Appendix_2

FZ760_AT Command Details

Version 0.1.1

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■ Table of Contents

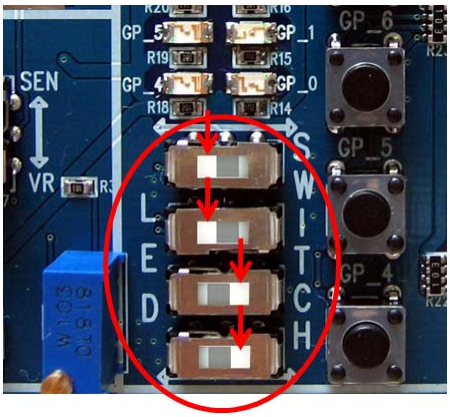
1. AT-Command

The command language to set up internal values of the device for operation is called “AT-Commands.”
To use AT-Commands, the device must be operated in the AT-Command Setup Mode.
Users can set up and check internal values of the device by using AT-Commands.
If the device is not in the AT-Command Setup Mode, the AT-Command input is recognized as serial data and transmitted to the target device for the device.

1-1. How to Enter the AT-Command Setup Mode

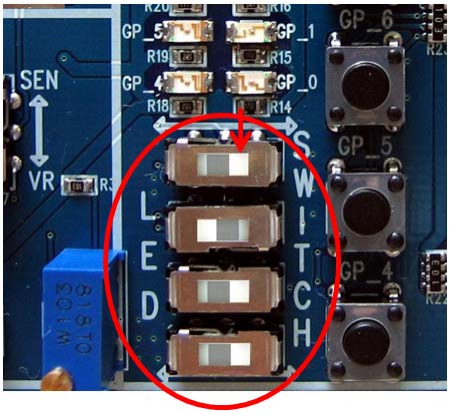
To enter the AT-Command Setup Mode, the GPIO 7 port has to be used.
The GPIO 7 port on the device is set as an output port. However, when Low (0V) signal is input to the GPIO 7 port before power is supplied to the device (and the input status is maintained), and power is supplied to the device, then the device enters the AT-Command Setup Mode.
When the AT-Command Setup Mode is entered, the UART communication speed is fixed at 9600bps.
When the setting is done in the AT-Command Setup Mode, turn off the power of the device.
When the Low (0V) signal input to the GPIO 7 port is stopped or pulled up and power is supplied to the device, then the device enters the Operation Mode.

※ How to Enter the AT-Command Setup Mode on the device using then Interface Board?
The GPIO ports 0/1/2/3 are fixed as data input ports.
The GPIO ports 4/5/6/7 are fixed as data output ports.
When the device is installed on the Interface Board and used in the **Data Input/output Mode**, the GPIO 0/1/2/3 Selection Switches on the Interface Board must be positioned to the “Switch,” and the GPIO 4/5/6/7 Selection Switches on the Interface Board must be positioned to the “LED”.



< The Selection Switch Position in the Data Input/output Mode >

To enter the **AT-Command Setup Mode** after connecting the device to the Interface Board, the GPIO 7 Selection Switch on the Interface Board must be changed from the “LED” to the “Switch”. Then, the GPIO port 7 and the GPIO Switch 7 on the Interface Board are connected.



< GPIO Selection Switch Position When Entering the AT-Command Mode >

While pressing the GPIO Switch 7 on the Interface Board, turn on the power of the Interface Board. Then, the device enters the AT-Command Setup Mode.

< Pressing the GPIO 7 Switch >

When the setup is completed after entering the AT-Command Setup Mode, turn off the power of the device.

Change the position of the GPIO 7 Selection Switch on the Interface Board from the “Switch” to the “LED.” This will connects the GPIO 7 port on the Interface Board to the GPIO 7 LED on the Interface Board. The GPIO 7 port on the Interface Board has to be connected to the GPIO 7 LED on the Interface Board for normal operation of the device in the Operation Mode.

