up to 32 devices and 256 values. RTU slave and TCP server, up to 128 values</p> <p>Time switches: Up to 8 switches, crontab format</p> <p>MicroBrowser interface</p> <p>Update: Via com.tom PORTAL, local WEB page or SD card</p> <p>Export: Export the diagram and/or the settings of the com.tom device as an update package</p>
com.tom PORTAL communication	<p>Transferred information:</p> <ul style="list-style-type: none"> - device information - GPS information (optional) - portal round trip times - update url, trigger and status - OpenVPN activation and status - I/O values - portal variables
Environmental	
Operating temperature (TA)	0°C to +55°C (-20°C to +60°C upon request)

Mechanical data

Size (W x L x H)	46 x 105 x 70 mm
Material	Completely hot-dip aluminium-zinc coated steel sheet (DIN EN 10215)
Mounting	DIN rail mounting



Modem Certifications and Compliance

FCC Rules Parts: 15B, 22H, 24E	FCC ID: R17T56HQ1
EN301 489-1 & 7	GCF 3.27.1
NAPRD 3.14.0	R&TTE - LVD 2006/95/EC

Compliance and Conformity

CE, R&TTE, RoHS/WEEE	
- EMC emission	IEC 61000-6-4
- EMC immunity	IEC 61000-6-2
- Protection Rating	IEC 60529: IP20
- Electrical Shock	IEC 61140: Class III
- Low Voltage Directive	IEC 60950-1
- R&TTE Directive	EN 301 489-1/-7, EN 301 511

Ordering information

Order-No. com.tom M-BUS 6.1:	570752
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