GSM /GPRS Modem   GSM-Q2403

Features

- Dual Band 900 / 1800 MHz for UK Use

- Fax, SMS, Data and Internet

- Integral SIM Card holder

- Wavecom GSM Engine

- Rugged Extruded Aluminium Enclosure

- Compact Form Factor 76 x 54 x 25mm

- RS232 Interface with

- SMA Antenna Connection

- LED Indication of Operation

- Supply Voltage 6-36Vdc

- 3V Simcard

Kit Includes

- GSM Modem

- Antenna

- Power Supply

- RS232 Lead

Description

The GSM-Q2403 Modem is ideal for a wide range of applications. The modem can be used to make circuit switched data calls (CSD), making the unit suitable for remote dial-up systems where a fixed phone line is not available. The SMS functionality enables the sending and receipt of text messages. A common use for this functionality is an SMS server for the automated sending and receipt of bulk text messages.

The modem implements the Wavecom 2403 GSM Engine. This ensures high quality and reliable operation along with compatibility with all standard GSM networks.

The modem is supplied in a rugged extruded aluminium enclosure making it suitable for use in a wide range of industrial and demanding environments. The unit connects directly to a PC or terminal device via the DB-9 RS232 Cable interface. The integral SIM card holder accepts standard SIM cards . The only other connections required are to dc power supply and Antenna .

Part Number	Description
GSM-Q2403	GSM/GPRS Modem
SIMCARD	Please see website for various PAYG / contract

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Key Features

Features	Implementation
Transmission	Data, SMS, Fax
Power supply	Single supply voltage 6V—36Vdc
Current Consumption	Standby ~55mA Working Current 100-140mA
GSM class	Small MS. (GSM07.07 and 07.05)
GPRS	Class 8
Frequency bands	900, 1800
Transmit power	Class 4 (2W) for 900MHz Class 1 (1W) for 1900MHz
Supported SIM card	3V
External antenna	Connected via antenna SMA connector
Max Transmitting Speed	115KB/s
FAX	Group 3: Class 1, Class 2
Serial interface	• RS-232 interface, for AT commands and data • Baud rates from 300bps to 115,200bps
Reset of Terminal	Reset via AT command
Environmental Temperature:	• Working operation: -20°C to +55°C • Humidity: max. 80% relative humidity
Size	76mmx54mmx25mm (Casing Dimension)
Weight	100g (Approx.)

Whats in the Box?

1. GSM Modem Unit
2. Antenna
3. RS232 Cable
4. Power Supply

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Interface description

The GSM Terminal provides the following connectors for power supply, interfacing and antenna:

- 2.1mm DC power connector (centre/inner pin is positive)

- 9-pin (female) D-SUB plug for RS-232 serial interface

- SMA connector for antenna (radio interface)

- SIM card holder

Power Supply

The power supply of the GSM Terminal should be a single voltage source of $V_{in}=6-36V$ providing a peak current of up to 500mA during transmission.

The terminal can be turned on by connecting power. The terminal power supply circuit automatically generates a low pulse signal not less than 100ms in order to wake up the GSM engine.

Each time the terminal is shut down, data will be written from the volatile memory to flash memory. The guaranteed maximum number of write cycles is limited to 100,000.

RS232 Interface

Via RS-232 interface, the host controller controls the TMAS GSM/GPRS Terminal and transports data. The table below shows the pin assignment of RS-232 (D-SUB 9-pin female).

Pin no.	Signal name	I/O	Function
1	/DCD	O	Data Carrier Detected
2	/RXD	O	Receive Data
3	/TXD	I	Transmit Data
4	/DTR	I	Data Terminal Ready
5	GND	-	Ground
6	/DSR	O	Data Set Ready
7	/RTS	I	Request To Send
8	/CTS	O	Clear To Send
9	/RI	O	Ring Indication

The GSM/GPRS Terminal is designed for use as DCE. Based on the conventions for DCE-DTE connection, it communicates with the user application (DTE) using the following signals:

