

## 8 Channel Multifunction USB Relay commamd

**This product supports two kinds of instructions, AT command (ASCII code) and 8-byte command (HEX format).**

**Automatic recognition of two kinds of commamds,no need to switch..**

### AT command (ASCII code)

Note:AT commands must be uppercase, lowercase invalid.

9600 Band ,8 Data bits,None Parity,1 Stop Bit. This commands has a delay function

Read Status:

Channel 1: AT+R1

Channel 2: AT+R2

Channel 3: AT+R3

Channel 4: AT+R4

Channel 5: AT+R5

Channel 6: AT+R6

Channel 7: AT+R7

Channel 8: AT+R8

Open :

Channel 1 : AT+O1

Channel 2 : AT+O2

Channel 3: AT+O3

Channel 4: AT+O4

Channel 5: AT+O5

Channel 6: AT+O6

Channel 7: AT+O7

Channel 8: AT+O8

Close:

Channel 1 : AT+C1

Channel 2 : AT+C2

Channel 3 : AT+C3

Channel 4 : AT+C4

Channel 5: AT+C5

Channel 6: AT+C6

Channel 7: AT+C7

Channel 8: AT+C8

Toggle (Self-locking)

Channel 1: AT+T1

Channel 2: AT+T2

Channel 3: AT+T3

Channel 4: AT+T4

Channel 5: AT+T5

Channel 6: AT+T6

Channel 7: AT+T7

Channel 8: AT+T8

#### Latch (Inter-locking)

Channel 1: AT+L1

Channel 2: AT+L2

Channel 3: AT+L3

Channel 4: AT+L4

Channel 5: AT+L5

Channel 6: AT+L6

Channel 7: AT+L7

Channel 8: AT+L8

#### Momentary (Non-locking)

Channel 1: AT+M1

Channel 2: AT+M2

Channel 3: AT+M3

Channel 4: AT+M4

Channel 5: AT+M5

Channel 6: AT+M6

Channel 7: AT+M7

Channel 8: AT+M8

#### Delay

Channel 1: AT+D1=XXXX

Channel 2: AT+D2=XXXX

Channel 3: AT+D3=XXXX

Channel 4: AT+D4=XXXX

Channel 5: AT+D5=XXXX

Channel 6: AT+D6=XXXX

Channel 7: AT+D7=XXXX

Channel 8: AT+D8=XXXX

XXXX refers to the 0000 to 9999 figures, Unit is seconds

#### All Relays Open

AT+AO

#### All Relays Close

AT+AC

Return command : OpenX, CloseX (X = 1/2/3/4/5/6/7/8/A)

#### Example 1:

Send command "AT+D1=0010", Channel 1 is "Open", after delay of 10 seconds, channel 1 is "Close"

Send command "AT+D2=0100", Channel 2 is "Open", after delay of 100 seconds, channel 2 is "Close"

#### Example 2:

Send command "AT+L1", Channel 1 is "Open", other Channels is "Close"

Send command "AT+L2", Channel 2 is "Open", other Channels is "Close"

### 8-byte command (HEX format)

Note : The data must be in HEX format.

9600 Band ,8 Data bits,None Parity,1 Stop Bit。 This commands has no delay function

Control command format:

Bytes Number	1	2	3	4	5	6	7	8
	Frame head		Reserved bytes			Channel	Command	checksum
Reading status	0x5556		0x000000			0x01 Channel 1 0x02 Channel 2 0x03 Channel 3 0x04 Channel 4 0x05 Channel 5 0x06 Channel 6 0x07 Channel 7 0x08 Channel 8	00	0xAB 0xAC 0xAD 0xAE 0xAF 0xB0 0xB1 0xB2
Relay open	0x5556		0x000000			0x01 Channel 1 0x02 Channel 2 0x03 Channel 3 0x04 Channel 4 0x05 Channel 5 0x06 Channel 6 0x07 Channel 7 0x08 Channel 8	01	0xAD 0xAE 0xAF 0xB0 0xB1 0xB2 0xB3 0xB4
Relay close	0x5556		0x000000			0x01 Channel 1 0x02 Channel 2 0x03 Channel 3 0x04 Channel 4 0x05 Channel 5 0x06 Channel 6 0x07 Channel 7 0x08 Channel 8	02	0xAE 0xAF 0xB0 0xB1 0xB2 0xB3 0xB4 0xB5
Relay toggle	0x5556		0x000000			0x01 Channel 1 0x02 Channel 2 0x03 Channel 3 0x04 Channel 4 0x05 Channel 5 0x06 Channel 6 0x07 Channel 7 0x08 Channel 8	03	0xAF 0xB0 0xB1 0xB2 0xB3 0xB4 0xB5 0xB6
Relay Interlock	0x5556		0x000000			0x01 Channel 1 0x02 Channel 2 0x03 Channel 3 0x04 Channel 4 0x05 Channel 5 0x06 Channel 6 0x07 Channel 7	04	0xB0 0xB1 0xB2 0xB3 0xB4 0xB5 0xB6

			0x08 Channel 8		0xB7
Relay momentary	0x5556	0x000000	0x01 Channel 1 0x02 Channel 2 0x03 Channel 3 0x04 Channel 4 0x05 Channel 5 0x06 Channel 6 0x07 Channel 7 0x08 Channel 8	05	0xB1 0xB2 0xB3 0xB4 0xB5 0xB6 0xB7 0xB8
All Relays Open	0x5556	0x000000	0X00 All Relay	07	B2
All Relays Close	0x5556	0x000000	0X00 All Relay	08	B3

