

WIZ14xSR Configuration Message Structure and Message Flow

1. Message Structure

Configuration Message consists of ‘general info section’ and four ‘channel info sections’.

1 Byte	1 Byte	144 Bytes	64 Bytes	64 Bytes	64 Bytes	64 Bytes
OP	RSV	General Info	Channel Info 1	Channel Info 2	Channel Info 3	Channel Info 4

(√ The MSB of all multiple bytes fields is the first byte. Bytes order in the packet are A[0], A[1], A[2], ..., and A[n])

1.1 General Info

Byte 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAC (6)						P_CODE (2)		LIP (4)				SN (4)			
GW (4)				FW_VER (2)		RSV	IPmode	Cmd_m	Cmd_Sequence (3)			DNSIP (4)			
RSV (8)								PPP_MAC (6)						PPP_SID (2)	
PPP_ID(32)															
PPP_PW(32)															
L_Domain(32)															

1.2 Channel Info

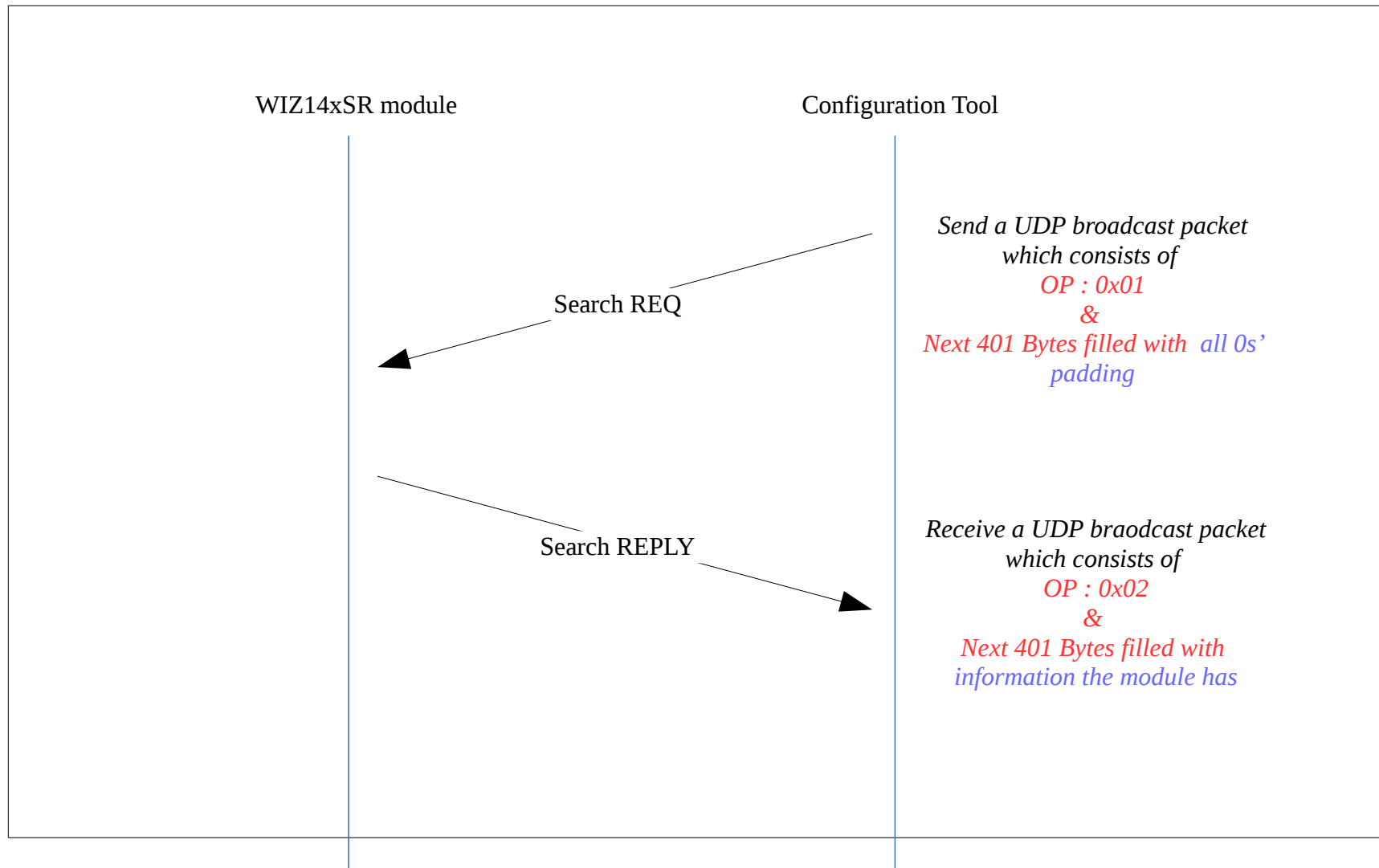
Byte1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
mode	status	DNS	UDP	RemoteIP(4)				LPort(2)		RPort(2)		RSV(4)			
D_Name(32)															
Baud	Databit	Parity	Stopbit	Flow	DP_CH	DP_Size(2)		DP_Time(2)		iTime(2)		RSV	bTelnet	RSV(2)	