1-2. Command Category

(1) Set Command

Command Category	AT Command
Set Command	**AT+SETPAN1234**[0x0D]
	AT+SETCHANNEL0B[0x0D]
	AT+SETLOCAL1234[0x0D]
	AT+SETTARGET5678[0x0D]
	AT+SETTXPOWER00[0x0D]
	AT+SETBAUD9600[0x0D]
	AT+SETKEY1[0x0D]
	AT+SETKEY0[0x0D]
	AT+SETADC1[0x0D]
	AT+SETADC0[0x0D]
	AT+SETCOUNT1[0x0D]
	AT+SETCOUNT0[0x0D]
	AT+SETTMR60[0x0D]
	AT+SETGPIO0[0x0D]
	AT+SETGPIO1[0x0D]
	AT+SETGPIO2[0x0D]
	AT+SETGPCLEAR1[0x0D]
	AT+SETGPCLEAR0[0x0D]
	AT+SETEOL10[0x0D]
	AT+SETPMODE1[0x0D]
	AT+SETSTAMSG1[0x0D]
	AT+SETSTAMSG0[0x0D]
	AT+SETLQI1[0x0D]
	AT+SETLQI0[0x0D]
	AT+SETBRIDGE1[0x0D]
	AT+SETBRIDGE0[0x0D]
	AT+SETBRI1ADDR1234[0x0D]
	AT+SETBRI2ADDR5678[0x0D]
	AT+SETBRI3ADDR1234[0x0D]
	AT+SETBRI4ADDR5678[0x0D]
	AT+SETLOCATION1[0x0D]
	AT+SETLOCATION0[0x0D]
	AT+SETID1[0x0D]
	AT+SETID0[0x0D]
	AT+SETDEVNAME1234567[0x0D]

(2) Get Command

Get Command	**AT+GETVER**[0x0D]
	AT+GETEXTADDR[0x0D]
	AT+GETPAN[0x0D]
	AT+GETTMR[0x0D]
	AT+GETKEY[0x0D]
	AT+GETADC[0x0D]
	AT+GETLQI[0x0D]
	AT+GETBAUD[0x0D]
	AT+GETLOCAL[0x0D]
	AT+GETTARGET[0x0D]
	AT+GETCOUNT[0x0D]
	AT+GETPMODE[0x0D]
	AT+GETSTAMSG[0x0D]
	AT+GETCHANNEL[0x0D]
	AT+GETTXPOWER[0x0D]
	AT+GETGPIO[0x0D]
	AT+GETGPCLEAR[0x0D]
	AT+GETEOL[0x0D]
	AT+GETBRIDGE[0x0D]
	AT+GETBRI1ADDR[0x0D]
	AT+GETBRI2ADDR[0x0D]
	AT+GETBRI3ADDR[0x0D]
	AT+GETBRI4ADDR[0x0D]
	AT+GETLOCATION[0x0D]
	AT+GETID[0x0D]
	AT+GETDEVNAME[0x0D]

(3) Special Command

Special Command	**AT**[0x0D]
	ATZ[0x0D]
	AT&F[0x0D]

2. Set Command

2-1. AT+SETPAN1234

Feature	This command set up the wireless network ID for the device.
Response	OK[0x0D][0X0A]
Description	To make the device send or receive data on a wireless network, the same wireless network ID has to be used. To apply the changed wireless network ID, users have to reset the device after setting up the wireless network ID. The wireless network ID is hexadecimal. Ex.)1234 => This means the wireless network ID is 0x1234. 0A0B => This means the wireless network ID is 0x0A0B.
Ex.	Host -> Device : AT+SETPAN1234[0x0D] Device -> Host : OK[0x0D][0x0A]

2-2. AT+SETCHANNEL0B

Feature	This command sets up the wireless communication channel for the device.
Response	OK[0x0D][0X0A]
Description	The wireless channels that can be set up are 0B, 0C, 0D, 0E, 0F, 10, 11, 12, 13, 14, 15, 16, 17, 18, and 19. To apply the changed wireless communication channels, users have to reset the device after setting up the wireless communication channels. The wireless network ID is hexadecimal. Ex.) 0B => This means the wireless communication channel is 0x0B. 19 => This means the wireless communication channel is 0x19.
Ex.	Host -> Device : AT+SETCHANNEL0B[0x0D] Device -> Host : OK[0x0D][0x0A]

2-3. AT+SETLOCAL1234

Feature	This command sets up the network address for the device.
Response	OK[0x0D][0X0A]
Description	When wireless data is transmitted, the device transmits its network address and the network address of the target device inside the data packet. When the wireless data is received, the device compares the network address of the target device included in the received data packet with its network address. If the network address of the target device included in the received data packet matches

	its network address, the device recognizes the data packet as its own data and receives it. If the network address of the target device included in the data packet is FFFF (broadcast address), the device does not compare it with its network address and recognizes the data packet as its own data and receives it. To apply the changed network address, users have to reset the device after setting up the network address. The wireless network address is hexadecimal. Ex.) 1234 => This means the network address of the device is 0x1234. 000B => This means the network address of the device is 0x000B.
Ex.	Host -> Device : AT+SETLOCAL1234[0x0D] Device -> Host : OK[0x0D][0x0A]

