



GL865T-DUAL

Hardware User Guide

Rev02 - 07.07.2014





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1 Description

The GL865T-DUAL terminal is a complete encased modem solution which combines the access to digital communication services in GSM and GPRS networks.

GL865T-DUAL is the new generation based on the dual-band and RoHS compliant GL865 core engine incorporating additional and new features.

The GL865T-DUAL featuring the embedded Python™ script interpreter provides the possibility for running customer programs inside the modem, thus making the terminal a complete self-contained application platform for customer solutions. Programmable I/O port, RS232 port and RS485 Port can be used for monitoring external signals, connecting sensors, and switching external devices. The GL865T-DUAL offers jamming detection functionality allowing the unit to sense attempts to disrupt the GSM communication by interference with the GSM signal.

GL865T-DUAL offers extended operating temperature, integrated TCP/IP stack, direct control by standard serial RS-232 interface and with a broad supply voltage range (5-32 VDC - Min1.2A), the GL865T-DUAL terminal is a complete stand alone solution for m2m applications.

GL865T-DUAL, supports Over-the-Air firmware update by means Premium FOTA Management. By embedding RedBend's vCurrent® agent, a proven and battle-tested technology powering hundreds of millions of cellular handsets world-wide is able to update its products by transmitting only a delta file, which represents the difference between one firmware version and another.



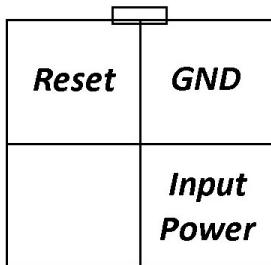
2 General Features

- * Dual-band EGSM 900 / 1800 MHz,
- * Embedded Python Version 1.5.2 ,
- * Serial Debug Port (Also 3.0V Fixed Voltage Output),
- * RS232 interface (DB9-Female),
- * Analog Audio Support (2.5mm jack, Mono-Mic & Mono-Ear),
- * 2 Digital Inputs, 2 Digital Outputs and RS485 Connections on GPIO socket,
- * Dimensions: 85 x 70 x 33 mm,
- * Weight: 140 grams,
- * SMA female, 50 Ohm RF connector,
- * Power Socket (PWR, GND, RST),
- * On board SIM card holder(Push-Push Type),
- * Optional WatchDog Timer with MCU(PIC12F675) controller.



3 Power

Front View



Power Connector

Pin Descriptions:

- * GND: Ground Reference
- * Input Power: 7-35V @ 1.2A min.
- * Reset: Active when Pulls Down to GND

4 Serial Port



Pin out (refers to DTE side):

- Pin 1 = DCD Output
- Pin 2 = RX Output
- Pin 3 = TX Input
- Pin 4 = DTR Input
- Pin 5 = Ground
- Pin 6 = DSR Output
- Pin 7 = RTS Input
- Pin 8 = CTS Output
- Pin 9 = RI Output

The RS-232 port is available through D-TYPE 9 pin connector

The main characteristics are:

- * Baud rate from 300 to 115,200 bits/s
- * Autobauding (300 to 38,400 bits/s)
- * Short circuit (to Ground) protection on all outputs.
- * Input voltage range : -12V to +12V

To connect to a PC a pin to pin, 9 pin cable needed with D type connectors (male & female) on both sides.

5 Digital I/O & RS485

Front View

D-	VIN	Out2_P	Out1_P	Input2_P	Input1_P
D+	GND	Out2_N	Out1_N	Input2_N	Input1_N

I/O Connector

The I/O port is available through 2x6 pin connector

The Main Characteristics are:

- * 2 Digital Inputs (0-220VDC),
- * 2 Digital Open-Collector Outputs,
- * RS485 Connections:

D-, D+, Vin, GND

Note: VIN connected to supply voltage of Terminal.

6 Antenna

ANTENNA REQUIREMENTS	
Frequency range	Standard Dual Band GSM/DCS frequency range or Standard Quad Band GSM/DCS/PCS frequency range if used for all four bands
Bandwidth	70 MHz in GSM850, 80 MHz in GSM & 170 MHz in DCS & 140 MHz PCS band
Gain	Gain < 3dBi
Impedance	50 ohm
Input power	> 2 W peak power
VSWR absolute max	<= 10:1
VSWR recommended	<= 2:1

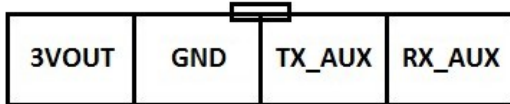
Note:

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.



7 Debug Port

Front View



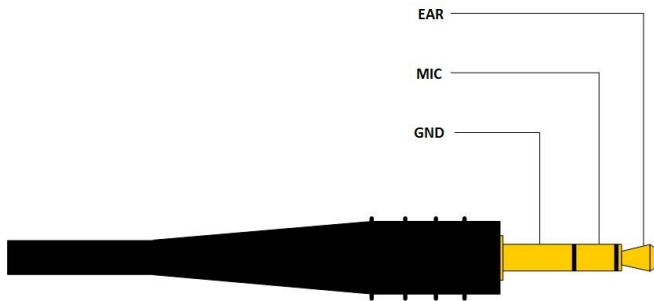
Debug Connector

The Debug port is available through 1x4 pin connector

The Main Characteristics are:

- * 3V Fixed Output,
- * 2.8V Level Second Serial Port (RX_AUX & TX_AUX)

8 Analog Audio



2.5mm Audio Connector

The Main Characteristics are:

- * Headset Connection including MIC and EAR,
- * Compatible with 2.5mm 3 channel receptacle headset jack



Document Change Log

Revision	Date	Changes
Rev02	07.07.2014	RS485 Port Added