4G Communication Protocol

Models : V22,V16,VS5, V5G, V3,V3RS, NS4 GPS Tracker

Version:V3.2_20250711

All data in this protocol follows the format of [manufacturer*device ID*content length*content], where the manufacturer ID is fixed at two bytes and the content length is fixed at four bytes of ASSII code, with the high bit in front and the low bit in the back. For example, 00A2 means the length is 162.

一.Terminal sends command

1. Link maintenance

Terminal sends:
[3G*YYYYYYYYYY*LEN*LK, number of steps, number of rolls, percentage of power]
Example:[3G*8800000015*000D*LK,50,100,100]
Platform replies:
[3G*YYYYYYYYYY*LEN*LK]
Example:[3G*8800000015*0002*LK]
Note: This command is sent at intervals. If the terminal does not receive the reply data, the connection will be reestablished.

2.Location data reporting

Terminal sends:
[3G*YYYYYYYYYY*LEN*UD, location data (see Appendix 1)]
Example:
[3G*2016001000*00BC*UD,120118,070625,A,22.570720,N,113.8620167,E,0.00,188.6,0.0,9,100,51,14188,0,00000010,6,255,460,0,9360,5081,156,9360,4081,129,9360,4151,128,9360,5082,127,9360,4723,122,9360,4082,120,5,buyaoxialian,a0:c5:f2:b0:7.4:d0,-34,3gtc

-5g,92:76:9f:48:4f:20,-48,726,38:37:8b:7:cf:99,-54,3gtc,d0:ae:ec:96:10:54,-63,ceshi,d0:ae:ec:96:10:55,-64,22.4]

Note:
Data content:
UD, command number
180916, date
025723, time
A, gps positioning valid
22.570733, latitude
N, latitude representation
113.8626083, longitude
E, longitude representation
0.00, speed
249.5, direction
0.0, altitude
6, number of satellites
100, gsm signal strength
60, battery
0, number of steps
0, number of flips
00000010,Terminal status, data is in hexadecimal, parsed into binary as 0000 0000 0000 0000 0000 0000 0001 0000
The first 4 bytes indicate the status, and the last 4 bytes indicate the alarm. The 4th bit in the data is 1. According to the data analysis at the end of the document, it indicates that the watch is in a stationary state. For details, please refer to the last part of the document.
7,Number of base stations
255,460,1,9529,21809,158,9529,63555,133,9529,63554,129,9529,21405,126,9529,21242,124,9529,21151,120,9529,63556,119,Base station information
5,WiFi个数
buyaoxialian,a0:c5:f2:b0:7.4:d0,-34,3gtc-5g,92:76:9f:48:4f:20,-48,726,38:37:8b:7:cf:99,-54,3gtc,d0:ae:ec:96:10:54,-63,ceshi,d0:ae:ec:96:10:55,-64,Wi-Fi information
22.4，Positioning accuracy, in meters
The platform does not need to respond. Note: The terminal reports location and status information at set intervals and does not need the platform to respond.

3.Blind spot data transmission

Terminal sends:
[3G*YYYYYYYYYY*LEN*UD2, location data (see Appendix 1)]
Example:
[3G*2016001000*00BD*UD2,120118,070625,A,22.570720,N,113.8620167,E,0.00,188.6,0.0,9,100,51,14188,0,00000010,6,255,460,0,9360,5081,156,9360,4081,129,9360,4151,128,9360,5082,127,9360,4723,122,9360,4082,120,5,buyaoxialian,a0:c5:f2:b0:7.4:d0,-34,3gtc-5g,92:76:9f:48:4f:20,-48,726,38:37:8b:7:cf:99,-54,3gtc,d0:ae:ec:96:10:54,-63,ceshi,d0:ae:ec:96:10:55,-64,22.4]
Platform reply:
None
Note: Supplement the location data generated when not logged into the platform.

