This product may be used as a component in many types of systems allowing them to communicate wirelessly with other products such as PC-cards, laptops, handheld computers, mobile phones etc.

SPECIFICATIONS

Baud Rate:
Up to 115.2kbps (Recommend above 2.4kbps)
Supports 1.2/2.4/4.8/9.6/19.2/38.4/57.6/115.2kbps

Coverage:
Up to 100 M

Connection:
Point-to-Point

Signal:
DCD, TxD, RxD, GND, CTS/DSR1, DTR, RTS

RS-232 Interface:
D-SUB 9 Pin Female

Standard:
Bluetooth Specification Version 1.1

Frequency:
2.400~ 2.4835 GHz

Hopping:
1600/Sec, 1 MHz Channel Space

Modulation:
GFSK, 1 Mbps, 0.5 BT Gaussian

Tx. Power:
Max 20 /Typical 16 dBm (Class 1)

Rx. Sensitivity:
-84 dBm

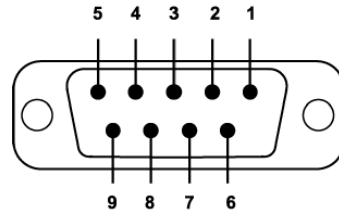Antenna Interface:
SMA Female

Antenna Gain Power:
Max 2 dbi

Power Supply:
+5 ~ +12 Vdc

Current Consumption:
Max 110 Ma

RS-232 INTERFACE

Signals

Pin#	Signal	Direction	Description
1	DCD	Output	Data Carrier Detect
2	TxD	Output	Transmitted Data
3	RxD	Input	Received Data
4	DSR	N/A(input)	Option: Data Set Ready
5	GND	N/A	Sign Ground
6	DIR	Output	Data Terminal Ready
7	CTS	Input	Clear to Send
8	RIS	Output	Request to Send
9	Vcc	Input	Power Supply

FACTORY SETTINGS

The following is the factory settings of COM port. You can change the factory settings of the COM port with commands. In this case, you have to remember the changed factory settings.
Baud rate: 9600 bps
Data Bit: 8 bit
Parity Bit: No parity
Stop Bit: 1 stop bit
Flow control: None
The default hardware configuration is for using CTS.

STATUS LED

There are two LED's
OPR (Red): When supplied with power, it is turned on or flashing.
LNK (Green): When a wireless link is on, it is on. If in the configuration mode, it will be flashing every second.

RESET BUTTON

The Reset button has the following functions.
Enter/Exit the configuration mode
Restore the factory settings
Disconnect and reconnect a wireless connection

ENTERING THE CONFIGURATION MODE

When the LNK LED is OFF, push the RST button. When the LNK LED is ON, you have to push the RST button twice to enter the configuration mode. If you enter the configuration mode successfully, LNK LED will flash every second. And the COM port will be restored to the factory settings.

EXITING THE CONFIGURATION MODE

You can have two options to exit the configuration mode.
Exit the configuration mode by software: Type "X"
Exit the configuration mode by the RST button: Push the RST button.

RE-CONNECTION

When the LNK LED is on, you can push the RST button to disconnect and reconnect a wireless link.

If you push the RST button, the COM port of HPS-120 will be stored the factory settings.

POWER SUPPLY

You can supply power to the HPS-120 as follows:
Use an AC/DC converter (Output Power: +5 ~ +12 Vdc / 300 mA)
Use a USB cable
Supply power via the 9th pin of the D-Sub 9-pin connector

INSTALLATION

1. Attached the antennae
2. Plug the unit into the COM port(s)
3. Power on
4. Adjust configuration (if necessary)

USAGE

You can change the configuration using Hyper Terminal.
Hyper Terminal Settings-
Baud Rate: 9600 bps / Data Bit: 8 / Parity Bit: None / Stop Bit: 1 / Flow Control: None / Emulation: VT100

STARTING CONFIRGURATION

1. Plug into a COM port on the PC
2. Power on the PC
3. Open Hyper Terminatl and set it up.
4. Push the RST button. If you enter the configuration mode successfully, the LNK LED will be flashing.
5. Press the <Enter> key, 5 seconds later.
6. Change the configuration with commands, if necessary.