2-4. AT+SETTARGET5678

Feature	This command sets up the network address of the target device.
Response	OK[0x0D][0X0A]
Description	When wireless data is transmitted, the device transmits its network address and the network address of the target device inside the data packet. When the wireless data is received, the device compares the network address of the target device included in the received data packet with its network address. If the network address of the target device included in the received data packet matches its network address, the device recognizes the data packet as its own data and receives it. If the network address for the target device included in the data packet is FFFF (broadcast address), the device does not compare it with its network device and recognizes the data packet as its own and receives it. To apply the changed network address of the device, users have to reset the device after setting up the network address of the target device. The network address of the target device is hexadecimal. Ex.) 5678 => This shows the network address of the target device is 0x5678. 000C => This shows the network address of the target device is 0x000C.
Ex.	Host -> Device : AT+SETTARGET5678[0x0D] Device -> Host : OK[0x0D][0x0A]

2-5. AT+SETTXPOWER00

Feature	This command sets up the wireless output value of the device.
Response	OK[0x0D][0X0A]
Description	The wireless output values are 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B, 0C, 0D, 0E, 0F,

	10, 11, and 12. 00 is the maximum wireless output value and 12 is the minimum wireless output value. To apply the changed wireless output value, users have to reset the device after setting up the wireless output value. The wireless output value is hexadecimal. Ex.) 00 => This shows the wireless output value is 0x00. 0A => This shows the wireless output value is 0x0A.
Ex.	Host -> Device : AT+SETTXPOWER00[0x0D] Device -> Host : OK[0x0D][0x0A]

2-6. AT+SETBAUD9600

Feature	This command sets up the UART communication speed of the device.
Response	OK[0x0D][0X0A]
Description	Communication speeds that can be set up are 9600, 19200, 38400, 57600, 115200, and 230400. To apply the changed UART communication speed, user have to reset the device after setting up the UART communication speed. The UART communication speed is decimal.
Ex.	Host -> Device : AT+SETBAUD9600[0x0D] Device -> Host : OK[0x0D][0x0A]

2-7. AT+SETKEY1

Feature	This command enables the KEY data transmission function of the device.
Response	OK[0x0D][0X0A]
Description	This command enables the function that recognizes the signal input to the KEY port and sends KEY data to the target device. **When the device does not use the Low Voltage Mode (Low Voltage Mode 0), the KEY port recognizes the LOW signal (0V) regardless of the KEY Option.** **When the device uses the Low Voltage Mode 1, the KEY port recognizes a changing signal from LOW (0V) -> High (3V).** **When the device uses the Low Voltage Mode 2 or 3, the KEY port recognizes the LOW signal (0V).**
Ex.	Host -> Device : AT+SETKEY1[0x0D] Device -> Host : OK[0x0D][0x0A]

2-8. AT+SETKEY0

Feature	This command disables the KEY data transmission function of the device.
Response	OK[0x0D][0X0A]
Description	This command disables the function that recognizes the signal input to the KEY port and sends the KEY data to the target device. **If the device uses the Low Voltage Mode 1/2/3 and the use of KEY data is disabled, the device only wakes up from the Low Voltage Mode but does not send the KEY data to the target device when a signal is input to the KEY port.** When the device enters the Low Voltage Mode, users can not set up the device nor send /receive the data.
Ex.	Host -> Device : AT+SETKEY0[0x0D] Device -> Host : OK[0x0D][0x0A]

2-9. AT+SETADC1

Feature	This command enables the ADC data transmission function of the device.
Response	OK[0x0D][0X0A]
Description	This command enables the function that reads the analogue data input to the ADC port of the device by the set interval on the internal timer, converts it to digital data, and sends it to the target device. Input data value range to the ADC port of the device is 0V ~1.5V. The input data on the target device is serially output.
Ex.	Host -> Device : AT+SETADC1[0x0D] Device -> Host : OK[0x0D][0x0A]

2-10. AT+SETADC0

Feature	This command disables the ADC data transmission function of the device.
Response	OK[0x0D][0X0A]
Description	-
Ex.	Host -> Device : AT+SETADC0[0x0D] Device -> Host : OK[0x0D][0x0A]

2-11. AT+SETCOUNT1

Feature	This command enables the COUNT data transmission function of the device.
Response	OK[0x0D][0X0A]
Description	This command enables the function that sends the increased internal hexa count value to the target device by the set interval on the internal timer. **To send the COUNT data of the device, the ADC data transmission function has to be enabled. In other words, the device sends the internal hexa count value instead of the ADC data.** The range of increased internal count value is 0x0000 ~ 0xC350 (0 ~ 50000). The received data on the target device is serially output.
Ex.	Host -> Device : AT+SETCOUNT1[0x0D] Device -> Host : OK[0x0D][0x0A]

