

USB-WT12 Data Sheet



Figure 1 - USB-WT12 device

Overview

The USB-WT12 is a bluetooth evaluation kit to provide education on using the Bluetooth interface. When installed, the USB-WT12 adaptor will appear as a virtual Com port.

Parameters

Parameter	Value	Nominal
Baud rate	1200 to 3.0M	115200,8,n,1
Supply	5V (USB Powered)	-
Current (Idle)	5 to 25mA	16mA

Table 1 - Electrical Characteristics

Baud Rate

The baud rate may be set using the SET CONTROL BAUD command. The default baud rate is 115200,8n1.

Operation

Plug the USB-WT12 adaptor into a USB port. Allow windows to automatically install the driver, or download the driver from : <http://www.ftdichip.com/Drivers/VCP.htm>. When the driver has installed, open the Device Manager and determine which COM port number is used by the FT232R USB UART device. Run a terminal program such as the Blue Terminal program (download from www.esdn.com.au), select the COM port, and set the baud rate as 115200 with no hardware control. Type RESET or SET to check the module is working.



Bluetooth Commands

Press Enter after all commands.

Command	Description
RESET	Resets the module and shows power up message including iWrap version.
SET	Displays all current parameters
INQUIRY 5	Sends out an inquiry to discover all Bluetooth devices within range, and displays MAC addresses of all devices found
INQUIRY 5 NAME	Same as above, but also displays device name such as "Nokia 6230"
CALL <MAC:ADDR> 1101 RFCOMM	Connect to another Bluetooth device using the serial port profile

Table 2 - Bluetooth Commands

Examples

User entered text is shown as ***bold italics***.

RESET [ENTER]

WRAP THOR AI (5.0.1 build 620)

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READY.

SET [ENTER]

SET

SET BT BDADDR 00:07:80:5e:65:c1

SET BT NAME WT12-A

SET BT CLASS 001f00

SET BT IDENT BT:47 f000 5.0.1 Bluegiga iWRAP

SET BT LAP 9e8b33

SET BT PAGEMODE 4 2000 1

SET BT POWER 3 3 3

SET BT ROLE 0 f 7d00

SET BT SNIFF 0 20 1 8

SET BT SSP 3 0

SET BT MTU 667

SET CONTROL BAUD 115200,8n1

SET CONTROL CD 00 0

SET CONTROL ECHO 7

SET CONTROL ESCAPE 43 00 1

SET CONTROL GAIN 0 5

SET CONTROL MSC DTE 00 00 00 00 00 00

SET CONTROL PIO 00 00

SET CONTROL READY 00

SET PROFILE SPP Bluetooth Serial Port

SET



INQUIRY 5 NAME [ENTER]

INQUIRY_PARTIAL 00:07:80:66:90:6d 001f00

INQUIRY 1

INQUIRY 00:07:80:66:90:6d 001f00

NAME 00:07:80:66:90:6d "WT41-A" // There is a WT41 within range for connecting to

CALL 00:07:80:81:4d:2c 1101 RFCOMM [ENTER]

CALL 0

CONNECT 0 RFCOMM 1

Reset Switch

The USB-WT12 module has an internal hardware reset switch. Pressing this switch is equivalent to sending RESET through the serial port. The USB-WT12 adaptor will respond with the text string below:

WRAP THOR AI (5.0.1 build 620)

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READY.

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READY.

Connectors

Two connectors are provided to connect external devices to the USB-WT12 device. Programmable Digital I/O Lines PIO3-7 are available on both connectors. PIO2 is available through a 220R resistor (R56) since this line may be used to power the 3.3V rail through a 1.8V zener diode (D51). The P53 connector has been designed to be used with Arduino development boards. If power is removed from the USB interface, the USB interface is held in reset, and an Arduino device may power the USB-WT12 module and communicate via the TTL serial port.

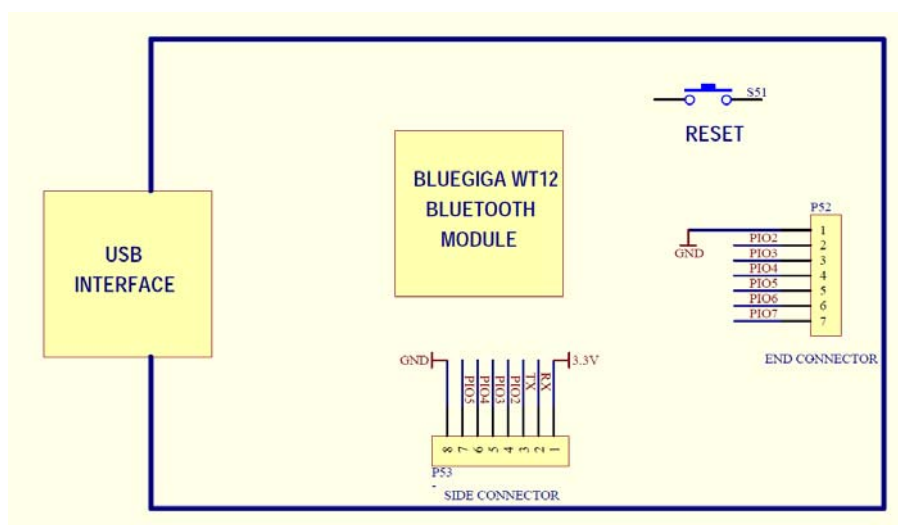


Figure 2 – Expansion Connectors

Schematic