4.Alarm data reporting

Terminal Send:
[3G*YYYYYYYYYY*LEN*AL,Location data (see Appendix 1)]

Example:
[3G*2016001000*00BC*AL,120118,070625,A,22.570720,N,113.8620167,E,0.00,188.6,0.0,9,100,51,14188,0,00010010,6,255,460,0,9360,5081,156,9360,4081,129,9360,4151,128,9360,5082,127,9360,4723,122,9360,4082,120,5,buyaoxialian,a0:c5:f2:b0:7.4:d0,-34,3gtc-5g,92:76:9f:48:4f:20,-48,726,38:37:8b:7:cf:99,-54,3gtc,d0:ae:ec:96:10:54,-63,ceshi,d0:ae:ec:96:10:55,-64,22.4]
Platform response:
[3G*YYYYYYYYYY*LEN*AL]
Example:
[3G*8800000015*0002*AL]
Note: After the terminal generates an alarm, it sends an alarm message to the platform. If the terminal does not receive a response, it will report it again.

The platform sends command

1)、General Protocol

1.Get Weather

Terminal Send：[3G*YYYYYYYYYY*LEN*WT,Location data (see Appendix 1)]
Example：
[3G*9403043989*009F*WT,260916,020049,V,22.683546,N,113.9907380,E,0.00,0.0,0.0,0,100,77,0,0,00000000,5,0,460,0,9346,4711,167,9346,4712,126,9360,4151,125,9346,4713,122,9360,4081,119]
Platform response：
[3G*9403043989*009F*WT,Year-Month-Day, Hour:Minute:Second, Weather Note, Weather Number, Current Temperature, Lowest Temperature, Highest Temperature, City Name]
[3G*9403043989*009F*WT,2016-09-26,11:00:00,b6e0d4c6,2,-5,-12,22,6df15733]
Note: Weather Notes are encoded in GB2312, and city names are encoded in Unicode
Weather number: 0 - Sunny 1 - Cloudy 2 - Rain 3 - Snow

2.Data upload interval setting

Platform Send:
[3G*YYYYYYYYYY*LEN*UPLOAD,Time interval]
Example:[3G*8800000015*0009*UPLOAD,600]
Terminal reply:
[3G*YYYYYYYYYY*LEN*UPLOAD]
Example:[3G*8800000015*0006*UPLOAD]
Note: Set the time interval for the terminal to regularly report. This upload interval is for when the watch is in vibration state. When the watch is stationary, it will not transmit position data. Unit: seconds.

3.Monitor

Platform Send:
[3G*YYYYYYYYYY*LEN*MONITOR,Telephone number]
Example:[3G*8800000015*0007*MONITOR,13600000000]
Terminal reply:
[3G*YYYYYYYYYY*LEN*MONITOR]
Example:[3G*8800000015*0007*MONITOR]
Note: The terminal automatically dials back the phone.

4.SOS number setting

Platform Send:
[3G*YYYYYYYYYY*LEN*SOS,Telephone number, telephone number, telephone number]
Example:[3G*8800000015*0027*SOS,00000000000,00000000000,00000000000]
Terminal reply:
[3G*YYYYYYYYYY*LEN*SOS3]
Example:[3G*8800000015*0003*SOS]
Note: Set 3 SOS numbers in sequence. After setting the SOS numbers, when the SOS alarm is triggered, the terminal will call the set numbers. If no one answers, it will call twice in a loop. If the number is answered, it will stop calling and send an alarm SMS to the 3 SOS numbers.

5.Language

[3G*YYYYYYYYYY*LEN*LANG,language]
Example:[SG*8800000015*0006*LANG,1]
Terminal reply:
[3G*YYYYYYYYYY*LEN*LANG]
Example:[SG*8800000015*0004*LANG]

6. Time Zone

[3G*YYYYYYYYYY*LEN*ZONE,Time Zone]
Example:[SG*8800000015*0006*ZONE,8]
Terminal reply:
[3G*YYYYYYYYYY*LEN*ZONE]
Example:[SG*8800000015*0004*ZONE]

7.SMS alarm receiving number

Platform Send:
[3G*YYYYYYYYYY*LEN*CENTER,Telephone number]
Example:[3G*8800000015*0012*CENTER,00000000000]
Terminal reply:
[3G*YYYYYYYYYY*LEN*CENTER]
Example:[3G*8800000015*0006*CENTER]
Note: Set the SMS alarm receiving number, and the terminal's various alarm SMS will be sent to the mobile phone of this number.