2-12. AT+SETCOUNT0

Feature	This command disables the COUNT data transmission function of the device.
Response	OK[0x0D][0X0A]
Description	-
Ex.	Host -> Device : AT+SETCOUNT0[0x0D] Device -> Host : OK[0x0D][0x0A]

2-13. AT+SETTMR60

Feature	This command sets up the internal timer of the device.
Response	OK[0x0D][0X0A]
Description	The device sends ADC/COUNT data but it wakes up in the Low Voltage Mode using the interval setting in the internal timer. When the device does not use the Low Voltage Mode (LOW 0), it sends ADC/COUNT data by the set interval on the internal timer (setting of 60 : ADC/COUNT transmission in every sixty seconds). When the device uses the Low Voltage Mode 1/2, it wakes up from the mode using the set interval on the internal timer (setting of 60 : Wakes up in every sixty seconds from the Low Voltage Mode). The interval setting on the internal timer can be made by a decimal second (5 seconds: 5, 1 minute : 60). **When the Low Voltage Mode is not in use (LOW 0), the setting value range of the internal timer is 0 ~ 65000 (maximum: about 18 hours).** **When the device uses the Low Voltage Mode 1/2, the setting value range of the**

	internal timer is 0 ~ 255 (maximum: about 4 minutes 20 seconds). The stored internal timer interval can be applied when the device is reset.
Ex.	Host -> Device : AT+SETTMR60[0x0D] Device -> Host : OK[0x0D][0x0A]

2-14. AT+SETGPIO0

Feature	This command sets the device to send GPIO data when it is input to the GPIO port on the device.
Response	OK[0x0D][0X0A]
Description	When Low (0V) signal is input to the GPIO Port on the device, the device sends the GPIO data wirelessly. **When the device enters the Low Voltage Mode, the GPIO data will not be sent after the data is input to the GPIO port on the device. The device will not wake up by the GPIO data.**
Ex.	Host -> Device : AT+SETGPIO0[0x0D] Device -> Host : OK[0x0D][0x0A]

2-15. AT+SETGPIO1

Feature	This command sets the device to send GPIO data of the device instead of KEY data.
Response	OK[0x0D][0X0A]
Description	When Low (0V) signal is input to the GPIO port on the device (and the input status is maintained) and the Low (0V) signal is input to the KEY port on the device, the device sends the GPIO data wirelessly. (KEY Option Enabled) **When the device enters the Low Voltage Mode, the device wakes up by the KEY data and the GPIO data is sent.**
Ex.	Host -> Device : AT+SETGPIO1[0x0D] Device -> Host : OK[0x0D][0x0A]

2-16. AT+SETGPIO2

Feature	This command sets the device to send GPIO data instead of ADC data.
Response	OK[0x0D][0X0A]
Description	After Low (0V) signal is input to the GPIO port on the device (and the input status is maintained), the device sends the GPIO data wirelessly at the preset time. (ADC Data

	Transmission Enabled) **When the device enters the Low Voltage Mode (Low Voltage Mode 1/2), the device wakes up by the internal timer and the GPIO data is sent.**
Ex.	Host -> Device : AT+SETGPIO2[0x0D] Device -> Host : OK[0x0D][0x0A]

2-17. AT+SETGPCLEAR1

Feature	This command sets the device to perform the GPIO Port Clear function after about 100ms following the GPIO data output.
Response	OK[0x0D][0X0A]
Description	When the device receives the GPIO data wirelessly, it sends the GPIO data to the GPIO port. **When GPIO_0 data is received, Low (0V) signal is output to the GPIO port 4.** **When GPIO_1 data is received, Low (0V) signal is output to the GPIO port 5.** **When GPIO_2 data is received, Low (0V) signal is output to the GPIO port 6.** **When GPIO_3 data is received, Low (0V) signal is output to the GPIO port 7.** The device automatically performs the GPIO Port Clear function after about 100ms following the GPIO data output.
Ex.	Host -> Device : AT+SETGPCLEAR1[0x0D] Device -> Host : OK[0x0D][0x0A]

2-18. AT+SETGPCLEAR0

Feature	This command sets the device not to perform the GPIO Port Clear function after the GPIO data output.
Response	OK[0x0D][0X0A]
Description	When the device receives GPIO data wirelessly, it sends the GPIO data to the GPIO port. This command sets the device to maintain the output status of the GPIO port after GPIO data output until another GPIO data is output.
Ex.	Host -> Device : AT+SETGPCLEAR0[0x0D] Device -> Host : OK[0x0D][0x0A]

