

ELLIXBLUE USER MANUAL

(VER1.00 - 2013.05.23)



1. Features
2. Specifications
3. Default Settings (Factory Settings)
4. Parts
5. LED Status
6. Product Component
7. Device Configuration
8. How to install
9. FCC compliance Information



1. Features

- Using Class 1(100m) Bluetooth Module, transmit power has been enhanced in the data communication.
- The Devices are pairing in the factory stage. It can be used without any additional settings. (In the case of Master/Slave Set purchase)
- Easy Installation, easy maintenance, handy settings with setting utility programs
- For RS-232C Communication, the Bluetooth Dongles support two type connectors (DSUB9 FEMALE/MALE)
- Interface card type is also available. It can be installed in the ELLIX printer.
- If the host device has no RS-232 port. USB communication can be used. It uses Virtual COM profile.
- Bluetooth communication status can be easily identified by the status LEDs of the top side.

2. Specifications

Item	Specification
Model Name	① BT-DG_F (DSUB9 FEMALE) ② BT-DG_M (DSUB9 MALE) ③ BT-IF (INTERFACE CARD)
Bluetooth Version	V2.0+EDR certification
Frequency	2,400 to 2,4835 GHz
Tx. power	Up to 18dBm(CLASS1)
Rx. sensitivity	-88 dBm typical
Coverage	Up to 100 Meters(Open space)
Antenna	Dongle type : Chip antenna (Gain: Max 1.5dBi) Interface card type : Cable antenna (Gain: Max 2.0dBi)
Power Supply	DC5V 80mA <ul style="list-style-type: none"> • USB : USB BUS POWER • RS-232C: DSUB9 Pin9 • DC 5V Adapter
Profile	SPP (Serial Port Profile)
Interface Support	RS-232C USB V1.1 (Virtual Com Profile)
Flow Control	RTS / CTS
Baud Rate	1.2/2.4/4.8/9.6/19.2/38.4/57.6/115.2 Kbps

3. Default Settings (Factory Settings)

- Baud rate: 115200bps
- Parity: None
- Flow control: Enable
- Stop bits: One

4. Parts

1) Dongle type



- ① DSUB9 Female or Male connector
 - It connected to the serial port of Host or Slave Device.
 - Used for data communication or configuration.
- ② Status LED
 - Power/Link status/Data transceive status displayed.
- ③ Mini USB Port
 - While connecting to PC/POS, It operates of virtual com port. It is used to change the settings. Also it can be used for power supply.

2) Interface card type



- ① Status LED
 - Power/Link Status/Data transceive status displayed
- ② Mini USB Port
 - While connecting to PC/POS, It operates of virtual com port. It is used to change the settings
- ③ Antenna connector
 - Cable Antenna can be mounted
- ④ I/F Connector

5. LED Status




Status	Description
All LED blink three times	Device boot OK
Data LED on	Transmitting / Receiving data
Power LED on	Power OK
Link LED off	No pairing established
Link LED fast (0.1 sec) blinking	Pairing (slave or master mode)
Link LED fast (0.3 sec) blinking	Discoverable and waiting for aconnection (slave mode)
Link LED slow (0.9 sec) blinking	Inquiring (master mode)
Link LED very slow (1.2 sec) blinking	Connecting (master mode)
Link LED steadily on	Connection established

6. Product Component



1) Software

- ELLIXBLUE Configuration Tool (Include Virtual com port driver)

2) Bluetooth Device

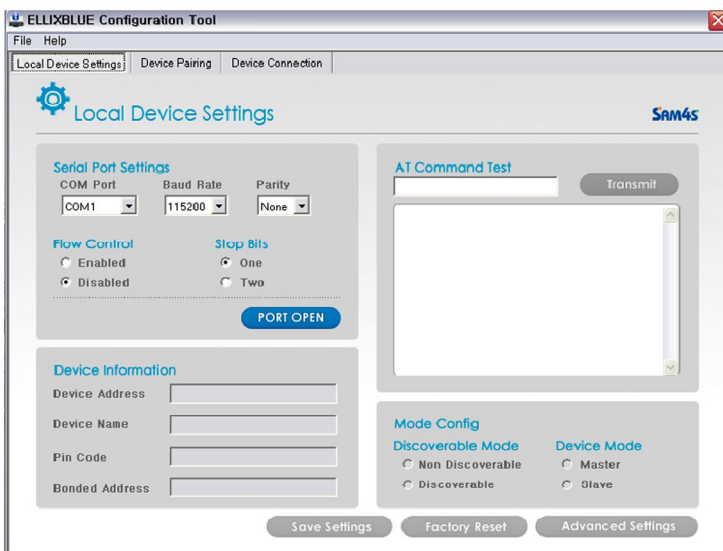
Item	Specification	Specification
		
Master Side (ex : POS, PC, ECR, various terminal device)	Slave Side (ex : PRINTER)	ELLIX PRINTER INTERFACE CARDTYPE

3) Optional peripherals

Item	Specification
	
<p>Connected to mini USB port, used for Device settings, Data Communication/power supply</p>	<p>Gender Connector For 25pin serial port</p>

