

# GoRugged M1000 2.4G

## Industrial Serial to Wi-Fi/Bluetooth Gateway

### for 2.4GHz Networks

Robustel GoRugged M1000 2.4G is a rugged serial to Wi-Fi/Bluetooth Gateway offering state-of-the-art WiFi(802.11b/g)/Bluetooth 2.1 connectivity for any legacy serial device.

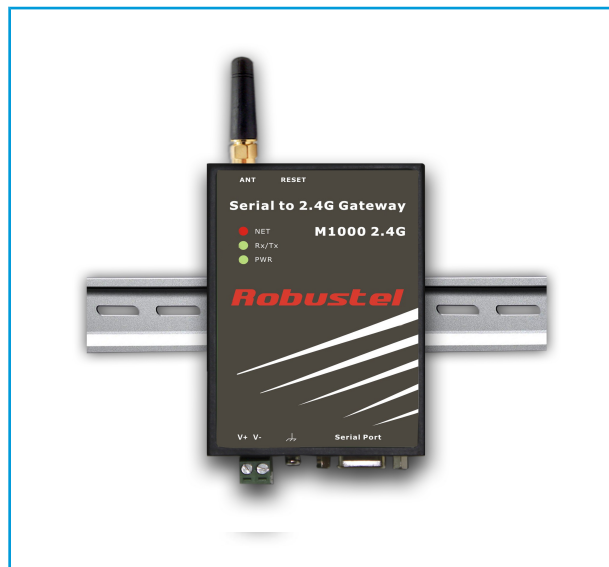
#### Key Features

##### Wi-Fi:

- Ultra low power consumption.
- Built-in TCP/IP stack.
- Firmware configurable transmit power: 0dBm to +12dBm.
- Supports Adhoc and infrastructure networking modes.
- Real-time clock for time-stamping, auto-sleep, and auto-wakeup modes.
- Configuration over serial or wireless interface using simple ASCII commands.
- Over the air firmware upgrade.
- Secure Wi-Fi authentication schemes (WEP/WPA/WPA2).

##### Bluetooth:

- Ultra low power consumption.
- Programmable low power modes.
- Built-in Bluetooth stack: GAP, SDP, RFCOMM, and L2CAP protocols, with SPP and DUN profile support.
- Supports Bluetooth data link to iPhone/iPad/iPod Touch.
- Secure communications, 128 bit encryption.
- Error correction for guaranteed packet delivery.
- UART local and over-the-air RF configuration.
- Auto-discovery/pairing requires no software configuration (instant cable replacement).
- Configuration by AT commands.



#### Applications

Cable Replacement  
Remote Device Monitoring  
Barcode Scanners/Readers

#### Regulatory and Type Approvals

Approval and Detective: RoHS, WEEE

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### Specifications

#### Wi-Fi Interface

- Networking Standards: 802.11 b/g
- Data Rate: 802.11b up to 11 Mbps, 802.11g up to 54 Mbps
- Frequency: 2.412 to 2.484 GHz
- Modulation: 802.11 b: DSSS(CCK-11, CCK-5.5, DQPSK-2, DBPSK-1); 802.11g : OFDM
- Security: WEP, WPA, WPA2
- Protocols: DHCP, DNS, ARP, ICMP, FTP client, HTTP client, TCP, UDP
- Output Power: 0 to +12 dBm
- Transmit Range: Up to 150 meters @ +12 dBm (open area)

#### Bluetooth Interface

- Bluetooth Versions: 2.1 + EDR, 2.0, 1.2, 1.1
- Data Rate: With onboard stack: 300Kbps, HCI mode: 1.5Mbps sustained, 3 Mbps burst
- Frequency: 2.412 to 2.484 GHz
- Modulation: FHSS/GFSK, 79 channels at 1 MHz intervals
- Profiles: SPP, DUN, HID, iAP, HCI, RFCOM, L2CAP, SDP
- Output Power: +4 dBm
- Transmit Range: Up to 100 meters (open area)

#### Antenna Interface

- Antenna Interface: SMA Female, 50 ohms impedance

#### Serial Interface

- Number of Ports: 1 x DB9 Female
- Serial Standards: RS232 or RS485
- ESD Protection: 15KV
- Parameters (Wi-Fi): 8N1, 8N2, 8E1, 8E2, 8O1, 8O2, 2400bps to 115200bps (default: 8N1, 9600bps)
- Parameters (Bluetooth): 8N1, 1200bps to 921Kbps (default: 8N1, 115.2Kbps)
- Flow Control: RTS/CTS, XON/XOFF
- RS-232: TxD, RxD, RTS, CTS, GND
- RS-485: Data+ (A), Data- (B), GND

### Selection and Ordering Data

Model No.	Description
M1000-24WA	1-port RS232, Wi-Fi (no Bluetooth)
M1000-24WB	1-port RS485, Wi-Fi (no Bluetooth)
M1000-24BA	1-port RS232, Bluetooth (no Wi-Fi)
M1000-24BB	1-port RS485, Bluetooth (no Wi-Fi)

### Packing List

Robustel M1000 2.4G Gateway  
Terminal Block for Power Connector  
Document and Software CD

#### System

- LED Indicators: 3 indicators, PWR, NET and Rx/Tx

#### Power Supply and Consumption

- Power Supply Interface: 2-pin 5mm pluggable terminal block
- Input Voltage: 9 to 36 VDC
- Power Consumption:  
**Wi-Fi:** 4uA sleep, 35mA active RX, 180mA TX (at +12dBm)  
**Bluetooth:** Standby/Idle 25 mA, Connected (normal mode) 30 mA, Connected (low power Sniff) 8 mA, Standby/Idle (Deep sleep enabled) 250 uA

#### 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

#### Contact:

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