2. Message Flow

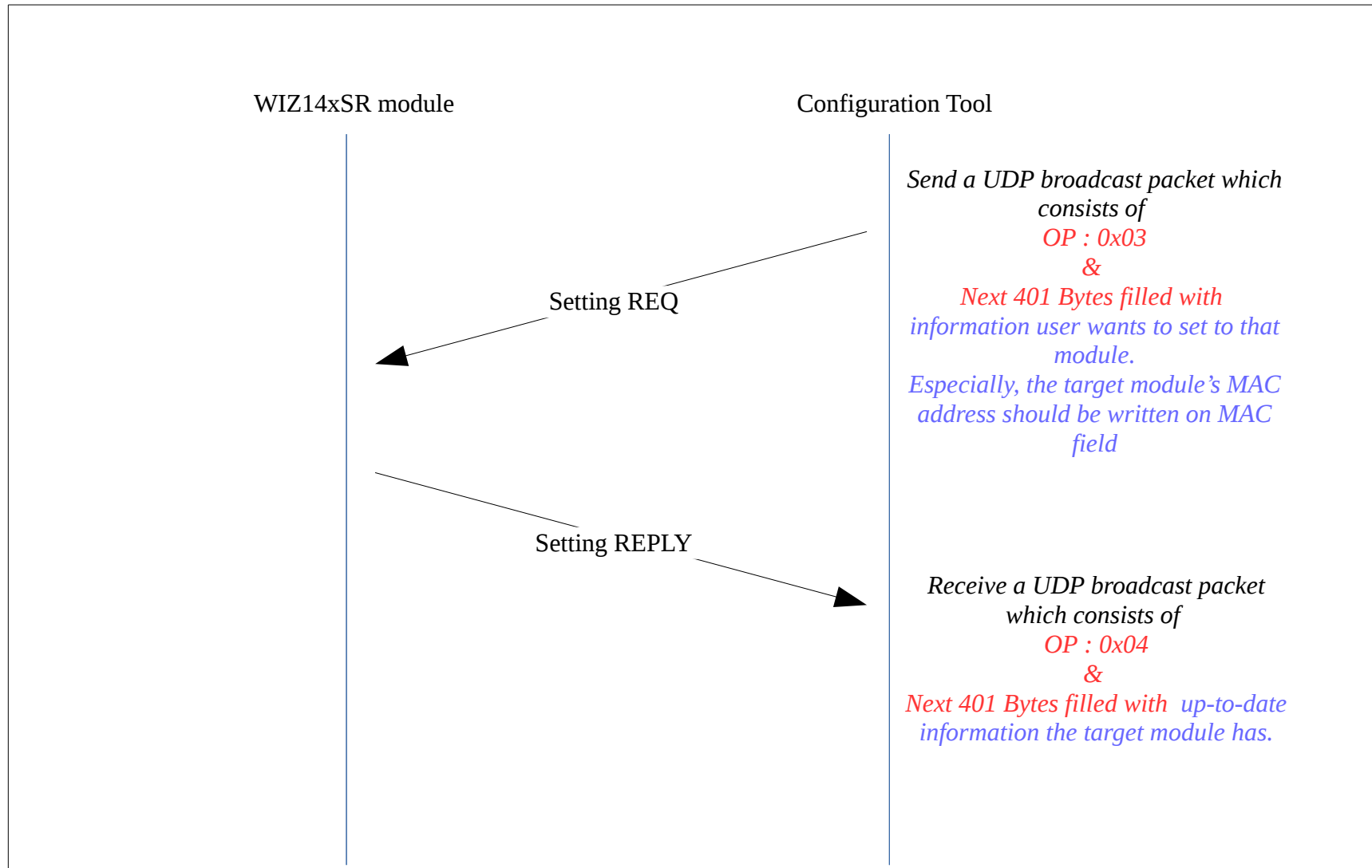
All message should be sent to network in UDP broadcast packet.

