

Bluetooth RS-422 Adapter with Internal Chip Antenna, Class 1 ACT-BT5702B



Features:

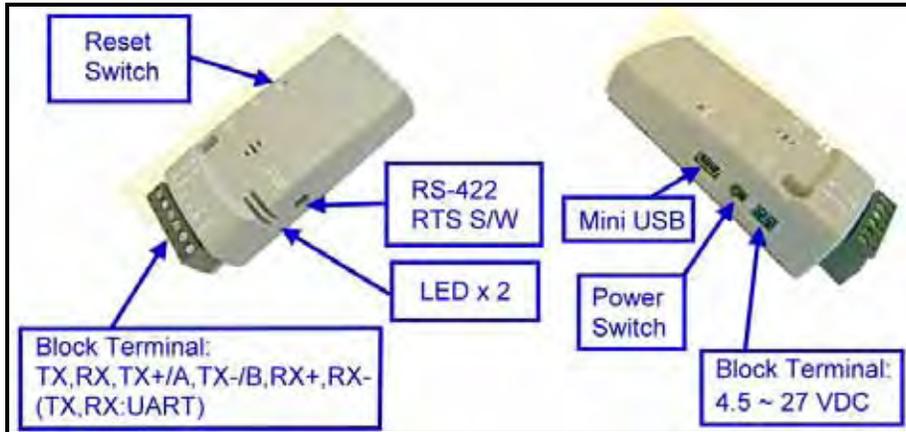
- Bluetooth V2.0 Class 1, SPP profile
- Support 4.5~27 VDC Power input
- Configure RS-232 parameters via COM port
- Internal Chip Antenna

Specifications:

Specification	Description
Baud Rate	Supports 1.2/2.4/4.8/9.6/19.2/38.4/57.6/115.2/230.4 Kbps
Coverage	Up to 100 M
Connection	Point-to-point (pico net)
Signal	RS-422(TX+/A,TX-/B,RX+,RX-) TxD, RxD, GND, CTS/RTS
RS-422 Interface	Block Terminal
Standard	Bluetooth specification version 2.1+EDR
Profiles	Serial Port Profile
Data Bit	8 bit
Frequency	2.400 to 2.4835 GHz
Hopping	1,600/sec, 1MHz channel space
Modulation	GFSK-1 Mbps, DQPSK-2 Mbps, and 8-DPSK-3 Mbps
Tx. Power	Max. 18 dBm (Class 1)
Rx. Sensitivity	-86 dBm typical
Antenna	Internal chip antenna
Antenna Gain	2 dBi
Power Supply	+4.5 to +27 V DC
Current Consumption	Max. 90 mA
Operation Temperature	-20°C to +75°C
Dimensions	80 x 40 x 18 mm

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Product Profile:



1. Setup Command set (Please type in all capital letter or all lowercase letter)

Command	Value	Description
<<<		Change the local adapter from data mode into command mode. The command will be unavailable if the data pass through within 1 second after set the command.
<<<		Switch the data mode to the command. The time interval between each character will be more than the time: [500ms] "<" [500ms] "<" [500ms] "<" [1500ms]
<<<=	?	Inquire the current setting.
(Default)	Y	Turn on the "<<<" command
	N	Turn off the "<<<" command
>>>		Change the remote adapter from the data mode into command mode from the local adapter in connecting status. The command is available after 500 ms when data transferring finished.
>>>		Switch the remote adapter from the data mode to the command. The time interval between each character will be more than the time: [1 sec] "<" [1 sec] "<" [1 sec] "<" [2 sec]
>>>=	?	Inquire the setting status of the ">>>" command.
(Default)	Y	Turn on the ">>>" command
	N	Turn off the ">>>" command
ADDRESS=		This command is used to display the Bluetooth address of the local adaptor.
	?	Inquire the Bluetooth address of the local adaptor.
AT		Check the connection status between control terminal and the RS-232 adaptor. Response: "OK" when the connection is ok. Response: "ERROR" when the connection is not ok.
AT		Test the RS-232 status when first connect the adaptor with the controller.
AUTO=		This command is used to enable/disable auto-connection feature. It is available only when the adaptor is in the master role. The command is available when DIP=N. The system will not re-start after change.
	Y	The Master role adaptor will connect the latest paired Bluetooth device automatically.

