

# Robustel GoRugged M1000 JAVA

## Industrial Smart GPRS Modem for GSM/GPRS Networks



### Overview

- The Robustel GoRugged M1000 JAVA is a rugged smart GPRS modem offering state-of-the-art GSM/GPRS connectivity for machine to machine (M2M) applications.
- Built-in **Java™** open platform environment enabling the user to run the application software directly on the shared resources such as internal microprocessor and memory.
- The modem transmits data and short messages (SMS) over GSM/GPRS mobile networks, also is controlled by firmware through a set of AT commands.
- Built-in software selectable RS232 / RS485 interfaces, with 15 KV ESD serial line protections.  
Six LED indicators provide signal strength (RSSI) and status.
- The modem supports a wide range of input voltages from 9 to 36 VDC and a wide range of temperature from -25 to 70°C.
- The metal enclosure can be mounted on a DIN-rail or on the wall, also with extra ground screw.

## Features

- **Configuration mode** and **Normal mode** selecting by switch
- **Built-in JAVA™ open platform environment**
- Control via AT commands (Hayes 3GPP TS 27.007 and 27.005)
- PPP, TCP/IP stack for GPRS data transfer
- CSD Data Transmission Rate up to 14.4 kbps
- Send / receive SMS via AT commands (Under normal mode)
  - Text and PDU SMS
  - Point to point SMS (MT/MO)
- Auto reboot at preset time of a day
- Firmware upgrade via serial interface

## Specifications

<b>Cellular Interface</b>	Standard	GSM and GPRS (* EDGE optional) GPRS: max. 86 kbps (DL and UL)
	Band Options	Quad-Band 850/900/1800/1900 MHz
	GPRS Multi-slot Class	Class 12
	Mobile Station Class	Class B
	PBCCH	Support
	GPRS Coding Schemes	CS1 to CS4
	CSD Data Transmission Rate	Up to 14.4 kbps
	USSD	Support
	Output Power	1 watt GSM1800/1900, 2 watts EGSM 900/GSM 850
<b>SIM Interface</b>	Number of SIMs	1
	SIM Card Reader	3V, 1.8V
<b>Antenna Interface</b>	Antenna Interface	SMA Female, 50 ohms impedance
<b>Serial Interface</b>	Number of Ports	1
	Interface	DB9 Female
	Serial Standards	RS232 and RS485 selectable by software
	ESD Protection	15KV
<b>Serial Communication Parameters</b>	Data Bits	8
	Stop Bits	1
	Parity	None
	Flow Control	RTS/CTS hardware flow control XON/XOFF software flow control
	Baudrate	Baud rates from 300bps to 115200bps Auto-bauding from 1200 to 115200bps
<b>Serial Signals</b>	RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI, GND
	RS-485	Data+ (A), Data- (B), GND
<b>LED Indicators</b>	LED Indicators	6 LED indicators, PWR, RUN, NET and 3 level RSSI

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<b>RTC</b>	Real Time Clock	Built-in real time clock with button battery
<b>Watchdog</b>	Watchdog and Timer	Built-in watchdog and timer
<b>Switch</b>	Switch	<b>Configuration mode</b> and <b>Normal mode</b> selecting by switch
<b>Power Supply Interface</b>	Power Supply Interface	2-pin 5mm pluggable terminal blocks
<b>Power Requirements</b>	Input Voltage	9 to 36 VDC
	Power Consumption	Idle: 50-60 mA @ 12 V Data Link: 100 to 200 mA (peak) @ 12 V
<b>Physical Characteristics</b>	Housing	Metal
	Weight	300g
	Dimension	Without ears (L x W x H): 102.4 x 71.4 x 29.4 mm With ears (L x W x H): 102.4 x 99.4 x 29.4 mm
	Installation Method	35mm Din-Rail or wall mounting or desktop
<b>Environmental Limits</b>	Operating Temperature	-25 to 70°C
	Storage Temperature	-40 to 85°C
	Operating Humidity	5 to 95% RH
<b>Regulatory and Type Approvals</b>	Directives	RoHS and WEEE compliant
	CE and R&TTE Approval	To be determined
	FCC Approval	To be determined
	PTCRB Approval	To be determined
<b>Warranty</b>	Warranty Period	1 year
* Function is not supported by all the models; please refer to " <a href="#">Selection and Ordering Data</a> " for supported models.		

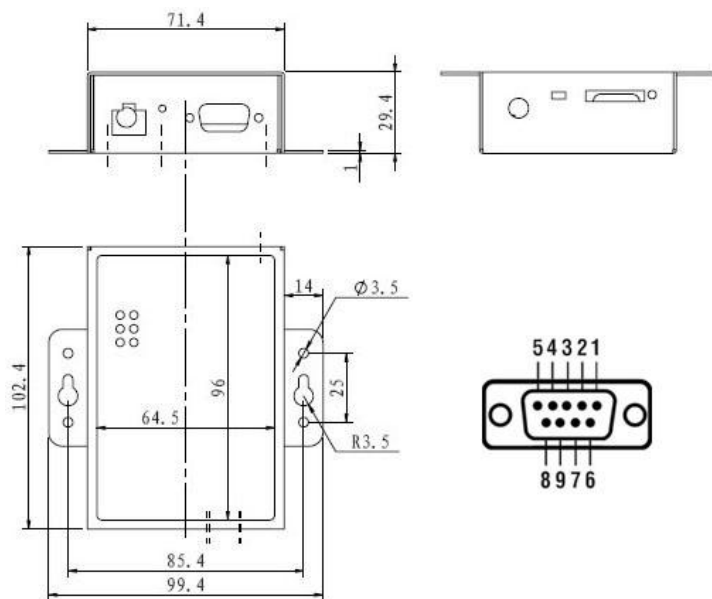
#### Packing List

- Robustel M1000 JAVA modem x1
- SMA antenna (Stubby antenna or Magnet antenna optional) x1
- 2-pin 5mm pluggable terminal block for power connector x1
- CD with user guide and modem configuration utility x1

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

- AC/DC Power Supply Adapter (Input 100 to 240VAC, output 1A @ 12VDC) x1
- 35mm Din-Rail mounting kit x2
- Serial cable for RS232 (DB9 Female to DB9 Male, 1.5 meters) x1

## Dimensions



## PIN Assignment

DB9 Female Connector

PIN	RS232	RS485 (2-wire)
1	DCD	Data- (B)
2	RXD	Data+ (A)
3	TXD	
4	DTR	
5	GND	GND
6	DSR	
7	RTS	
8	CTS	
9	RI	

## Selection and Ordering Data

Model No.	Built-in Module	Networks	RS232	RS485	Built-in TCP/IP and JAVA™
M1000-JC651A	Cinterion TC65i	Quad-Band GSM 850/900/1800/1900 MHz, GPRS Class 12	<b>O</b>	<b>X</b>	<b>O</b>
M1000-JC651B	Cinterion TC65i	Quad-Band GSM 850/900/1800/1900 MHz, GPRS Class 12	<b>O</b>	<b>O</b>	<b>O</b>
<b>O:</b> Supports this feature.		<b>X:</b> Does not support this feature.			

# Robustel

Guangzhou Robustel Technologies Co., Limited

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WEB: <http://www.robustel.com>

E-MAIL: [info@robustel.com](mailto:info@robustel.com)

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