Pin TxD @ application sends data to TxD of GSM/GPRS Terminal

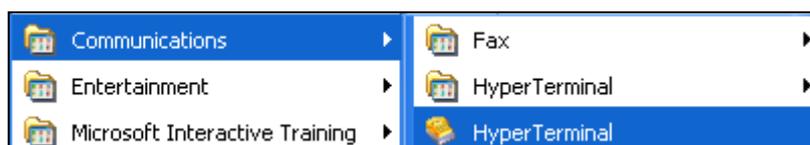Pin RxD @ application receives data from RxD of GSM/GPRS Terminal

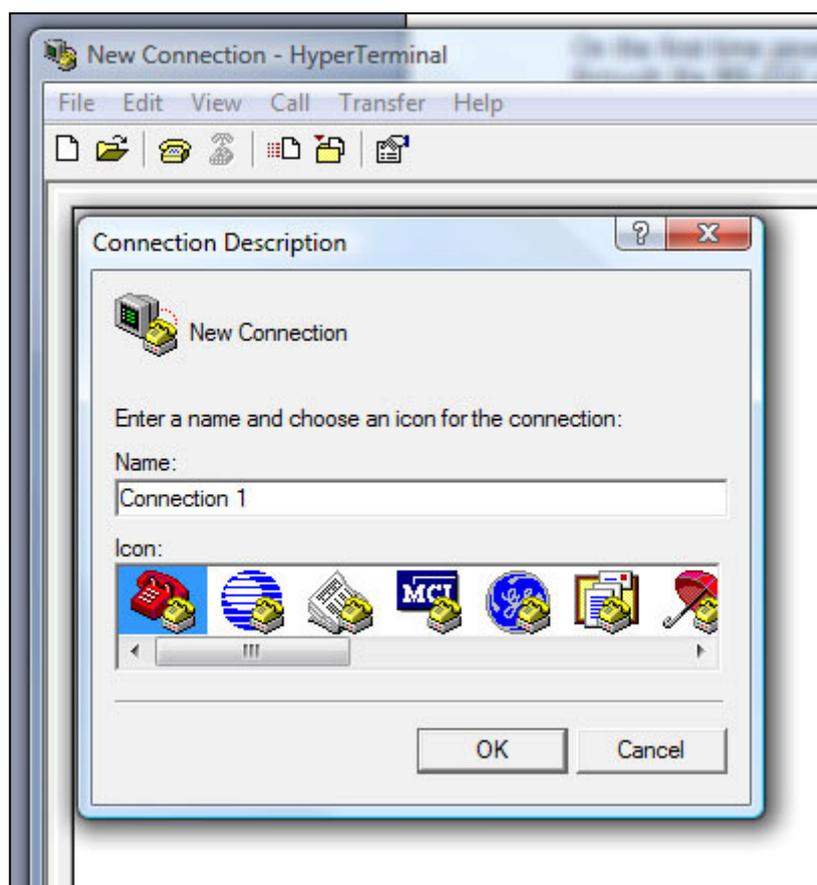## Basic Setup Information

Modem functionality Test

On the first time power-up you can use terminal communications program to communicate with the modem
through the RS-232 serial port. Following example is using the HyperTerminal in Windows XP.
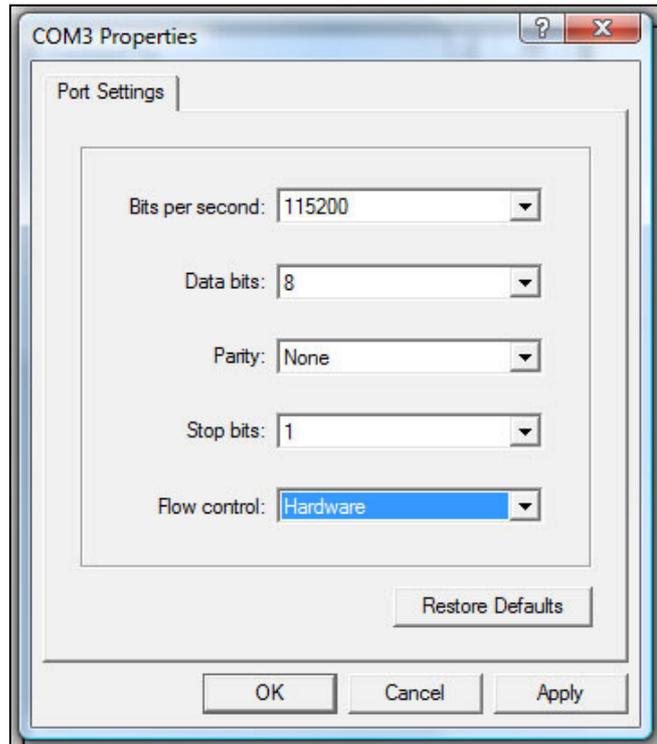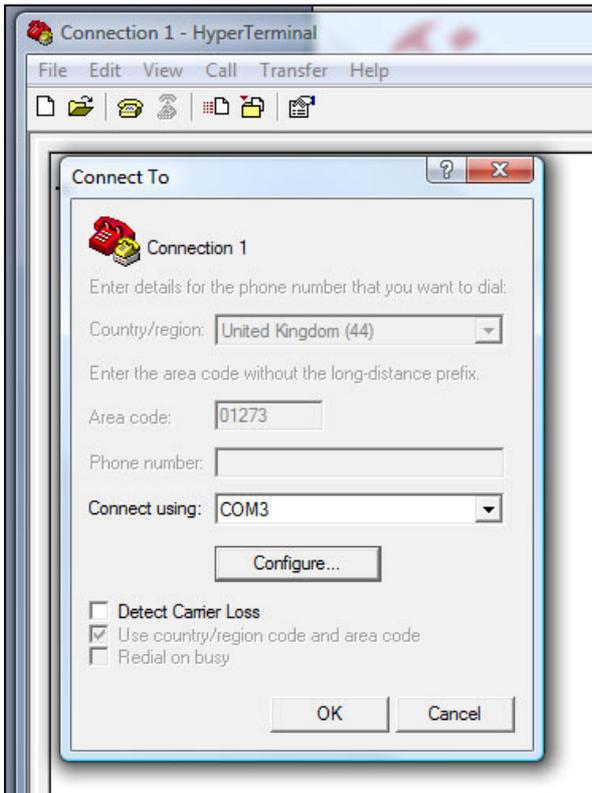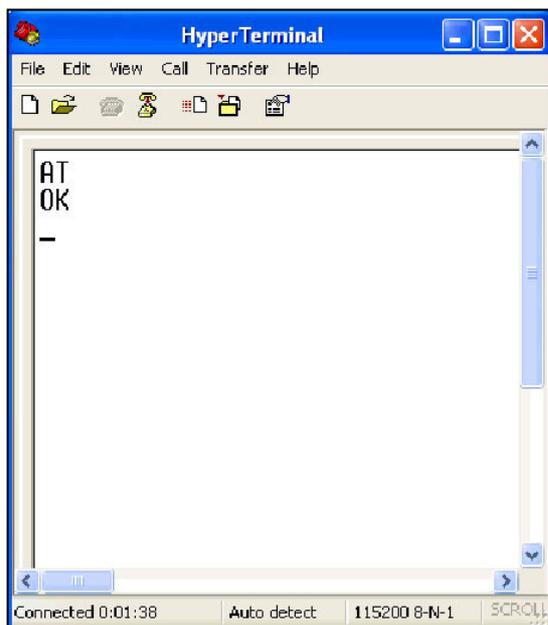
Select Hyperterminal from the Start Menu

Start the HyperTerminal program and assign any name for a new session.

Choose the Com port connected to the modem. The unit features auto bauding so any baud rate from 1.2 to 115.2 Kbps can be used, 8bits, no parity bit, 1 stop bit)

On the terminal screen, type "AT" to check the "OK" response from the modem

Status LED

The LED displays the operating status of the terminal.

The table below summarizes the coding of the red LED status

Operating status	LED
Power Down	Off
Standby (registered to the net)	ON
Talk mode, GPRS data	Blinking

Basic AT Command List

The commands are listed in the document Q2403 AT.pdf

Reader Response

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