2-19. AT+SETEOL10

Feature	This command sets the device to check the length of serial data input to the device and send the serial data wirelessly.
Response	OK[0x0D][0X0A]
Description	When serial data is input to the device, the device gathers input data and sends them

	wirelessly after about 30ms. If the End of Length is 0, the received serial data length is not constant. If an End of Length is set, the device checks the length of the input serial data and sends the serial data wirelessly after about 30ms, if the length of input serial data matches the setting. The range of End of Length is 0 ~ 99 in decimal numbers.
Ex.	Host -> Device : AT+SETEOL10[0x0D] Device -> Host : OK[0x0D][0x0A]

2-20. AT+SETPMODE1

Feature	This command sets up the Low Voltage Mode for the device.
Response	OK[0x0D][0X0A]
Description	Low Voltage Mode 0: The device did not enter the Low Voltage Mode. Low Voltage Mode 1: When the device enters the Low Voltage Mode, it uses about 25uA current. Wake up condition: internal timer, KEY data input, reset When the device wakes up, no reset is made. (No Reset) Low Voltage Mode 2: When the device enters the Low Voltage Mode, it uses about 2uA current. Wake up condition: internal timer, KEY data input, reset When the device wakes up, a reset is made. Low Voltage Mode 3: When the device enters the Low Voltage Mode, it uses about 1uA current. Wake up condition: internal timer, KEY data input, reset When the device wakes up, a reset is made.
Ex.	Host -> Device : AT+SETPMODE1[0x0D] Device -> Host : OK[0x0D][0x0A]

2-21. AT+SETSTAMSG1

Feature	This command enables the Start Message Output function of the device.
Response	OK[0x0D][0X0A]
Description	In the Operation Mode, the device outputs a Start Message when power is supplied to it. Start Message: FZ760 START OK[0x0D][0x0A]
Ex.	Host -> Device : AT+SETSTAMSG1[0x0D] Device -> Host : OK[0x0D][0x0A]

2-22. AT+SETSTAMSG0

Feature	This command disables the Start Message Output function of the device.
Response	OK[0x0D][0X0A]
Description	The device does not output a Start Message when power is supplied to it.
Ex.	Host -> Device : AT+SETSTAMSG0[0x0D] Device -> Host : OK[0x0D][0x0A]

2-23. AT+SETLQI1

Feature	This command enables the Receiving Data Quality Output function of the device.
Response	OK[0x0D][0X0A]
Description	The device serially outputs the quality data of the wirelessly received data (ADC/CNT data). It does not output the wirelessly received data. It outputs the IEEE Address of the transmitting device, too.
Ex.	Host -> Device : AT+SETLQI1[0x0D] Device -> Host : OK[0x0D][0x0A]

2-24. AT+SETLQI0

Feature	This command disables the Receiving Data Quality Output function of the device.
Response	OK[0x0D][0X0A]
Description	It outputs the wirelessly received data.
Ex.	Host -> Device : AT+SETLQI0[0x0D] Device -> Host : OK[0x0D][0x0A]

2-25. AT+SETBRIDGE1

Feature	This command enables the Bridge function of the device.
Response	OK[0x0D][0X0A]
Description	The device compares the network address of the transmitting device in the wirelessly received data packet with the network address that is used for the Bridge function and sends the data again.
Ex.	Host -> Device : AT+SETBRIDGE1[0x0D]

	Device -> Host : OK[0x0D][0x0A]

2-26. AT+SETBRIDGE0

Feature	This command disables the Bridge function of the device.
Response	OK[0x0D][0X0A]
Description	
Ex.	Host -> Device : AT+SETBRIDGE0[0x0D] Device -> Host : OK[0x0D][0x0A]

2-27. AT+SETBRI1ADDR1234

Feature	This command sets up the 1st bridge address to be used for the Bridge function of the device.
Response	OK[0x0D][0X0A]
Description	The device compares the network address of the transmitting device in the wirelessly received data packet with the network address that is used for the Bridge function and sends the data again. If the network address of the transmitting device of the data packet matches the 1st bridge address that is used for the Bridge function, the device sends the data to the 2nd bridge address that is used for the Bridge function again. If the network address of the transmitting device of the data packet matches the 2nd bridge address that is used for the Bridge function, the device sends the data to the 1st bridge address that is used for the Bridge function again.
Ex.	Host -> Device : AT+SETBRI1ADDR1234[0x0D] Device -> Host : OK[0x0D][0x0A]