The UDP socket, the port number of which is **34001**, is ready to communicate

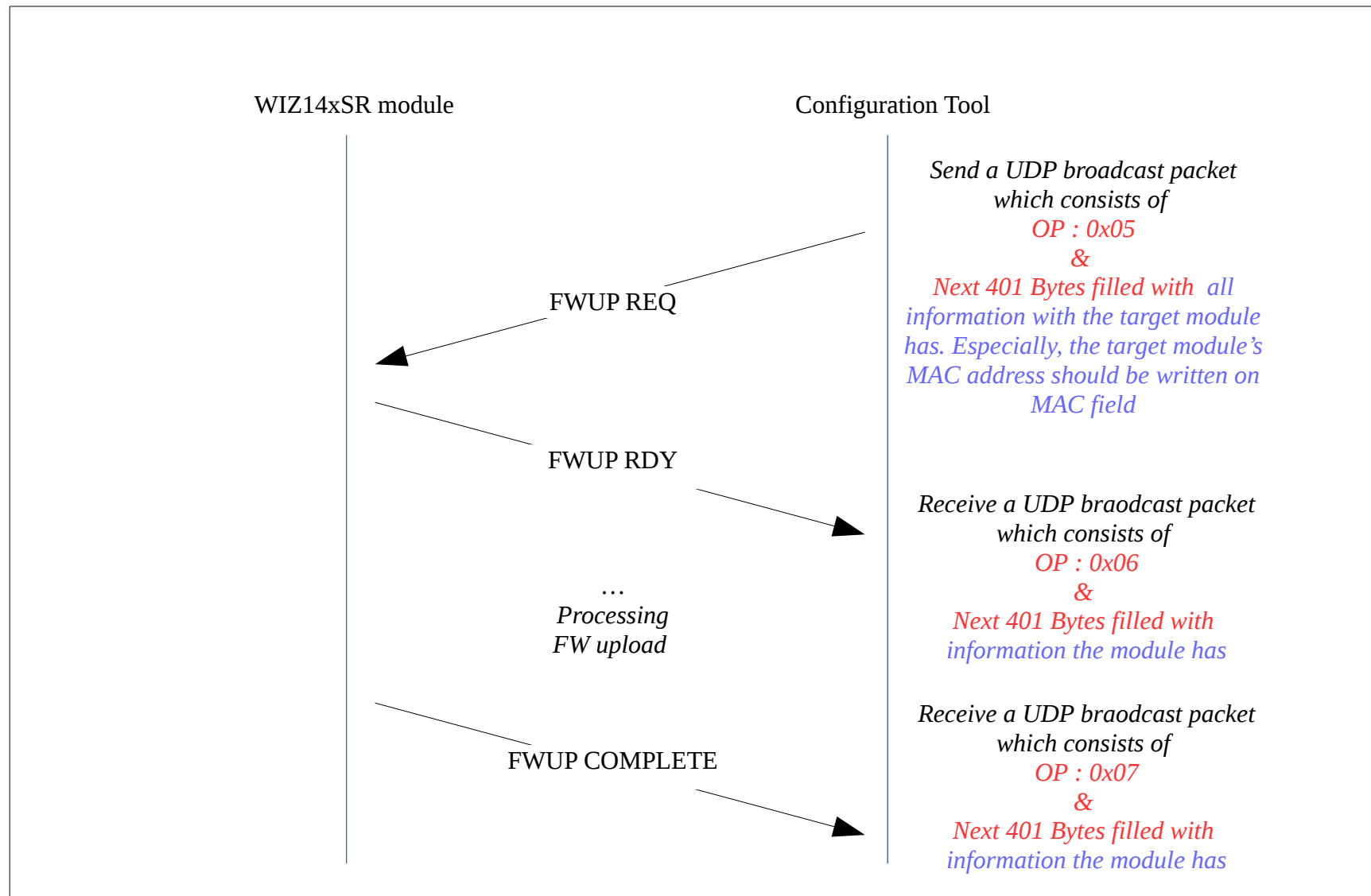
1) Search



2) Setting



3) Firmware Uploading



3. Field Information

OP Code [1 Byte, Operation Code]

OP Code Name	Value (Hex)	Direction
MSG_SEARCH_REQ	0x01	Config Tool → WIZ14xSR module
MSG_SEARCH_REPLY	0x02	Config Tool ← WIZ14xSR module
MSG_SETTING_REQ	0x03	Config Tool → WIZ14xSR module
MSG_SETTING_REPLY	0x04	Config Tool ← WIZ14xSR module
MSG_FWUP_REQ	0x05	Config Tool → WIZ14xSR module
MSG_FWUP_READY	0x06	Config Tool ← WIZ14xSR module
MSG_FWUP_COMPLETE	0x07	Config Tool ← WIZ14xSR module

GeneralInfo.**MAC** [6 Bytes, Module's own MAC address]

WIZ14xSR's MAC address should start with "00:08:DC", i.e., MAC[0] = 0x00, MAC[1] = 0x08 and MAC[2] = 0xDC

GeneralInfo.**P_CODE** [2 Bytes, Module's Product Code]

Product Code	Product Name
0x0006	WIZ14xSR (WIZ140SR and WIZ145SR)

GeneralInfo.**LIP** [4 Bytes, Module's Local IP address]

Example) If the Local IP address is 192.16.1.2, then LIP[0] = 192, LIP[1] = 168, LIP[2] = 1 and LIP[3] = 2