7. Device Configuration

1) ELLIXBLUE Configuration Tool

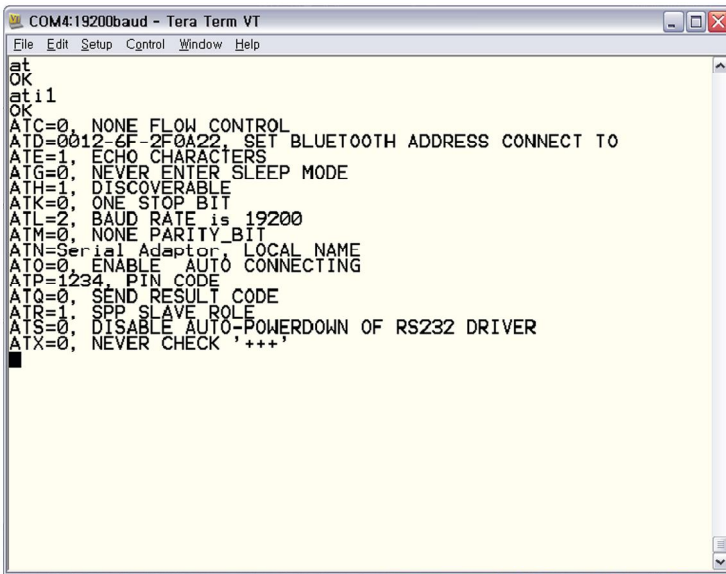


- ① Make the Bluetooth device a connection to PC/POS on which ELLIXBLUE Configuration Tool is installed.
- ② Run ELLIXBLUE Configuration Tool, Select Serial port settings, and click PORT OPEN button.
- ③ If port successfully opens, existing device information will be displayed. (In port open fail case, change the serial port settings and retry.)
- ④ After settings are modified, click Save Settings Button to apply changes

※ For the more details about ELLIXBLUE Configuration Tool, refer to the annex manual. (Include Virtual Com Driver Installation)

※ When Purchased as a Master/Slave Bluetooth Set, there's no need to additional pairing setup. (those are already paired.)

2) HyperTerminal



```

COM4:19200baud - Tera Term VT
File Edit Setup Control Window Help
at
OK
at+1
OK
ATC=0, NONE FLOW CONTROL
ATD=0012 CF 2FOA22 SET BLUETOOTH ADDRESS CONNECT TO
ATE=1, ECHO CHARACTERS
ATG=0, NEVER ENTER SLEEP MODE
ATH=1, DISCOVERABLE
ATK=0, ONE STOP BIT
ATL=2, BAUD RATE is 19200
ATM=0, NONE PARITY BIT
ATN=Serial Adaptor, LOCAL NAME
ATO=0, ENABLE AUTO CONNECTING
ATP=1234, PIN CODE
ATQ=0, SEND RESULT CODE
ATR=1, SPP SLAVE ROLE
ATS=0, DISABLE AUTO-POWERDOWN OF RS232 DRIVER
ATX=0, NEVER CHECK '+++'
    
```

- ① Make a Bluetooth device connect to PC/POS on which HyperTerminal is installed.
- ② Run HyperTerminal and open port with serial setting value of Bluetooth.
- ③ Press Enter Key after typing "AT", and it will show "OK" in the case of Normal connection.
(On the other case, retry after change serial settings appropriately.)
- ④ Change the Bluetooth device settings by using AT COMMAND.

※ Please refer to AT-COMMAND SET MANUAL about AT Command

8. How to install

1) Installing on the SLAVE device (such as a printer)

STEP1.

Make the DSUB9 male type Bluetooth device(BT-DG_M) a connection to Serial port of Printer.

If the printer have a DSUB25 pin serial interface, use DSUB9(F) to DSUB25(M) Gender.

STEP2.

When the printer is turn on, make sure whether the power supplies on the Bluetooth, if the printer does not supply power to the Bluetooth, go to step 3.

(In the case of the latest version of ELLIX PRINTER, the power from serial port can be turned on and off by using shunt.)

STEP3.

If there is no power supply from serial port, make the power adapter (+5V) a connection to the Mini USB port. It will supply the power to the Bluetooth.

(For ELLIX30/40, after latest F/W upgrade, if the printer's USB port and Bluetooth's mini USB port are connected with cable, the printer supplies power to the Bluetooth device.)

2) Installing on the HOST device (such as PC/POS/ECR)

STEP1.

Make the DSUB9 female type Bluetooth device(BT-DG_M) a connection to Serial port of the HOST. if there is no serial port on HOST, connect by USB , then It operates of virtual com port.

STEP2.

If there is no power supply from serial port, make the power adapter (+5V) a connection to the Mini USB port.

9. FCC compliance Information

This device complies with Part 15 of the FCC Rules and Industry Canada License-exempt RSS standard(s).

Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation of the device

CAUTION : Any Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Mobile Device RF Exposure Statement

RF Exposure – This device is only authorized for use in a mobile application. At least 20 cm of separation distance between the transmitting antenna device and the user's body must be maintained at all times.

Information to the user

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.