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DMR828S and DMR828 Comparison

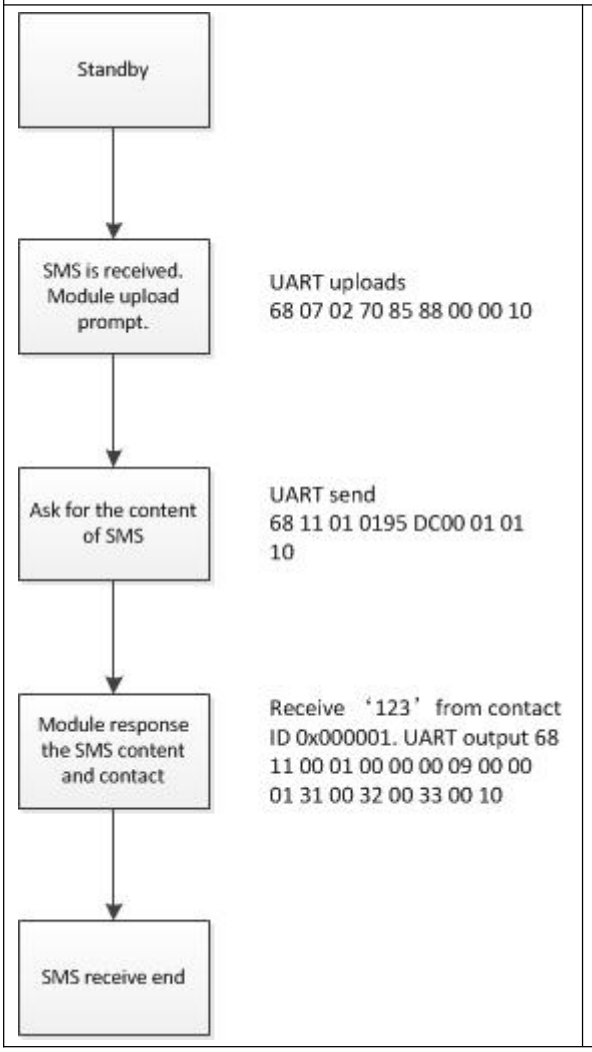
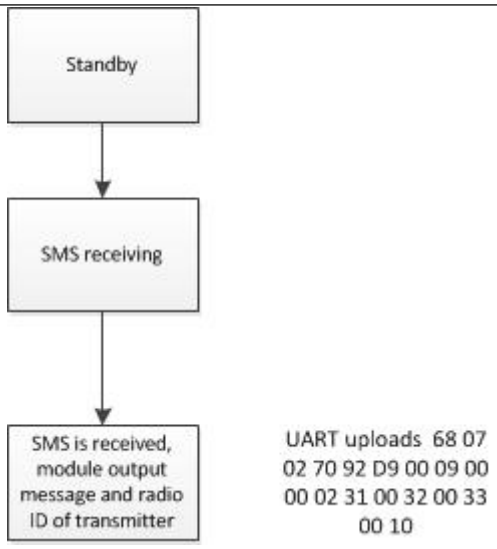
Compared with DMR828, DMR828S has deleted functions such as SCAN, adjusted parameters of some commands such as RSSI and encryption, and adjusted the functions of some commands such as alarm and SMS. Details as follows.

Command	DMR828	DMR828S
Scan	Yes	No
RSSI	5 Levels	127 Levels
Emergency alarm	Output prompt and come with alarm sound	Only output prompt
Duty working mode	Can response to the serial port command under this mode	Can't response to the serial port command without wake up command under this mode
SQ setting command	3 Levels	9 Levels
CXCSS		Do not support CTCSS of 62.5kH
SMS	Cannot communicate with Hytera walkie-talkie	Not compatible with DMR828 SMS, can communicate with Motorola or Hytera walkie-talkie
	After receiving the SMS prompt, need to send the 0x11 command to get the SMS content	The content of SMS is included in the SMS prompt
	Support confirmation SMS	Do not support confirmation SMS
Encryption	DMR828 and DMR828S cannot communicate under Encryption	