8.SOS SMS alarm switch

Platform Send:
[3G*YYYYYYYYYY*LEN*SOSSMS,0 or 1]
Example:[3G*8800000015*0008*SOSSMS,0]
Terminal reply:
[3G*YYYYYYYYYY*LEN*SOSSMS]
Example:[3G*8800000015*0006*SOSSMS]
Note: Set whether to send a text message to the SOS number after an SOS alarm is generated (0: off, 1: on).

9.Low battery SMS alarm switch

Platform Send:
[3G*YYYYYYYYYY*LEN*LOWBAT,0 or 1]
Example:[3G*8800000015*0008*LOWBAT,1]
Terminal reply:
[3G*YYYYYYYYYY*LEN*LOWBAT]
Example:[3G*8800000015*0006*LOWBAT]
Note: Set whether to send a text message to the center number after a low point alarm occurs (0: off, 1: on).

10.Remove the bracelet alarm switch

Platform Send:
[3G*YYYYYYYYYY*LEN*REMOVE,0 or 1]
Example:[SG*5678901234*0008*REMOVE,1]
Terminal reply:
[3G*YYYYYYYYYY*LEN*REMOVE]
Example:[SG*5678901234*0006*REMOVE]
Note: The watch removal alarm switch, 1 is on, 0 is off.

SMS alarm switch of remove the watch:
Platform Send:
[3G*YYYYYYYYYY*LEN*REMOVESMS,0 or 1]
Terminal reply:
[3G*YYYYYYYYYY*LEN*REMOVESMS]
Note: Switch to remove the alarm message from the watch, 1 is on, 0 is off

11.Version Query

Platform Send:
[3G*YYYYYYYYYY*LEN*VERNO]
Example:[3G*8800000015*0005*VERNO]
Terminal reply:
[3G*YYYYYYYYYY*LEN*VERNO,Version Number]
Example:[3G*8800000015*0028*VERNO,G29_BASE_V1.00_2014.04.23_17.46.49]
Note: Query the terminal software version.

12.Immediate positioning command

Platform Send:
[3G*YYYYYYYYYY*LEN*CR]
Example:[3G*8800000015*0002*CR]
Terminal reply:
[3G*YYYYYYYYYY*LEN*CR]
Example:[3G*8800000015*0002*CR]
Note: Wake up the terminal GPS module immediately and keep it in the positioning state for a period of time.

13.Shutdown command

Platform Send:
[3G*YYYYYYYYYY*LEN*POWEROFF]
Example:[3G*5678901234*0008*POWEROFF]
Terminal reply:

[3G*YYYYYYYYYY*LEN*POWEROFF]

Example:[3G*5678901234*0008*POWEROFF]

Note: Shutdown function.

14.Restart

Platform Send:

[3G*YYYYYYYYYY*LEN*RESET]

Example:[3g*5678901234*0005*RESET]

Terminal reply:

[3G*YYYYYYYYYY*LEN*RESET]

Example:[3g*5678901234*0005*RESET]

Note: The terminal restarts after receiving the command. The terminal restarts in the background and will not be displayed.

15.Setting of prohibited time periods during class (new)

Platform Send:

[3G*YYYYYYYYYY*LEN*SILENCETIME2,time period-week,time period-week,time period-week,time period-week]

Example:

[3G*5678901234*0037*SILENCETIME2,21:10-7:30-0111110,21:10-7:30-0111110,21:10-7:30 -0111110,21:10-7:30-0111110]

Terminal reply:

[3G*YYYYYYYYYY*LEN*SILENCETIME2]

Example:

[3G*5678901234*000B*SILENCETIME2]

Note: Set the time range for prohibiting classes, and the week order is: Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday. 0 represents off, and 1 represents on.