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(Default)	N	The user will connect the Bluetooth device manually.
	?	Inquire the current setting.
BAUD=		Specify the baud rate of COM port. The command needs 200 ms delay.
	1200	1200 bps
	2400	2400 bps
	4800	4800 bps
	9600	9600 bps
(Default)	19200	19200 bps
	38400	38400 bps
	57600	57600 bps
	115200	115200 bps
	230400	230400 bps
	460800	460800 bps
	921600	921600 bps
	R	Restore the default settings. (Baud rate =19200 bps)
	?	Inquire the current baud rate.
CONNECT=		Establish a connection manually. It is available only when the adaptor is in the master role.
	DEVICE	Connect the adaptor to a specified Bluetooth device manually. It is available only when "DEVICE=xxxxxxxxxxx" is executed.
	1~8	Connect the adaptor to a Bluetooth device in the neighborhood found through "SEARCH=?"
	xxxxxxxxxxx	Connect the remote adapter by type the MAC address directly without searching.
	?	Display the MAC address of the latest paired device.
	Y	Recover the latest connection in the command mode.
	N	Disconnect the two adapters in the command mode.
	P	Connect the previous connected adapter.
DEFAULT=		Restore the default settings and originate a warm start.
	Y	Restore the default settings (e.g. 19200 bps). The command will re-start the system for 1 second.
DETECT=		Detect the voltage of the power supply and set the alert value of low power.
(Default)	N	Disable the voltage detection
	Y	Enable the voltage detection
	R	Restore the default value (3.5 Volt)
	x.x	Setup the range of voltage detection from 3.0 to 3.7 Volt. The "x" indicates the number.
	?	Inquire the setting status
DEVICE=		For security purpose, this command is used to specify a unique remote Bluetooth serial adaptor to be connected. In the master role, the adaptor pairs and connects with the designated remote slave address. If the adaptor is in the slave mode, this command is a filter condition to accept the inquiry of the master device.
	xxxxxxxxxxx	"xxxxxxxxxxx" is a string of 12 hexadecimal digits.
	R	Restore the status in which the adaptor can connect with any remote

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		address.
	?	Inquiry the designated address that can be paired and connected.
DFU=		Device Firmware Upgrade
	Y	
DIP=		Set the DIP switch function.
	?	Inquire the setting status of the DIP switch function.
	Y	Turn on the function of the DIP switch. The "ROLE" and "AUTO" command are not available to set the "Master" or "Slave".
(Default)	N	Turn off the function of the DIP switch. The "ROLE" and "AUTO" command are available when the DIP=N.
DISCOVER=		Specify whether the adaptor can be discovered or connected by remote devices. This command is available only when the adaptor is in the slave role.
	N	The adaptor enters the undiscoverable mode. If a pair has been made, the original connection can be resumed. But any other remote master device cannot discover this adaptor.
(Default)	Y	The adaptor enters the discoverable mode.
	?	Inquire the current setting.
ECHO=		Specify whether the adaptor echoes characters received from the UART back to the DTE/DCE.
	N	Command characters received from the UART are not echoed back to the DTE/DCE.
(Default)	Y	Command characters received from the UART are echoed back to the DTE/DCE.
	?	Inquire the current setting.
FLOW=		Enables or disables flow control signals (CTS/RTS) of the UART port. Note, the setting is not affected by DEFAULT. The command needs 1 second delay.
(Default)	N	Disable flow control.
	Y	Enable flow control.
	?	Inquire the current setting
NAME=		Specify a name for the adaptor. You can specify a friendly name using 0 to 9, A to Z, a to z, space and -, which are all valid characters. Note that "first space or -, last space or - isn't permitted". The default name is "Serial Adaptor".
(Default)	Serial Adaptor	Default device name
	xx...xx	"xx...xx" is a character string with the length from 2 to 30.
	R	Restore the default settings name="Serial Adaptor".
	?	Inquire the name of the local adaptor.
PARITY=		Specify parity bit setting of COM port. The command needs 200 ms delay.
(Default)	N	None parity bit
	O	Odd parity
	E	Even parity
	?	Inquire the current setting.
PIN=		Used to specify PIN. Default is "1234". PIN code could include number and English characters. But the length should not be less than 4 or greater than

