

Device/PC Communication Protocol (By RS232)

Version 1.02

DIRECTION	PARAMETER	FORMAT	DESCRIPTION	REMARK
PC → DEVICE	BaudRate : 9600 Parity : None	<STX><CMD_ID><CMD_LEN>	STX : Start Character (02h)	1. If OK : Response ACK (06h)
DEVICE → PC	Data bits : 8 bits Stop bit : 1 Flow Control : None	<DATA_BLOCK><ETX><CheckSum>	CMD_ID : 00h - 7Fh Command with Data 80h - FFh Command without Data CMD_LEN : DATA_BLOCK LENGTH-1 DATA_BLOCK : DATA ETX : End Character (03h) CheckSum : XOR from STX to ETX	2. If Error : Response NAK (15h) 3. If CMD_ID is between 80h – FFh, there are no <CMD_LEN> and <DATA_BLOCK>. 4. Parity should be set to MARK if CMD_ID is 03h

DEVICE: BAR CODE DECODER,PKB,etc.

1	VCC5V		
2	KB CLK		
3	HOST CLK		
4	R2 IN	PC-PIN3	此组有效RS232 PC机对接
5	T2 OUT	PC-PIN2	
6	KB DATA		
7	HOST DATA		
8	GND		
9	T1 OUT	PC-PIN2	此组串口无效
10	R1 IN	PC-PIN3	

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PC → DECODER DECODER → PC	00H Send configuration data	<STX><00h><255><CONFIG_DATA> <ETX><Checksum>		1.If CheckSum OK, Response ACK 2.If CheckSum ERR, Response NAK 3.If decoder cannot receive all data in 2 seconds after receiving STX, decoder will stop waiting and quit 4.To compatible with Kinterface, byte 254 & 255 are checksum from byte 0 to 253
PC → DECODER DECODER → PC	01H Send and save configuration data	<STX><01h><255><CONFIG_DATA> <ETX><Checksum>		1.If CheckSum OK, Response ACK 2.If CheckSum ERR, Response NAK 3.If decoder cannot receive all data in 2 seconds after receiving STX, decoder will stop waiting and quit 4.To compatible with KB interface, byte 254 & 255 are checksum from byte 0 to 253
DECODER → PC	02H Send Status Bytes	<STX><02h><00><STATUS_BYTE> <ETX><Checksum>	Status Byte Definition b2 b1 b0: Reading mode 0 0 0 Trigger on/off 0 0 1 Good Read off	

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			0 1 0 Continuous/Trigger off 0 1 1 Continuous/Auto Power on 1 0 0 Flash 1 0 1 Testing 1 1 0 Flash/Auto Power on 1 1 1 Reserved 1 b3: 0--PE off; 1--PE on b4: 0--TG off; 1--TG on b5: 0--decode OK; 1—decode err b6,b7: reserved	
PC → DECODER	03H Specify device to communicate	<STX><03h><00><DEVICE_ID> <ETX><Checksum>		1. If send ID, set Parity=mark(1) 2. If device receives correct ID, response ACK
PC → PKB	04H PC Download to PKB	<STX><04h><11h><Frame data> <ETX><Checksum>	Frame data: <frame No.> 1 byte(0—127) < data > 16 bytes	1.If CheckSum OK, response ACK, PC can send another 04 cmd After receiving ACK. 2.If CheckSum ERR,responseNAK
PKB → PC	05H PKB Upload to PC	<STX><05h><11h><Frame data> <ETX><Checksum>	Frame data: <frame No.> 1 byte(0—127) < data > 16 bytes	1.after receiving 80H cmd,PKB start to send 05H cmd. 2.If CheckSum OK, response ACK, 3.If CheckSum ERR, Response NAK
DECODER → PC	06H	<STX><06h><1Eh><Version data>	Version data: 30 bytes	If CheckSum OK, response ACK,

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	Send Version Data	<ETX><Checksum>		If CheckSum ERR, Response NAK
PC → DEVICE	80H PC Upload	<STX><80h><ETX><Checksum>		If CheckSum OK, response ACK, then response 01H command (decoder)or 05H (PKB). If CheckSum ERR, Response NAK
PC → DEVICE	81H PC Download	<STX><81h><ETX><Checksum>		If CheckSum OK, response ACK, then wait 01H command(decoder) Or wait 04H command(PKB). If CheckSum ERR, Response NAK
PC → DECODER	82H Trigger	<STX><82h><ETX><Checksum>		If CheckSum OK, response ACK If CheckSum ERR, response NAK
PC → DECODER	83H Get Status Command	<STX><83h><ETX><Checksum>		If CheckSum OK, response ACK, then response 02H command If CheckSum ERR, Response NAK
PC → DECODER	84H ISP Command	<STX><84h><ETX><Checksum>		Reserved
PC → DECODER	85H Read Version Data Command	<STX><85h><ETX><Checksum>		If CheckSum OK, response ACK Then decoder send version data to PC(command 06h); If CheckSum ERR, response NAK