16.Step counting time period setting

Platform Send:

[3G*YYYYYYYYYY*LEN*WALKTIME,time period, time period, time period]

Example:[3G*5678901234*002A*WALKTIME,8:10-9:30,10:10-11:30,12:10-13:30]

Terminal reply:

[3G*YYYYYYYYYY*LEN*WALKTIME]

Example:[3G*5678901234*0008*WALKTIME]

Note: Set the time range for step counting to be enabled.

17.Setting the time period for rollover detection during sleep

Platform Send:

[3G*YYYYYYYYYY*LEN*SLEEPTIME,Time period]

Example:[3G*5678901234*0014*SLEEPTIME,21:10-7:30]

Terminal reply:

[3G*YYYYYYYYYY*LEN*WALKTIME]

Example:[3G*5678901234*0009*SLEEPTIME]

Note: Set the time range for rollover detection.

18.Find watch command

Platform Send:

[3G*YYYYYYYYYY*LEN*FIND]

Example:[3G*5678901234*0004*FIND]

Terminal reply:

[3G*YYYYYYYYYY*LEN*FIND]

Example:[3G*5678901234*0004*FIND]

Note: Send this command and the phone will ring for 1 minute.

19.Alarm setting command

Platform Send:

[3G*YYYYYYYYYY*LEN*REMIND,Alarm 1, Alarm 2, Alarm 3]

Example:[3G*5678901234*0018*REMIND,08:10-1-1,08:10-1-2, 08:10-1-3-0111110]

Terminal reply:

[3G*YYYYYYYYYY*LEN*REMIND]

Example:[3G*5678901234*0006*REMIND]

Note:The alarm format is: time-on/off-frequency (1: once; 2: every day; 3: custom)

08:10-1-1: Alarm time 8:10, on, ring once

08:10-1-2: Alarm time 8:10, on, ring every day

08:10-1-3-0111110: Alarm time 8:10, on, custom Monday to Friday on.

20.Course Schedule

Platform Send:

[3G*YYYYYYYYYY*LEN*SCHEDULE,hhmmhhmm-hhmmhhmm,x_x_x-x_x_x]

hhmmhhmm-hhmmhhmm-...: Corresponding to the class time periods of 8 class hours

x_x_x-x_x_x-...: Corresponding to the day of the week _ the number of the class _ the subject (the three parameters are delivered together; the number of the week and the number of class hours are fixed, while the subject is a variable).**The data format is Unicode characters.**

Note: The data for the time periods and subject settings of the 8 class hours are delivered together. All parameters will generate data, that is, the data of the entire curriculum schedule will be delivered together.

Example:

[3G*3916111448*0071*SCHEDULE,07000800-00000000-00000000-00000000-00000000-00000000-00000000-00000000,0031005f0031005f8bed6587]

It indicates the class time period from 7:00 to 8:00, with the format "1_1_Chinese". That is, it refers to the first class on Monday, which is Chinese, and the class time is from 7:00 to 8:00.

Terminal reply

[3G*YYYYYYYYYY*LEN*SCHEDULE]

21.Phone Book

(1)Phonebook setup command (15 for children)

Platform Send(1-5):

[3G*YYYYYYYYYY*LEN*PHB,Number 1, Name 1, Number 2, Name 2, Number 3, Name 3, Number 4, Name 4, Number 5, Name 5]

Example:[3G*5678901234*001B*PHB,313131,597D003100320033]
Terminal reply:
[3G*YYYYYYYYYY*LEN*PHB]
Example:[3G*5678901234*0003*PHB]
Platform Send(6-10):
[3G*YYYYYYYYYY*LEN*PHB2,Number 6, Name 6, Number 7, Name 7, Number 8, Name 8, Number 9, Name 9, Number 10, Name 10]
Example:[3G*8800000015*001C*PHB2,313131,597D003100320033]
Terminal reply:
[3G*YYYYYYYYYY*LEN*PHB2]
Example:[3G*8800000015*0004*PHB2]
Platform Send(11-15):
[3G*YYYYYYYYYY*LEN*PHB3,Number 11, Name 11, Number 12, Name 12, Number 13, Name 13, Number 14, Name 14, Number 15, Name 15]
Example:[3G*8800000015*001C*PHB3,313131,597D003100320033]
Terminal reply:
[3G*YYYYYYYYYY*LEN*PHB3]
Example:[3G*8800000015*0004*PHB3]