2-28. AT+SETBRI2ADDR5678

Feature	This command sets up the 2nd bridge address to be used for the Bridge function of the device.
Response	OK[0x0D][0X0A]
Description	The device compares the network address of the transmitting device in the wirelessly received data packet with the network address that is used for the Bridge function and sends the data again. If the network address of the transmitting device of the data packet matches the 1st bridge address that is used for the Bridge function, the device sends the data to the 2nd bridge address that is used for the Bridge function again. If the network address of the transmitting device of the data packet matches the 2nd bridge

	address that is used for the Bridge function, the device sends the data to the 1st bridge address that is used for the Bridge function again.
Ex.	Host -> Device : AT+SETBRI2ADDR5678[0x0D] Device -> Host : OK[0x0D][0x0A]

2-29. AT+SETBRI3ADDR1234

Feature	This command sets up the 3rd bridge address to be used for the Bridge function of the device.
Response	OK[0x0D][0X0A]
Description	The device compares the network address of the transmitting device in the wirelessly received data packet with the network address that is used for the Bridge function and sends the data again. If the network address of the transmitting device of the data packet matches the 3rd bridge address that is used for the Bridge function, the device sends the data to the 4th bridge address that is used for the Bridge function again. If the network address of the transmitting device of the data packet matches the 4th bridge address that is used for the Bridge function, the device sends the data to the 3rd bridge address that is used for the Bridge function again.
Ex.	Host -> Device : AT+SETBRI3ADDR1234[0x0D] Device -> Host : OK[0x0D][0x0A]

2-30. AT+SETBRI4ADDR5678

Feature	This command sets up the 4th bridge address to be used for the Bridge function of the device.
Response	OK[0x0D][0X0A]
Description	The device compares the network address of the transmitting device in the wirelessly received data packet with the network address that is used for the Bridge function and sends the data again. If the network address of the transmitting device of the data packet matches the 3rd bridge address that is used for the Bridge function, the device sends the data to the 4th bridge address that is used for the Bridge function again. If the network address of the transmitting device of the data packet matches the 4th bridge address that is used for the Bridge function, the device sends the data to the 3rd bridge address that is used for the Bridge function again.
Ex.	Host -> Device : AT+SETBRI4ADDR5678[0x0D] Device -> Host : OK[0x0D][0x0A]

2-31. AT+SETLOCATION1

Feature	This command enables the Location function of the device.
Response	OK[0x0D][0X0A]
Description	The Location function of the device works on the basis of the Bridge function of the device. The device either reconfigure the wirelessly received data packet for locating data or sends it again by using the Bridge function.
Ex.	Host -> Device : AT+SETLOCATION1[0x0D] Device -> Host : OK[0x0D][0x0A]

2-32. AT+SETLOCATION0

Feature	This command disables the Location function of the device.
Response	OK[0x0D][0X0A]
Description	-
Ex.	Host -> Device : AT+ SETLOCATION0[0x0D] Device -> Host : OK[0x0D][0x0A]

2-33. AT+SETID1

Feature	This command enables the Device Name Transmission function of the device.
Response	OK[0x0D][0X0A]
Description	The device sends the Device Name wirelessly instead of KEY or ADC/COUNT data.
Ex.	Host -> Device : AT+SETID1[0x0D] Device -> Host : OK[0x0D][0x0A]

2-34. AT+SETID0

Feature	This command disables the Device Name Transmission function of the device.
Response	OK[0x0D][0X0A]
Description	-
Ex.	Host -> Device : AT+SETID0[0x0D] Device -> Host : OK[0x0D][0x0A]

2-35. AT+SETDEVNAME1234567

Feature	This command sets the Device Name.
Response	OK[0x0D][0X0A]
Description	Since the Device Name is fixed as 7 bytes, users have to enter 7 bytes for the Device Name setting.
Ex.	Host -> Device : AT+SETDEVNAME1234567[0x0D] Device -> Host : OK[0x0D][0x0A]

3. Get Command

3-1. AT+GETVER

Feature	This command sets the device to serially output its version data.
Response	FZ760 Vx.x.x[0x0D][0X0A]
Description	-
Ex.	Host -> Device : AT+GETVER[0x0D] Device -> Host : FZ760 Vx.x.x[0x0D][0x0A]

3-2. AT+GETEXTADDR

Feature	This command sets the device to serially output the IEEE Address.
Response	0015510000000001[0x0D][0x0A]
Description	The IEEE Address of the device is unique and can not be changed by users.
Ex.	Host -> Device : AT+GETEXTADDR[0x0D] Device -> Host : 0015510000000001[0x0D][0x0A]

3-3. AT+GETPAN

Feature	This command sets the device to serially output the wireless network ID.
Response	078D[0x0D][0X0A]
Description	To make the device send or receive data on a wireless network, the same wireless network ID has to be used.
Ex.	Host -> Device : AT+GETPAN[0x0D] Device -> Host : 078D[0x0D][0x0A]

