

## Datasheet: com.tom RADIO-UMTS 11.1

The com.tom RADIO-UMTS 11.1 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, an Ethernet port 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® Add-On	SC143-LF Embedded Controller 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	1 x RS232, RS485 or RS422 (selectable) with DSUB9 connector
SD card interface	MMC/SD memory card
Digital inputs/outputs	4 channels (input or output). When used as an output the signal can be read back via the input function. inputs: max. 4 x sink 24 V DC, 5 mA (typ.) TRUE: 15 V DC min (nom.) FALSE: 5 V DC max (nom.) outputs: max. 4 x transistor (high side) 24 V DC, 500 mA (max.) short circuit and overload resistant no potential isolation
Analog inputs	4 channels (voltage or current) input type configurable per channel: 0 – 10 V / 4 – 20 mA (+/- 3%) no potential isolation
Analog outputs	2 channels 0 – 10 V, 10 mA (nom)

RTD inputs	2 x resistance thermometers (2-wire), PT100 / PT500 / PT1000 mating connector Weidmüller BL 3.50/20 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. 200 mA (at 24 V DC) + current of digital outputs
Antenna interface	SMA female socket

### Software engineering

Operating System	IPC@CHIP® RTOS Real-time operating system
WEB-PLC editor and runtime	<p>Web based editor running 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"> <li>- Binary: AND, OR, XOR</li> <li>- Bits and Bytes: Extract, Pack, Put Bit, Shift register, Unpack</li> <li>- Controllers: On/Off, P, Shade</li> <li>- Messages: Send, Receive</li> <li>- Numerical: Addition, Subtraction, Multiplication, Division, Minimum, Maximum, Counter, Compare, Signal Limiter, Signal Converter, Signal Smoother, Signal Tracker</li> <li>- Special: First Cycle, OpenVPN, Portal Status</li> <li>- Storage, selection, edge detection: Demultiplexer, Multiplexer, RS Flipflop, T Flipflop, Trigger, State Machines</li> <li>- Timing: Local Clock, UTC Clock, TON, TOFF, TP, Timer, Compare Time, Time Switches</li> </ul> <p>PLC diagram:</p> <ul style="list-style-type: none"> <li>- Up to 256 function units, I/O values, portal variables and constants</li> <li>- IPO cycle time: 25 – 1000 ms</li> </ul>
WEB-PLC additional functions	<p>Event log: System events are logged with timestamp, message and event type</p> <p>Simple Network Time Protocol (SNTP) synchronization of the system clock</p> <p>OpenVPN client: Integrate the com.tom device into a virtual private network</p> <p>DHCP server: Up to 100 clients, up to</p>

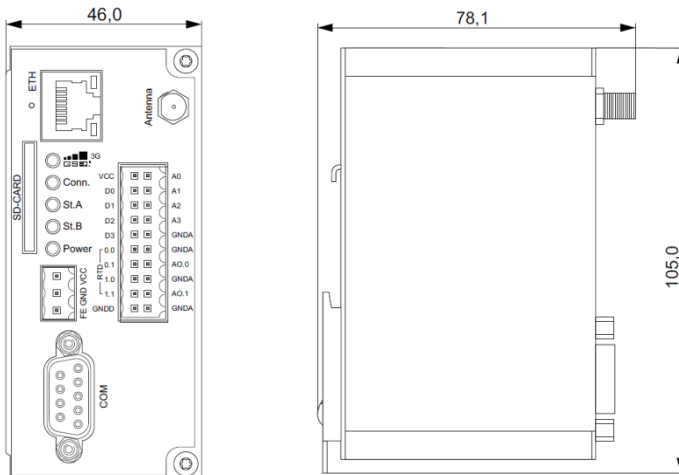
	<p>10 static leases</p> <p>NAT: Route traffic between a local (internal) and a global (external) network, up to 500 mappings, up to 10 static mappings</p> <p>Firewall: Filter incoming traffic, up to 500 rules (including dynamic rules for outgoing traffic), up to 30 static rules</p> <p>Messages: Send and receive short messages (up to 10 templates respectively)</p> <p>Modbus RTU: Master, up to 32 devices and 256 values. Slave, up to 128 values</p> <p>Modbus TCP: Client, up to 32 devices and 256 values. Server, up to 128 values</p> <p>CODESYS network variables: Up to 32 lists and 256 values</p> <p>SNMP manager: Up to 32 agents and 256 values. Trap receiver</p> <p>COM server: According to RFC 2217</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"> <li>- device information</li> <li>- portal round trip times</li> <li>- update url, trigger and status</li> <li>- OpenVPN activation and status</li> <li>- I/O values</li> <li>- portal variables</li> </ul>

## Environmental

Operating temperature (TA)	0°C to +55°C (-20°C to +60°C upon request)
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### Mechanical data

Size (W x L x H)	46 x 105 x 78 mm
Material	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: RI7T56KL1
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 61000-6-3
- Low Voltage Directive	IEC 60950-1
- Protection Rating	IEC 60529: IP20
- R&TTE Directive	EN 301 489-1/-7, EN 301 511

### Order information

com.tom RADIO-UMTS 11.1:	571078
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