Note:This command sets the terminal phone book.
len: send length in hexadecimal format, occupies 2 bytes
number: ascii character
name: Unicode encoding
up to 5 groups of numbers and names, the number does not exceed 20 ascii characters, and the name does not exceed 10 Chinese characters
PHB is 1-5 numbers, phb2 is 6-10 numbers, phb3 is 11-15 numbers

(2) Phonebook settings (30 for the elderly)

Platform Send:
[3G*7893267563*len*PHBX,Number, Name, Phone, Photo Data]
Note:1、TB——Phonebook function (0: None, 1: 10, 2: 15, 3: 0-30 (Elderly version)
2、There can be 0-30 phone numbers
3. Numbers 1-30
4. Photo data can be empty (i.e. no photo is set), but the protocol parameter format remains unchanged (i.e. there will be commas ",")
Terminal reply: [3G*7893267563*0002*PHBX,Status Code]
Status Code:1——Success 0——Failure

(3) Phonebook settings (100 on Android Spreadtrum platform)

Platform Send:
[3G*7893267563*len*PHBX,Number, name, phone number, photo data]
Note:1. TB - Phonebook function (0: None, 1: 10, 2: 15, 3: 0-30 <Elderly version>, 4: 0-100 <Elderly version>)
2、There can be 0-100 phone numbers
3. Numbers 1-100
4. Photo data can be empty (i.e. no photo is set), but the protocol parameter format remains unchanged (i.e. there will be commas ",")
Terminal reply: [3G*7893267563*0002*PHBX,Status Code]
Status Code:1——Success 0——Failure

(4) Phonebook deletion (30/100)

Platform Send:
[3G*7893267563*0002*DPHBX,Number]
Terminal reply: [3G*7893267563*0002*PHBX,Status Code]
Status Code:1——Success 0——Failure

22.WeChat chat (old version)

(1). Intercom function

Platform Send:
[3G*YYYYYYYYYY*LEN*TK,ARM format audio data]
Terminal reply:
[3G*YYYYYYYYYY*LEN*TK,Receiving result]
ARM format audio data needs to be unescaped:
0X7D 0X01 --> 0X7D
0X7D 0X02 --> 0X5B
0X7D 0X03 --> 0X5D
0X7D 0X04 --> 0X2C
0X7D 0X05 --> 0X2A
Receiving result:1—Success
Failure
Terminal Send:
[3G*YYYYYYYYYY*LEN*TK,ARM format audio data]
Platform reply:
[3G*YYYYYYYYYY*LEN*TK,Receiving result]
ARM format audio data needs to be escaped:
0X7D --> 0X7D 0X01
0X5B --> 0X7D 0X02
0X5D --> 0X7D 0X03
0X2C --> 0X7D 0X04
0X2A --> 0X7D 0X05
The terminal requests the recording to be sent:
[3G*YYYYYYYYYY*LEN*TKQ]

(2).Terminal detection offline voice

Send terminal request recording:
[3G*YYYYYYYYYY*LEN*TKQ]
Server Reply:
[3G*YYYYYYYYYY*LEN*TKQ]
Send terminal request for friend's audio recording:
[3G*YYYYYYYYYY*LEN*TKQ2]
Server Reply:
[3G*YYYYYYYYYY*LEN*TKQ2]

23.Phrase display setting command

Platform Send:

[3G*YYYYYYYYYY*LEN*MESSAGE,Phrase Content]

Example:[3G*5678901234*0018*MESSAGE,597D003100320033]

