CH9120 Serial Control Command Set

V1.1

1.Overview

The CH9120 supports two ways of accessing the serial configuration mode:

（1） Hardware CFG0 pin pull low to enter, when the CH9120 CFG0 pin detects a low level, the CH9120 serial data will be used as a configuration command, CFG0 pin pull high to exit configuration mode, send configuration command baud rate fixed 9600bps.

（2） The serial port negotiation mode (which needs to be enabled by the network configuration software first) enters the serial port configuration mode. When the serial port idle time reaches 500ms, the serial port data received by the CH9120 is compared with {0x55,0xaa,0x5a}, and if the comparison is successful, the CH9120 will reply with one byte: 0xa5, and after receiving the reply data 0xa5 within 500ms time, send 0xa5 to confirm the entry into configuration mode. If the data comparison is wrong in any part of the process, these data bits will be considered as normal serial data, and this part of the data will be sent to the network side through the serial port, and the baud rate of the configuration command will be sent as the actual baud rate set for the serial port.

2.Command Code

CH9120 Send command code in the format "0x57 0xab Command Code Parameter (optional)"

Command Code	Parameters	Back	Purpose of the order
0x01		Chip version number	Check the chip version number
0x02		0xaa	Reset chip
0x03		0x00:TCP disconnected 0x01:TCP connection	Querying TCP connection status
0x0d		0xaa	Storage Parameter To EEPROM Number
0x0e		0xaa	Execute the configuration command, and Reset CH9120
0x5e		0xaa	Leaving the serial configuration mode (only on the serial port negotiation

	0x00(255.255.255.0)		
0x13	Gateway address: 0xc0 0xa8 0x01 0x01(192.168.1.1)	0xaa	Setting up the chip gateway
0x14	Port no: 0xd0 0x07 (2000)	0xaa	Setting up the local side of the chip Mouth
0x15	Destination IP address: 0xc0 0xa8 0x01 0x64(192.168.1.100)	0xaa	Setting the chip destination IP
0x16	Destination port: 0xe8 0x03(1000)	0xaa	Setting the chip destination port
0x17	Port random enable: 0x00: disabled 0x01: Enabling	0xaa	Set chip local port random
0x21	Baud rate: 0x80 0x25 0x00 0x00 (9600)	0xaa	Setting the serial port baud rate
0x22	0x01 0x04 0x08 (1stop, no checksum, 8data) Calibr ation: 00: even 01: Odd 02: Mark 03: Space 04: None	oxaa	Set serial port parity bit data bit stop bit
0x23	0x01 0x00 0x00 0x00 (Serial timeout 1*5ms，followed by four bytes to be filled in, null Bitwise zeroing)	0xaa	Set the serial pack timeout
0x24	0x01:Disconnect 0x00:Constantly open	0xaa	Is the network cable disconnected? Network connection

0x25	0x00 0x02 0x00 0x00 (Packed length 2*256=512) (Bytes)	0xaa	Set serial port receive packet length
0x26	0x01:Empty 0x00:Not cleared	0xaa	Is the network connection clear when Empty serial port data
0x33	0x01:Open 0x00:Close	0xaa	Enable / Disable DHcP Function
0x60		Network mode (1 byte) 0x00:TCP server 0x01:TCP Client 0x02:UDP server	Read the chip operating mode.
		0x03:UDP Client	
0x61		Device IP address 0xc0 0xa8 0x01 0xc8(192.168.1.200)	Reads the chip IP address.
0x62		Subnet Mask: 0xff 0xff 0xff 0x00(255.255.255.0)	Read chip masks
0x63		Gateway address: 0xc0 0xa8 0x01 0x01(192.168.1.1)	Read Chip Gateway
0x64		Port no: 0xd0 0x07 (2000)	Read chip source port
0x65		Destination IP address: 0xc0 0xa8 0x01 0x64(192.168.1.100)	Read the chip destination IP address
0x66		Destination port: 0xe8 0x03(1000)	Read chip destination port No.
0x71		Baud rate: 0x80 0x25 0x00 0x00 (9600)	Read serial port baud rate

0x72		0x01 0x04 0x08 (1stop, no checksum, 8data) Calibr ation: 00: even 01: Odd 02: Mark 03: Space 04: None	Read serial port parity bits data bits stop bits
0x73		0x01 (Serial port timeout 1*5ms)	Read serial port timeout
0x74		0x01:Disconnect 0x00:Constantly open	Is the network cable disconnected? Network connection
0x75		0x00 0x02 0x00 0x00 (Packed length 2*256=512) (Bytes)	Set serial port receive packet length
0x76		0x01:Empty 0x00:Not cleared	Is the network connection clear when Empty serial port data

3.Application notes

Setting instructions:"→" serial device send"←" CH9120 return □

1、Enter the configuration mode process (serial port negotiation into，if the hardware pin way into it is not necessary)

→0x55,0xaa,0x5a

←0xa5

→0xa5

←0xa5

2. Set the module parameters:

→0x57,0xab,0x10,0x02 // UDP broadcast mode.

←0xaa

→0x57,0xab,0x11,0xc0,0xa8,0x01,0x0a //Source IP: 192.168.1.10

←0xaa

→0x57,0xab,0x12,0xff,0xff,0xff,0x00 //Subnet mask: 255.255.255.0

←0xAA

→0x57,0xab,0x13,0xc0,0xa8,0x01,0x01 //Gateway: 192.168.1.1

←0xaa

→0x57,0xab,0x14,0x88,0x13 //Local port: 0x1388(5000)

←0xaa

→0x57,0xab,0x15,0xff,0xff,0xff,0xff //Destination IP address: 255.255.255.255

←0xaa

→0x57,0xAB,0x16,0x70,0x17 // Destination port: 0x1770(6000)

←0xaa

→0x57,0xab,0x21,0x00,0xc2,0x01,0x00 // Serial port baud rate: 0x0001c200(1152000)

←0xaa

→0x57,0xab,0x0d // Update configuration parameters to EEPROM

←0xaa

→0x57,0xab,0x0e // Perform configuration, reset 9120

←0xaa

→0x57,0xab,0x5e // Leave configuration mode

←0xaa

3. Read configuration

→0x57,0xAB,0x81 //read MAC

←0x84,0xC2,0xE4,0x05,0x06,0x07 //Return to □ MAC

→0x57,0xAB,0x61 // Read source IP

←0xC0,0xA8,0x01,0x10 //return to □ IP address