GeneralInfo.**SN** [4 Bytes, Module's Subnet Mask]

Example) If the Subnet Mask is 255.255.255.0, then SN[0] = 255, SN[1] = 255, SN[2] = 255 and SN[3] = 0

GeneralInfo.**GW** [4 Bytes, Module's Gateway address]

Example) If the Gateway IP address is 192.16.1.1, then GW[0] = 192, GW[1] = 168, GW[2] = 1 and GW[3] = 1

GeneralInfo.**FW_VER** [2 Bytes, Firmware Version]

Position	Description
FW_VER[0]	MAJOR VERSION
FW_VER[1]	MINOR VERSION

GeneralInfo.**Ipmode** [1 Byte, Option for getting Local IP address]

Mode	Value
Static IP mode	0x00
Dynamic IP mode (DHCP mode)	0x01

GeneralInfo.**Cmd_m** [1 Byte, it indicates which option is used to enter Serial command mode]

Mode	Value
Serial command mode not supported	0x00
Serial command mode with HW trigger	0x01

Serial command mode with SW trigger	0x02
-------------------------------------	------

GeneralInfo.**Cmd_Sequence** [3 Bytes, Characters sequence to enter serial command mode]

GeneralInfo.**DNSIP** [4 Bytes, DNS Server IP address]

Example) If the DNS IP address is 192.16.1.2, then DNSIP[0] = 192, DNSIP[1] = 168, DNSIP[2] = 1 and DNSIP[3] = 2

