

# GoRugged M1000

## Industrial Smart Cellular Modem

### for GSM/GPRS/EDGE Networks

Robustel GoRugged M1000 is a rugged smart cellular modem offering state-of-the-art GSM/GPRS (EDGE optional) connectivity for machine to machine (M2M) applications.

#### Key Features

- Control via AT commands (Hayes 3GPP TS 27.007 and 27.005).
- GPRS, TCP/IP, SMS, CSD access via AT commands.
- RS232/RS485 selectable by software, additional one digital input and one digital output.
- Six LED indicators provide signal strength (RSSI) and status.
- Wide range input voltages from 9 to 36 VDC and wide range operating temperature: -25 to 70 °C.
- The metal enclosure can be mounted on a DIN-rail or on the wall, also with extra ground screw.
- Featured SMS Direct mode which can transparently convert serial data to SMS or vice versa without using AT Commands. Verification of incoming Caller ID is implemented to block unauthorized users.
- Supports Modbus RTU slave protocol, converts alarm to SMS without using AT commands.
- Auto reboot via SMS/Caller ID or during a preset time of a day.
- Remote configuration via SMS.
- Firmware upgrade via serial interface.



#### Applications

Automatic Meter Reading  
PLC Remote Management  
Vending Machine Remote Management  
LED Signage Publication  
POS Connectivity Backup  
Bulk SMS

#### Regulatory and Type Approvals

Approval and Detective: CE 1177, R&TTE, RoHS, WEEE  
EMC: EN 61000-4-2 (ESD) Level 4, EN 61000-4-3 (RS) Level 4  
EN 61000-4-4 (EFT) Level 4, EN 61000-4-5 (Surge) Level 3  
EN 61000-4-6 (CS) Level 3, EN 61000-4-8, EN 61000-4-12

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### Specifications

#### Cellular Interface

- Standards: GSM/GPRS/EDGE
- GPRS: max. 86 kbps (DL & UL), class 10
- EDGE: max. 236.8 kbps (DL & UL), class 12
- Frequency: 850/900/1800/1900 MHz
- CSD: Up to 14.4 kbps
- Output Power: 1 watt GSM1800/1900  
2 watts EGSM 900/GSM 850
- SIM: 1 x (3V & 1.8V)
- Antenna Interface: SMA Female, 50 ohms impedance

#### Serial Interface

- Number of Ports: 1 x DB9 Female
- Serial Standards: RS232 and RS485 selectable by software
- ESD Protection: 15KV
- Parameters: 8N1, 1200bps to 115200bps
- Flow Control: RTS/CTS, XON/XOFF
- RS-232: TxD, RxD, RTS, CTS, GND
- RS-485: Data+ (A), Data- (B), GND

#### Digital Input

- Type: Dry Contact, DI or event counter
- Dry Contact: On: short to GND, Off: open
- Isolation: 3K VDC or 2K Vrms
- Counter Frequency: 900 Hz
- Digital Filtering Time Interval: Software selectable
- Over-voltage Protection: 36 VDC

#### Digital Output

- Type: Sink, DO or pulse output
- Pulse Output Frequency: 1 kHz
- Over-voltage Protection: 40 VDC
- Over-current Protection: 0.5 A
- Isolation: 3K VDC or 2K Vrms

### Selection and Ordering Data

Model No.	Description
M1000-SCS2WA	1-port RS232, GPRS Class 10
M1000-SCS2WB	1-port RS232/RS485, GPRS Class 10
M1000-SC75IA	1-port RS232, GPRS/EDGE Class 12
M1000-SC75IB	1-port RS232/RS485, GPRS/EDGE Class 12

#### System

- LED Indicators: 6 indicators, PWR, RUN, NET and 3 level RSSI
- Real Time Clock: Built-in real time clock with button battery
- Watchdog and Timer: Built-in watchdog and timer

#### Power Supply and Consumption

- Power Supply Interface: 2-pin 5mm pluggable terminal block
- Input Voltage: 9 to 36 VDC
- Power Consumption: Idle: 50-60 mA @ 12 V  
Data Link: 100 to 200 mA (peak) @ 12 V

#### Physical Characteristics

- Housing & Weight: Metal, 300g
- Dimension(L x W x H): 102.4 x 71.4 x 29.4 mm
- Installation: 35mm Din-Rail or wall mounting or desktop

#### Environmental Limits

- Operating Temperature & Humidity: -25 to 70°C, 5 to 95% RH
- Storage Temperature: -40 to 85°C

#### Warranty

- Warranty Period: 1 Year

#### Optional Accessories (can be purchased separately)

- AC/DC Power Supply Adapter
- Rubber SMA Antenna
- 35mm Din-Rail mounting kit or Wall mounting kit
- Serial cable (DB9 Female to DB9 Male)
- DB9 Male to terminal block for serial port and DI/DO

#### Packing List

Robustel M1000 Modem  
Terminal Block for Power Connector  
Document and Software CD



#### Contact:

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