# 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

### 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

## 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) |

**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

### Packing List

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

**Contact:**