GeneralInfo.**PPP_MAC** [6 Bytes, field for PPPoE]

GeneralInfo.**PPP_SID** [2 Bytes, field for PPPoE]

GeneralInfo.**PPP_ID** [32 Bytes, field for PPPoE]

GeneralInfo.**PPP_PW** [32 Bytes, field for PPPoE]

GeneralInfo.**L_DOMAIN** [32 Bytes, field for Module's domain name in case of DDNS enabled, *Not supported yet*]

ChannelInfo.**mode** [1 Byte, it indicates who opens the connection]

Connection Mode	Value	Description
Server Mode	0x00	This socket is waiting new connection request
Client Mode	0x01	This socket tries to connect to the designated server
Mixed Mode	0x02	This socket acts as a server mode but it receives data from

		serial I/F before the connection is established, then it closes the socket, open it as a client, connects to the server and send the received data to the server.
--	--	---

ChannelInfo.**status** [1 Byte, it indicates whether the connection is established]

Value	Description
0x00	Disconnected
0x01	Connected

ChannelInfo.**DNS** [1 Byte, it indicates whether DNS option is activated]

Value	Description
0x00	Disabled
0x01	Enabled

ChannelInfo.**UDP** [1Byte, it indicates whether the corresponding socket is UDP]

Value	Description
0x00	TCP
0x01	UDP

ChannelInfo.**RemoteIP** [4 Bytes, it indicates the peer system's IP address and it is valid in case its operating mode is Client mode]

Example) If the remote IP address is 192.16.1.2, then RemoteIP[0] = 192, RemoteIP[1] = 168, RemoteIP[2] = 1 and RemoteIP[3] = 2

ChannelInfo.**LPort** [2 Bytes, it indicates the Local Port number of the socket]

Example) If Local Port is 5000 (= 0x1388), then LPort[0] = 0x13, LPort[1] = 0x88

ChannelInfo.**Rport** [2 Bytes, it indicates the Peer's Port number of the socket and it is valid in case its operating mode is Client mode]

ChannelInfo.**D_Name** [32 Bytes, it indicates the Domain name of the server which it connects but it is meaningless in case of DNS disabled]

ChannelInfo.**Baud** [1 Byte, it indicates the baud rate of the corresponding UART port]

Baud Rate (bps)	Value (Hex)
115200	0x00
57600	0x01
38400	0x02
19200	0x03
9600	0x04
4800	0x05
2400	0x06
1200	0x07
230400	0x08
600	0x09

ChannelInfo.**Databit** [1 Bytes, it indicates data bits]

Value	Description
0x00	7 bits Data
0x01	8 bits Data

ChannelInfo.**Parity** [1Byte, it indicates parity]

Value	Description
0x00	Parity None
0x01	Odd Parity
0x02	Even Parity

ChannelInfo.**Stopbit** [1 Byte, it indicates stop bit]

Value	Description
0x00	0.5 bit stop bit
0x01	1 bit stop bit
0x02	1.5 bits stop bit
0x03	2 bits stop bit

ChannelInfo.**Flow** [1 Bytes, it indicates flow control]

Value	Description
0x00	Non Flow Control
0x01	XON/XOFF
0x02	RTS/CTS

0x03	RTSONLY (for RS485)
------	---------------------

ChannelInfo.**DP_CH** [1 Byte, it indicates the character delimiter for packing serial data to an ethernet packet]

ChannelInfo.**DP_SIZE** [2 Bytes, it indicates the size delimiter for packing serial data to an ethernet packet]

ChannelInfo.**DP_Time** [2 Bytes, it indicates the time delimiter for packing serial data to an ethernet packet]

ChannelInfo.**iTime** [2 Bytes, it indicates how long it will wait idle status on UART port to close the established TCP connection]

ChannelInfo.**bTelnetmode** [1 Bytes, it indicates whether telnet mode is enabled]

Value	Description
0x00	Raw mode
0x01	Telnet mode