

RS232 Command Code UART Protocol



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UART Protocol Rev 1.0 (for AP development)

1. UART Setting:

Baud Rate :9600

Data Bits: 8

Parity check: None

Stop Bit:1

2. Command packet format (From PC to Monitor):

PC	LCD	PC	PC	PC	PC	
Start	ACK	Command	Index	Value	CRC	
0XAA	0XAO	0X01	0XE1	0X00	0X1E	Write Comman
0xAA	0XAO	0X00	0XE1	*	0X1F	Read Comman

Note: * = don't care.

EX: * = 0

CRC= 0X100 - 0X00-0XE1-(*= 0X00)=0X1F -> Read Command checksum

Start =0XAA, Command =0x01 write / 0x00 read , Value = control range.

CRC = 0X100 - (Command + Index + Value)

ACK code: 0XAO =OK, 0XOD =Time out, 0XOE = End , 0XOF = NG.

The first byte (0XAA) is a special prefix data packet from PC to LCD.

3. The receiver must send ACK packet back to sender after it receivers START command packet.

If PC receives 0X0D, 0X0E and 0X0F from LCD monitor, then PC must resend START packet,

Command packet format (From Monitor to PC):

LCD	LCD	LCD
Start	Value	CRC

CRC = 0X100 - Value

EX: Value = 0 ; CRC = 0X100 -0 =0x00 (1 Byte)

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4.

NO	Function	Command	Index	Value	CRC
1	Power OFF ON	0X01	0XE1	0X00 0X01	0X1E 0X1D
2	Brightness	0X01	0X10	0~ 0X64	
3	Contrast	0X01	0X11	0 ~ 0X64	
4	Auto-Adjust. (for VGA only)	0X01	0X17	0X00	0XE8
5	Color Temp. 9300 7500 6500	0X01	0X20	0X00 0X01 0X02	0XDF 0XDE 0XDD
6	Input (option) VGA DVI	0X01	0X40	0X00 0X01	
7	Auto Dimming (option) OFF ON Disable (R)	0x01	0x50	0X00 0X01 0xFF	

Note: (R) = The value is for read only. Disable does not support auto-dimming function on hardware when read the value 0XFF.