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		16 digits. Paired adaptors should have the same PIN.
(Default)	1234	
	xx....xx	“xx....xx” is a 4~16 digit string or English character (in capital or lower case)
	N	Cancel authentication by PIN.
	R	Restore the default settings PIN=“1234”.
	?	Inquire the current PIN.
PROMPT=		Decide whether result messages are prompted when Setup commands are executed. The result messages are: OK/ERROR for command execution, or CONNECT/DISCONNECT/Try Connect Device for connection status.
(Default)	Y	Prompt result messages.
	N	Not prompt result messages.
	?	Inquire the current setting.
RECONNECT =		Re-connect the lost link for the Master adaptor.
	?	Inquire the current setting.
	Y	Re-connect is Enabled.
(Default)	N	Re-connect is disabled.
ROLE=		Specify whether the adaptor is in the master or slave role. If the device role is changed, the adaptor will reboot and all paired addresses will be cleared. The command is available when the adaptor is in DIP=N status. The command needs 1 second delay.
	M	Set the adaptor to the master role.
(Default)	S	Set the adaptor to the slave role.
	?	Inquire the current role of the adaptor.
RSSI=		Received signal strength indication
	?	Display the Received signal strength indication in command mode when connected. 1. Strong: RSSI>-9; 2. Medium: -9>RSSI>-20; 3. Weak: RSSI<-20
SEARCH=		Search for any Bluetooth device in the neighborhood within one minute. If any device is found, its name and 12-digit-address will be listed. The search ends with a message “Inquiry ends. xx device(s) found.” This command is available only when the adaptor is in the master role by manual.
	?	Inquire Bluetooth devices in the neighborhood, listing 8 devices maximum.
STATUS=		Inquire all the current setting of the adapter.
	T	Inquire the inner temperature of the IC in centigrade.
	?	Display the current setting of the adapter.
STOP=		Specify one or two stop bits of COM port. The command needs 200ms delay.
(Default)	1	One stop bit.
	2	Two stop bits.
	?	Inquire the current setting.
VERSION=		Inquiry the firmware version.
	?	Inquire the version codes.

Remark: Customization on these commands is allowed.

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2. Command Unavailable Conditions

No	Command	Conditions which command is not available
1	ROLE=S	SEARCH=? , CONNECT=?, CONNECT=P , CONNECT=xxxxxxxxxxxx , CONNECT=DEVICE
2	AUTO=Y	SEARCH=? , CONNECT=? , CONNECT=P , CONNECT=xxxxxxxxxxxx , CONNECT=DEVICE
3	DIP=Y	ROLE=M, ROLE=S , AUTO=Y , AUTO=N ,DISCOVER=Y,DISCOVER=N
4	<<<	SEARCH=? , CONNECT=? , CONNECT=P , CONNECT=xxxxxxxxxxxx , CONNECT=DEVICE , DFU=Y
5	>>>	SEARCH=? , CONNECT=? , CONNECT=P , CONNECT=xxxxxxxxxxxx , CONNECT=DEVICE , DFU=Y
6	Not connection	RSSI=? , CONNECT=Y , CONNECT=N



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