COMMANDS AND USAGE REVIEW

If you are in the configuration mode, type "?<ENTER>" for a listing of commands. If you want to know the usage of a command, type "?[command]<ENTER>" All commands and parameters are case sensitive. Do not use the <Backspace> key.

AFTER CONFIGURATION

After finishing the configuration, you have to execute a command "X" to apply the changes.

Item	Syntax	Description	Remarks
1. Connecting address	AAddr<CR>	Set a remote device address for a wireless connection.	A local and remote BD_ADDR always need to be difference.
2. Baud rate	BBR[D]<CR>	Change the baud rate. D (option): Change a factory setting[2].	Baud Rate (BR) - 0: 1200, 1: 2400, 2: 4800, 3: 9600, 4: 19200, 5: 38400, 6: 57600, 7: 115200
3. COM port	CCOMPort<CR>	Change a request serial port.	COMPort: '1' ~ '7' Only valid in connection mode 2.
4. PIN code	EPIN<CR>	Authentication Off: hit <Enter> Authentication On: Type up to 11 characters	Paired adapters should have a same PIN code.
5. Flow control	FFC[D]<CR>	Set the Flow control. D (option): Change a factory setting[3].	FC - 0: None 1: Hardware[4] 2: DTR/DSR[5]
6. Search timer	GTO<CR>	Set a search timeout. TO (timeout): ASCII '0' ~ "999"	Connection mode 3 only. Default: 10 sec.
7. Max number of search	HNO<CR>	Set the max number of search. NO: ASCII '0' ~ "999"	Connection mode 3 only. Default: 10
8. Search device	ITO,NO[L]<CR>	Execute searching devices. TO: ASCII '0' ~ "999" NO: ASCII '0' ~ "999" L (option): Display a long form.	Connection mode 3 only. ',': ASCII 0x2C
9. Discovery mode	JE/D<CR>	Set the discovery mode. 'E': Enable 'D': Disable	Connection mode 1 only. Default: Enable
10. Low Power Mode	KE/D<CR>	Set the low power mode. 'E': Enable 'D': Disable	Default: Disable

Item	Syntax	Description	Remarks
11. Connection mode	MMode<CR>[1]	Set a connection mode. Mode: '0' – '3' Mode 0 & 2: Required a remote address. Mode 2: Required a serial port.	0: 1:1 Mode 1: WAIT Mode 2: REGISTER and CONNECT Mode 3: WAIT Command Mode
12. Friendly name	NName<CR>	Set a friendly name up to 11 characters.	
13. Parity Bit	PPA[D][2]<CR>	Set the parity bit. D (option): Change a factory setting[3].	0: None, 1: Odd 2: Even
14. Connection Timeout	QTO<CR>	Set the connection timeout. TO: ASCII '0' ~ "999"	Connection mode 3 only. Default: 10 sec.
15. Stop Bit	SST[D]<CR>	Set the stop bit. D (option): Change a factory setting[4].	0: 1 Stop, 1: 2 Stop
16. Connect	TAddr[,TO]<CR>	Try to make a connection. Addr: a remote address TO (option): ASCII '0' ~ "999"	Connection mode 3 only. ',': ASCII 0x2C Default Timeout: 10 sec.
17. Cancel	U	Cancel a command.	Connection mode 3 only.
18. View	V	Display the device information	You can find out a software version.
19. CoD	WCoD<CR>	Set the class of device. CoD: 6-Hex in ASCII	Default: "001F00"
20. Exit	X	Apply changes.	Rebooting
21. Status	Z	Display the status of state machine.	'S': Idle / 'P': Pairing / 'C': Connecting / 'A': RF on / 'I': Inquiring
22. Usage	?[C]<CR>	Display the command list or usage. C: Command	AT+Z?<CR>: Command list AT+Z?A<CR>: Usage of 'A'

[1] If you push the RST button, the COM port will be stored the factory settings.
[2] If you change a factory setting for baud rate, you have to remember it.
[3] If you change a factory setting for flow control, you have to remember it.
[4] This is a flow control (will not be passed it over the air).
[5] This is a flow control (will be passed it over the air).

[1] <CR>: Carriage Return (0x0D)
[2] [ ]: An optional parameter.
[3] If you change a factory setting for parity bit, you have to remember it.
[4] If you change a factory setting for stop bit, you have to remember it.