Bluetooth Configuration Guide

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Configuration Commands

The document describes the system configuration variables of *abSerial* with their defaults and ranges. These values are stored in the non-volatile memory of the module.

1. Usage

1.1. Set/update

To set a configuration variable enter:

```
at+ab config xxxx = yyyy
```

Where "xxxx" is the variable name and "yyyy" is the value to set. A variable name may also be specified as "varzz". Where zz is the sequence number of the variable.

1.2. Inquiry

An inquiry may be made using:

```
at+ab config xxxx
```

Where "xxxx" is the variable name. The reply will be the current setting.

1.3. Listing

All non-hidden variables may be listed using:

```
at+ab config
```

2. Configuration Parameters

System Configuration Settings – Version 1.7 Note: All Changes require a Reset to take effect			
Name	**Default**	**Description**	**Visible/Hidden**
BuildVersion	140616B	Date code of the firmware (read only).	Visible
BD_ADDR	00043e212345	Bluetooth device address (read only).	Visible
DeviceName	Amp'ed Up!	Code used for secure connection. Up to 20 characters are allowed (case sensitive). LT modules support 15 characters only.	Visible
StreamingSerial	true	When True, hardware RTS/CTS flow control is disabled and data not able to transmit over the link will be discarded. When False, RST/CTS flow control is enabled.	Visible
PIN	1234	Code used for pairing. Up to 16 characters are allowed (case sensitive). Not used with BT specs v2.1+	Visible
UartBaudrate	115200	Main UART baudrate: 1200 to 921,600 baud.	Visible
UartParity	none	Main UART parity.	Visible
UartDataBits	8	Main UART data bits per character.	Visible
UartStopBits	1	Main UART number of stop bits.	Visible
UartTimeout	16	Timeout used to determine the end of a message in units of bit times: from 8 to 255 are allowed.	Visible
HostShallowSleepEn	true	Enables shallow sleep mode.	Visible
HostDeepSleepEn	false	Enables deep sleep mode.	Visible
GPIO_HostKeepAwake	none	GPIO register used to prevent the module from entering deep sleep mode. A setting of **none** means that this function is disabled. Typically, GPIO 5 supports this feature.	Visible
GPIO_HostWakeup	none	GPIO register used to wake up the module after it enters deep sleep mode. A setting of **none** means that this function is disabled. Typically, GPIO 5 supports this feature.	Visible
UseSmallPackets	false	If true, only DM1, DH1, DM3, DH3 packets are allowed on a link. EDR is disabled.	Visible
EnableAFH	true	Enable/Disable the Adaptive Frequency Hopping mode.	Visible
ATReply	AT-AB	Sets the AT command reply prefix. All events that are displayed are prefixed by this character string (case sensitive).	Visible
QoS_Latency	20	Sets the Quality of Service Latency from 3 to 20 Slots. A slot period is 625 microseconds.	Visible
CpuMHz	8	Sets the module's CPU speed: 2, 4, 8, 12, 16, 20, 24, 28, 32, 36 and 64 Mhz are allowed. (**Note:**CPUMhz: 40 to 63 are not supported.) Dual mode modules support 42 Mhz as well.	Visible
HciBaudrate	230400	Baudrate of the HCI interface to the Bluetooth controller: 115,200; 230,400; 460,800; 921,600; and 2,000,000 baud are allowed.	Visible
COD	240404	Bluetooth Class of Device.	Visible

HostEvents	true	All host events are sent when True.	Visible
BondingAllowed	true	Automatically allow bonding by default when True.	Visible
PageScan	true	Enables Page scan when True, or halts Page scan when False.	Visible
InquiryScan	true	Enables Inquiry scan when True, or halts Inquiry scan when False.	Visible
UseExtLPO	auto	True when a 32.768KHz low power oscillator is present, and False if not present.	Hidden
EnableEncryption	true	Set to True to enable the Bluetooth link encryption	Hidden
DefaultSecurity	4	Default security mode should be 4 for Authentication required. Modes 2 and 3 are used for legacy compatibility and not supported anymore.	Hidden
DefaultAuth	5	Default authentication setting. 4 will skip MITM protection and 5 will support MITM protection by asking for a confirmation message during pairing.	Visible
EnableIAP	true	Enables IAP Mode to support iOS devices.	Visible
EnableSPP	true	Enables SPP Service.	Visible
AllowSniff	false	Enables sniff mode. Must be False when no 32.768KHz LPO is present.	Hidden
iAPAppID	A1B2C3D4E5	This variable identifies the iOS application ID.	Visible
iAPAppIDStr	com.****.Demo	This variable defines the iOS application ID string, used with Request Application Launch.	Visible
iAPProtocolStrMain	com.****.Demo	This variable defines the main protocol string for the iOS connection.	Visible
iAPProtocolStrAlt	com.****.ProtocolAlt	This variable defines the alternative protocol string for the iOS connection.	Visible
CPI2CMode	3	Apple CP Chip I2C address mode 2 or 3. Apple CP v2.0C should default to 2. Mode 2 = 0x20, 0x21, Mode 3 = 0x22, 0x23.	Visible
HardwareType	BT43H	Module part number (read only).	Visible
SPP128UUID	true	This variable enables the 128-bit UUID for the SPP profile.	Hidden
EnableRPN	false	Remote Port Negotiation enabled.	Hidden
RmtEscapeSequence	false	Remote escape sequence enabled: @#@$@%	Hidden
CreditMax	7	Number of buffers available for incoming data packets.	Visible
AccName	ART	This variable defines the iOS Accessory Name	Visible
AccManufacturer	ART	This variable defines the iOS Accessory Manufacturer	Visible
AccModelNumber	Demo	This variable defines the iOS Accessory Model Number	Visible
AccSerialNumber	Amp'ed Up!	This variable defines the iOS Accessory Serial Number	Visible

MITMEvent	false	True, enables MITM protection during bonding. Requires AT command: at+abPassKeyAccept y.	Visible

3. BLE (Smart) Configuration Parameters

System Configuration Settings – addendum for Dual Mode Bluetooth *Note: All Changes require a Reset to take effect*			
Name	**Default**	**Description**	**Visible/Hidden**
ProfileRole	P	Profile Role. P=peripheral, C=central role.	Visible
AdvIntMin	256	Min advertising interval, 0.625 ms units: 20 ms to 10240 ms.	Visible
AdvIntMax	512	Max advertising interval, 0.625 ms units: 20 ms to 10240 ms	Visible
ScanInt	32	Scan Interval, 0.625 ms units: 2.5 ms to 10240 ms.	Visible
ScanWindow	18	Scan Window, 0.625 ms units: 2.5 ms to 10240 ms.	Visible
ConnectIntMin	912	Min connection interval, 1.25 ms units: 7.5 ms to 4000 ms.	Visible
ConnectIntMax	1000	Max connection interval, 1.25 ms units: 7.5 ms to 4000 ms.	Visible
BatteryEnable	true	Enable or disable battery service.	Visible
CharacteristicMax	4	Default number of custom service characteristics.	Visible
ServiceUUID	26cc3fc06241f5b4534763a3097f6764	Custom service UUID.	Visible
BLEModemMode	0	0: Demo, battery service used with BleBypass 1: Modem, Custom Service used with BleBypass 2: Profile, no BleBypass mode allowed (some FW versions do not support this)	Hidden