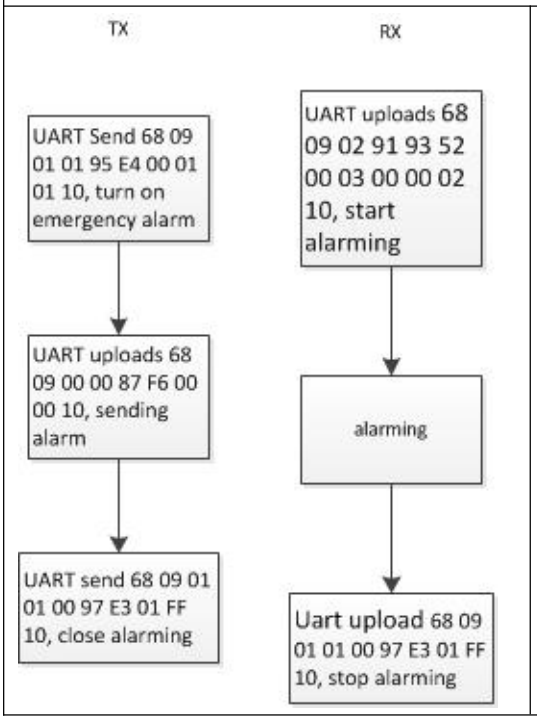
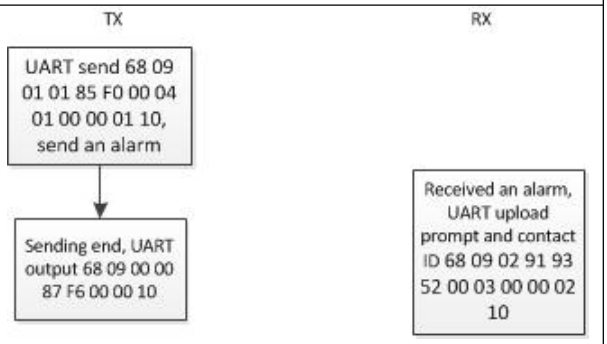
1. RSSI

DMR828	DMR828S
Expanded the range of RSSI	
Response of RSSI 68 05 00 S/R CHKSUM 00 01 RSSI 10 RSSI: 1 byte, signal strength level(0x00~0x05), The higher the value, the stronger of the signal.	Response of RSSI 68 05 00 S/R CHKSUM 00 01 RSSI 10 RSSI: 1 byte, signal strength level(0x00~0x7F), The higher the value, the stronger of the signal.

2. SMS

<table>
<tr><td>DMR828</td><td>DMR828S</td></tr>
<tr><td colspan="2">The SMS of DMR828S cannot communicate with that of DMR828, but it can communicate with the Motorola walkie-talkie.</td></tr>
<tr><td colspan="2">DMR828S delete the confirmation SMS function</td></tr>
<tr><td>68 07 01 01 CHKSUM LEN Msg_type CallNum Msg 10
LEN:2 bytes, message length +4
Msg_type: 1 byte, message type
0x01-> IP confirmed
0x02-> IP unconfirmed
0x09-> group calling
CallNum: 3 bytes, contact ID
Msg: Message content, ASCII format</td><td>68 07 01 01 CHKSUM LEN Msg_type Call_ID Msg 10
LEN:2 bytes,length of message+4
Msg_type: 1 byte, message type
0x01-> Private message
0x09-> Group message
Call_ID: 3 bytes, the contact of receiver of this message
Msg: Message contact, ASCII format</td></tr>
<tr><td colspan="2">The operation process is changed. After the DMR828S receives the SMS, the content of the SMS is directly output, and there is no need to send command 0x11.</td></tr>
<tr><td>
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</td></tr>
</table>

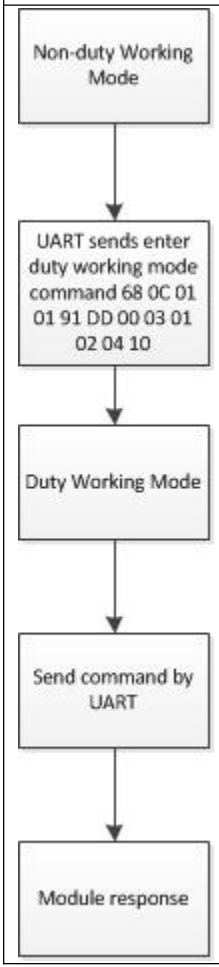
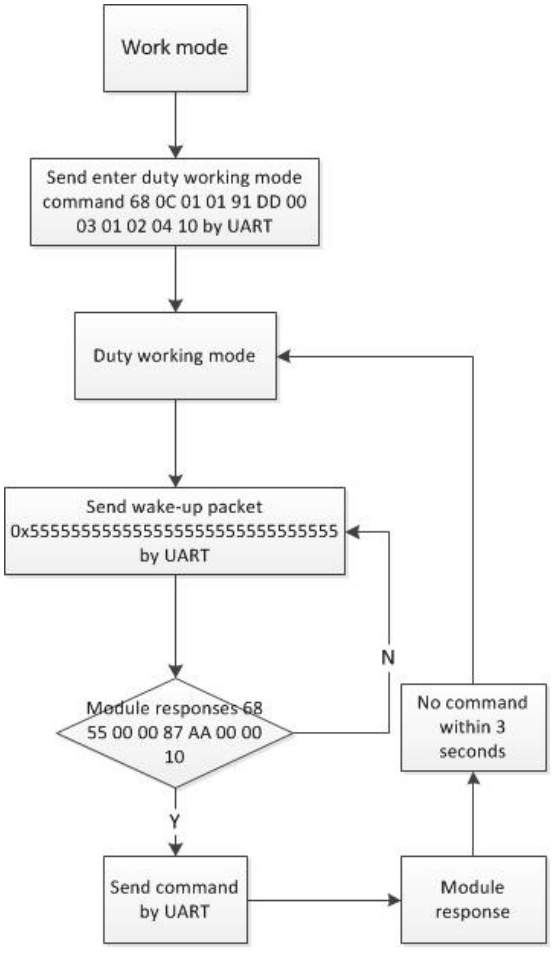
3. Emergency Alarm