#### 5 Control commands:

##### 1. Reading status (reading the status of the relay (on/off))

Channel 1 : 55 56 00 00 00 01 00 AC  
Channel 2 : 55 56 00 00 00 02 00 AD  
Channel 3 : 55 56 00 00 00 03 00 AE  
Channel 4 : 55 56 00 00 00 04 00 AF  
Channel 5 : 55 56 00 00 00 05 00 B0  
Channel 6 : 55 56 00 00 00 06 00 B1  
Channel 7 : 55 56 00 00 00 07 00 B2  
Channel 8 : 55 56 00 00 00 08 00 B3

##### 2. Relay open (issue this command , Relay open , COM connect to NO )

Channel 1 : 55 56 00 00 00 01 01 AD  
Channel 2 : 55 56 00 00 00 02 01 AE  
Channel 3 : 55 56 00 00 00 03 01 AF  
Channel 4 : 55 56 00 00 00 04 01 B0  
Channel 5 : 55 56 00 00 00 05 01 B1  
Channel 6 : 55 56 00 00 00 06 01 B2  
Channel 7 : 55 56 00 00 00 07 01 B3  
Channel 8 : 55 56 00 00 00 08 01 B4

##### 3. Relay close (issue this command , Relay close , COM disconnect NO , and COM connect to NC )

Channel 1 : 55 56 00 00 00 01 02 AE  
Channel 2 : 55 56 00 00 00 02 02 AF  
Channel 3 : 55 56 00 00 00 03 02 B0  
Channel 4 : 55 56 00 00 00 04 02 B1  
Channel 5 : 55 56 00 00 00 05 02 B2

Channel 6 : 55 56 00 00 00 06 02 B3  
Channel 7 : 55 56 00 00 00 07 02 B4  
Channel 8 : 55 56 00 00 00 08 02 B5

4. Relay toggle (Relay status reversal, if COM connect to NO, this commands will Disconnect COM to NO and Reverse COM connect to NC, and vice versa)

Channel 1 : 55 56 00 00 00 01 03 AF  
Channel 2 : 55 56 00 00 00 02 03 B0  
Channel 3 : 55 56 00 00 00 03 03 B1  
Channel 4 : 55 56 00 00 00 04 03 B2  
Channel 5 : 55 56 00 00 00 05 03 B3  
Channel 6 : 55 56 00 00 00 06 03 B4  
Channel 7 : 55 56 00 00 00 07 03 B5  
Channel 8 : 55 56 00 00 00 08 03 B6

5. Relay Interlock

Channel 1 : 55 56 00 00 00 01 04 B0  
Channel 2 : 55 56 00 00 00 02 04 B1  
Channel 3 : 55 56 00 00 00 03 04 B2  
Channel 4 : 55 56 00 00 00 04 04 B3  
Channel 5 : 55 56 00 00 00 05 04 B4  
Channel 6 : 55 56 00 00 00 06 04 B5  
Channel 7 : 55 56 00 00 00 07 04 B6  
Channel 8 : 55 56 00 00 00 08 04 B7

6. Relay momentary (Relay COM connect to NO, disconnect after 500MS )

Channel 1 : 55 56 00 00 00 01 05 B1  
Channel 2 : 55 56 00 00 00 02 05 B2  
Channel 3 : 55 56 00 00 00 03 05 B3  
Channel 4 : 55 56 00 00 00 04 05 B4  
Channel 5 : 55 56 00 00 00 05 05 B5  
Channel 6 : 55 56 00 00 00 06 05 B6  
Channel 7 : 55 56 00 00 00 07 05 B7  
Channel 8 : 55 56 00 00 00 08 05 B8

7 All Relays Open

55 56 00 00 00 00 07 B2

8 All Relays Close

55 56 00 00 00 00 08 B3

Once issue a command, will have a return fame , 7th byte of return fame mean the satus of realy .

Return command format:

Bytes Number	1	2	3	4	5	6	7	8
	Frame head		Reserved bytes			Channel	Command	checksum
Return relay open	0x333C		0x000000			0x01 Channel 1 0x02 Channel 2 0x03 Channel 3 0x04 Channel 4 0x05 Channel 5 0x06 Channel 6 0x07 Channel 7 0x08 Channel 8	01	0x71 0x72 0x73 0x74 0x75 0x76 0x77 0x78
Return all Relay open	0x333C		0x000000			0X00 All Relay	01	0X70
Return relay close	0x333C		0x000000			0x01 Channel 1 0x02 Channel 2 0x03 Channel 3 0x04 Channel 4 0x05 Channel 5 0x06 Channel 6 0x07 Channel 7 0x08 Channel 8	02	0x72 0x73 0x74 0x75 0x76 0x77 0x78 0x79
Return all Relay close	0x333C		0x000000			0X00 All Relay	02	0X71

## 2 return command

1、Return relay open (return this command, mean COM connect to NO )

Channel 1 : 33 3C 00 00 00 01 01 71  
Channel 2 : 33 3C 00 00 00 02 01 72  
Channel 3 : 33 3C 00 00 00 03 01 73  
Channel 4 : 33 3C 00 00 00 04 01 74  
Channel 5 : 33 3C 00 00 00 05 01 75  
Channel 6 : 33 3C 00 00 00 06 01 76  
Channel 7 : 33 3C 00 00 00 07 01 77  
Channel 8 : 33 3C 00 00 00 08 01 78

2、Return relay close (return this command, mean COM disconnect NO , and COM connect to NC )

Channel 1 : 33 3C 00 00 00 01 02 72  
Channel 2 : 33 3C 00 00 00 02 02 73  
Channel 3 : 33 3C 00 00 00 03 02 74  
Channel 4 : 33 3C 00 00 00 04 02 75

Channel 5 : 33 3C 00 00 00 05 02 76

Channel 6 : 33 3C 00 00 00 06 02 77

Channel 7 : 33 3C 00 00 00 07 02 78

Channel 8 : 33 3C 00 00 00 08 02 79