3-4. AT+GETTMR

Feature	This command sets the device to serially output the set values on the internal timer.
Response	10[0x0D][0X0A]
Description	The device outputs the data in the number of seconds.
Ex.	Host -> Device : AT+GETTMR[0x0D] Device -> Host : 10[0x0D][0x0A]

3-5. AT+GETKEY

Feature	This command sets the device to serially output the set value for the use of KEY data.
Response	1[0x0D][0X0A]
Description	If the output value is 1, it means this function is used. If the output value is 0, it means this function is not used.
Ex.	Host -> Device : AT+GETKEY[0x0D] Device -> Host : 1[0x0D][0x0A]

3-6. AT+GETADC

Feature	This command sets the device to serially output the set value for the use of ADC data.
Response	0[0x0D][0X0A]
Description	If the output value is 1, it means this function is used. If the output value is 0, it means this function is not used.
Ex.	Host -> Device : AT+GETADC[0x0D] Device -> Host : 0[0x0D][0x0A]

3-7. AT+GETLQI

Feature	This command enables the device to serially output the set value for the use of the LQI Output.
Response	0[0x0D][0X0A]
Description	If the output value is 1, it means this function is used. If the output value is 0, it means this function is not used.
Ex.	Host -> Device : AT+GETLQI[0x0D]

	Device -> Host : 0[0x0D][0x0A]

3-8. AT+GETBAUD

Feature	This command sets the device to serially output the set value for the UART Communication of the device.
Response	38400[0x0D][0X0A]
Description	-
Ex.	Host -> Device : AT+GETBAUD[0x0D] Device -> Host : 38400[0x0D][0x0A]

3-9. AT+GETLOCAL

Feature	This command sets the device to serially output the network address of the device.
Response	0001[0x0D][0X0A]
Description	The device includes its network address inside the data packet when it wirelessly sends the data packet.
Ex.	Host -> Device : AT+GETLOCAL[0x0D] Device -> Host : 0001[0x0D][0x0A]

3-10. AT+GETTARGET

Feature	This command sets the device to serially output the target device's network address of the device.
Response	0002[0x0D][0X0A]
Description	The device sends its target device's network address inside the data packet when it wirelessly sends the data packet.
Ex.	Host -> Device : AT+GETTARGET[0x0D] Device -> Host : 0002[0x0D][0x0A]

3-11. AT+GETCOUNT

Feature	This command sets the device to serially output the set value for the use of COUNT data.
Response	0[0x0D][0X0A]
Description	If the output value is 1, it means this function is used. If the output value is 0, it means this function is not used.

Ex.	Host -> Device : AT+GETCOUNT[0x0D] Device -> Host : 0[0x0D][0x0A]

3-12. AT+GETPMODE

Feature	This command sets the device to serially output the set value for the Low Voltage Mode.
Response	0[0x0D][0X0A]
Description	If the output value is 0, it means the Low Voltage Mode is not used. If the output value is 1, it means the Low Voltage Mode 1 is used. If the output value is 2, it means the Low Voltage Mode 2 is used. If the output value is 3, it means the Low Voltage Mode 3 is used.
Ex.	Host -> Device : AT+GETPMODE[0x0D] Device -> Host : 0[0x0D][0x0A]

3-13. AT+GETSTAMSG

Feature	This command sets the device to serially output the set value for the use of the Start Message Output.
Response	1[0x0D][0X0A]
Description	If the output value is 1, it means this function is used. If the output value is 0, it means this function is not used.
Ex.	Host -> Device : AT+GETSTAMSG[0x0D] Device -> Host : 1[0x0D][0x0A]

3-14. AT+GETCHANNEL

Feature	This command sets the device to serially output the set value for wireless channel of the device.
Response	0B[0x0D][0X0A]
Description	To make the device send or receive data on a wireless network, the same wireless channel has to be used.
Ex.	Host -> Device : AT+GETCHANNEL[0x0D] Device -> Host : 0B[0x0D][0x0A]

3-15. AT+GETTXPOWER

Feature	This command sets the device to serially output the wireless output value of the device.
Response	00[0x0D][0X0A]
Description	-
Ex.	Host -> Device : AT+GETTXPOWER[0x0D] Device -> Host : 00[0x0D][0x0A]

3-16. AT+GETGPIO

Feature	This command sets the device to serially output the transmission method for the GPIO data on the device.
Response	0[0x0D][0X0A]
Description	If the output is 0, GPIO data is sent when a data is input to the GPIO Port. If the output is 1, GPIO data is sent instead of KEY data. If the output is 2, GPIO data is sent instead of ADC data.
Ex.	Host -> Device : AT+GETGPIO[0x0D] Device -> Host : 0[0x0D][0x0A]