DMR828	DMR828S
DMR828S add a parameter of contact ID in alarm command. It also delete the turn off alarm command	
68 09 01 01 CHKSUM 00 01 Alarm 10 Alarm: 1 byte, turn on/off emergency alarm 0x01-> turn on emergency alarm 0xFF-> turn off emergency alarm	68 09 01 01 CHKSUM 00 01 01 Call_ID 10 Call_ID: 3bytes, The group contact ID of receiver.(Only support group call)
Operational process changes	
	

4. SQ

DMR828	DMR828S
Expand the levels of SQ	
68 12 01 01 CHKSUM 00 01 Level 10 Level: 1 byte, SQ level 0x00 -> normal level 0x01 -> strong level 0x02 -> stronger level	68 12 01 01 CHKSUM 00 01 Level 10 Level: 1 byte, SQ level(1~9)

5. Duty Working Mode

DMR828	DMR828S
DMR828 can respond to serial port commands in duty working mode. DMR828S needs to send a wake-up packet before responding to commands. Therefore, the process of sending serial commands has changed.	
	

6. CXCSS Code

DMR828	DMR828S
DMR828S doesn't support the 62.5kHz CTCSS with index 0.	
68 14 01 01 CHKSUM 00 02 RX_CXCSS TX_CXCSS 10 RX_CXCSS: 1byte,CTCSS/CDCSS code,ctcss (0~50), CDCSS (0~83) TX_CXCSS: 1byte,CTCSS/CDCSS code,ctcss (0~50), CDCSS (0~83)	68 14 01 01 CHKSUM 00 02 RX_CXCSS TX_CXCSS 10 RX_CXCSS: 1 byte, index of RX CTCSS/CDCSS code, CTCSS (TPL) 1~50, CDCSS(DPL/ DPL Invert) 0~83 TX_CXCSS: 1 byte, index of TX CTCSS/CDCSS code, CTCSS (TPL) 1~50, CDCSS(DPL/ DPL Invert) 0~83

7. Encryption

DMR828	DMR828S
Add parameters of key in this command	
68 19 01 01 CHKSUM 00 01 SWITCH 10 SWITCH: 1 byte 0x01-> on 0xFF-> off	68 19 01 01 CHKSUM 00 01 SWITCH KEY 10 SWITCH: 1 byte 0x01-> Encryption on KEY: 8 bytes, encryption key. The key of transmitter and receiver must be the same.

8. New command of DMR828S

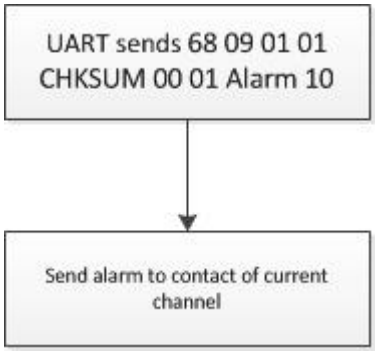
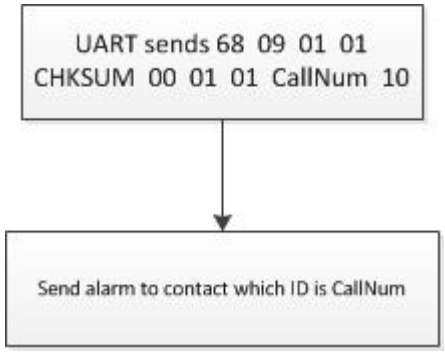
DMR828S	
Set time slot 0x33	Set the time slot of current channel
On/off tone 0x1C	Turn off/on the boot tone, call out tone, etc.
Check the parameters of current channel 0x1D	Check the parameters of current channel
Reset to default parameters 0xF0	Set all the parameters of module to default
Software reset 0xF2	Software reset

9. Deleted commands

DMR828
Frequency scanning on/off command 0x03
Additional funciton 0x0a
Monitor mode command 0x15

10. Compatible Commands

Command	Description	
Emergency Alarm	DMR828S adds a contact number in the alarm command, while the DMR828 does not have a contact number. If sending the alarm command without contact number to DMR828S, it will send alarm to the contact of the current channel. If the contact type of the current channel is not a group call, this command will report an error.	
	68 09 01 01 CHKSUM 00 01 Alarm 10	68 09 01 01 CHKSUM 00 01 01 CallNum 10

<table>
<tr><td></td><td>
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<tr><td rowspan="3">Encryption</td><td colspan="2">There is no key in this command of the DMR828. DMR828S adds key to this command. If sending an encryption command with key to DMR828S , it will set the default key as key.</td></tr>
<tr><td>68 19 01 01 CHKSUM 00 01 SWITCH 10</td><td>68 19 01 01 CHKSUM 00 01 SWITCH KEY 10</td></tr>
<tr><td>Encryption with default key</td><td>Encryption with KEY of command</td></tr>
</table>