3-17. AT+GETGPCLEAR

Feature	This command sets the device to serially output the GPIO Port Clear method of the device.
Response	1[0x0D][0x0A]
Description	If the output is 1, the GPIO Port is cleared (High) in about 100ms. If the output is 0, the GPIO Port maintains the cleared status (Low) until another GPIO data is output.
Ex.	Host -> Device : AT+GETGPCLEAR[0x0D] Device -> Host : 1[0x0D][0x0A]

3-18. AT+GETEOL

Feature	This command sets the device to serially output the length of the serial data packet of the device.
Response	0[0x0D][0x0A]
Description	If an End of Length is 10, the device sends the serial data wirelessly after about 30ms if the length of input serial data is 10. If an End of Length is 0, the device gathers input data in an interval of 30ms and wirelessly sends the serial data.

Ex.	Host -> Device : AT+GETEOL[0x0D] Device -> Host : 0[0x0D][0x0A]

3-19. AT+GETBRIDGE

Feature	This command sets the device to serially output the set value for the use of the Bridge function of the device.
Response	0[0x0D[0x0A]
Description	If the output value is 1, it means this function is used. If the output value is 0, it means this function is not used.
Ex.	Host -> Device : AT+GETBRIDGE[0x0D] Device -> Host : 0[0x0D][0x0A]

3-20. AT+GETBRI1ADDR

Feature	This command sets the device to serially output the 1st bridge address to be used for the Bridge function of the device.
Response	1234[0x0D][0x0A]
Description	-
Ex.	Host -> Device : AT+GETBRI1ADDR[0x0D] Device -> Host : 1234[0x0D][0x0A]

3-21. AT+GETBRI2ADDR

Feature	This command sets the device to serially output the 2nd bridge address to be used for the Bridge function of the device.
Response	5678[0x0D[0x0A]
Description	-
Ex.	Host -> Device : AT+GETBRI2ADDR[0x0D] Device -> Host : 5678[0x0D][0x0A]

3-22. AT+GETBRI3ADDR

Feature	This command sets the device to serially output the 3rd bridge address to be used for the

	Bridge function of the device.
Response	5678[0x0D[0x0A]
Description	-
Ex.	Host -> Device : AT+GETBRI2ADDR[0x0D] Device -> Host : 5678[0x0D][0x0A]

3-23. AT+GETBRI4ADDR

Feature	This command sets the device to serially output the 4th bridge address to be used for the Bridge function of the device.
Response	5678[0x0D[0x0A]
Description	-
Ex.	Host -> Device : AT+GETBRI2ADDR[0x0D] Device -> Host : 5678[0x0D][0x0A]

3-24. AT+GETLOCATION

Feature	This command sets the device to serially output the set value for the use of the Location function of the device.
Response	0[0x0D[0x0A]
Description	If the output value is 1, it means this function is used. If the output value is 0, it means this function is not used.
Ex.	Host -> Device : AT+GETLOCATION[0x0D] Device -> Host : 0[0x0D][0x0A]

3-25. AT+GETID

Feature	This command sets the device to serially output the set value for the use of the Device Name Transmission function of the device.
Response	0[0x0D[0x0A]
Description	If the output value is 1, it means this function is used. If the output value is 0, it means this function is not used.
Ex.	Host -> Device : AT+GETID[0x0D]

	Device -> Host : 0[0x0D][0x0A]

3-26. AT+GETDEVNAME

Feature	This command sets the device to serially output the Device Name of the device.
Response	1234567[0x0D][0x0A]
Description	-
Ex.	Host -> Device : AT+GETDEVNAME[0x0D] Device -> Host : 1234567[0x0D][0x0A]

4. Special Command

4-1. AT

Feature	This command enables the device to check if the host and the device are connected normally.
Response	OK[0x0D][0x0A]
Description	This can be done in the AT-Command Setup Mode.
Ex.	Host -> Device : AT[0x0D] Device -> Host : OK[0x0D][0X0A]

4-2. ATZ

Feature	This command soft resets the device.
Response	OK[0x0D][0X0A]
Description	After OK is output to show the command is recognized correctly, the device will be reset. It gives the same effect of powering off and on again for the device.
Ex.	Host -> Device : ATZ[0x0D] Device -> Host : OK[0x0D][0X0A]

4-3. AT&F

Feature	This command hard resets the device.
Response	OK[0x0D][0X0A]
Description	After OK is output to show the command is recognized correctly, the device will be

	initialized. The device settings are initialized to the factory settings.
Ex.	Host -> Device : AT&F[0x0D] Device -> Host : OK[0x0D][0X0A]