Terminal reply:

[3G*YYYYYYYYYY*LEN*MESSAGE]

Example:[3G*5678901234*0007*MESSAGE]

Note:This command pushes the displayed phrase to the terminal.The phrase is sent to the terminal in unicode encoding (u3G2)

24.Restore factory settings

Platform Send:

[3G*YYYYYYYYYY*LEN*FACTORY]

Example:[3G*8800000015*0007*FACTORY]

Terminal reply:

[3G*YYYYYYYYYY*LEN*FACTORY]

Example:[3G*8800000015*0007*FACTORY]

Note:Restoring the terminal to factory settings.

25.Number of small red flowers setting command

Platform Send:

[3G*YYYYYYYYYY*LEN*FLOWER,Number]

Example:[3G*8800000015*0008*FLOWER,5]

Terminal reply:

[3G*YYYYYYYYYY*LEN*FLOWER]

Example:[3G*8800000015*0006*FLOWER]

Note: Set the number of small red flowers displayed on this screen.

26.Remote photography

Remote photo taking command

[3G*8800000015*len*rcapture]

Terminal reply

Image upload instructions

[3G*8800000015*len*img,5,y,z]

Parameter Y represents: time (year, month, day, hour, minute, second: 160429110950)

Parameter Z represents the photo content

27.Bump to make friends (single friend)

Terminal sends:

[3G*YYYYYYYYYY*LEN*PP,Current time of the watch, location data (see Appendix I)]

Example:

[3G*8800000015*00D4*PP,091046,180916,085033,A,22.570193,N,113.8621950,E,0.48,60.3,0.0,9,100,100,0,0,00000010,7,255,460,1,9529,21809,160,9529,21405,133,9529,63555,133,9529,63554,124,9529,21242,119,9529,21151,118,9529,63574,116,0,23.2]

Platform reply:

Case 1：Making friends Success

[3G*8800000015*LEN*pp,ID]

Example：

[3G*8800000015*000A*pp,8800000015]

Case 2：Making friends Failure

[3G*8800000015*LEN*pp,X]
The value of X is 1, which means that the other party has made friends, and 2, which means that you have made friends.
Example:
[3G*8800000015*0001*pp,1]
[3G*8800000015*0002*pp,2]

28.Remove Bump to make friends

Platform Send command:
[3G*8800000015*0003*PPR]
The terminal does not need to reply

29.Scene Mode

Platform Send:
[3G*YYYYYYYYYY*LEN*profile,x]
The value of X can be 1, 2, 3, or 4 respectively:
- A value of 1 indicates vibration plus ringing.
- A value of 2 indicates ringing only.
- A value of 3 indicates vibration only.
- A value of 4 indicates silent mode.

Terminal reply:
[3G*YYYYYYYYYY*LEN*profile]

30.Body temperature (BT=2, new version)

(1)New version of the temperature reporting protocol

Terminal Send:
[3G*YYYYYYYYYY*LEN*btemp2,type,temp]
Type : Measurement mode: 0: Forehead mode 1: Wrist mode
Temp : Body Temperature,

When temp=0, the temperature is too low (measurement abnormality)
When temp=1, the temperature is too high (measurement abnormality)

Server Reply:
[3G*YYYYYYYYYY*LEN*btemp2]

(2)Real-time temperature measurement send command

Server sends:
[3G*YYYYYYYYYY*LEN*bodytemp2]

Terminal reply:
[3G*YYYYYYYYYY*LEN*bodytemp2]

(3)Temperature interval measurement send command

Server sends:
[3G*YYYYYYYYYY*LEN*bodytemp,arg1, arg2]
arg1 : 0: Interval measurement off 1: Interval measurement on
arg2 : 2: Interval time, unit: hours, value: 1-12 (no reporting in night mode)

Terminal reply:
[3G*YYYYYYYYYY*LEN*bodytemp]

(4)Abnormal body temperature reminder setting and delivery protocol (function configuration item: BW=1)

Server sends:
[3G*YYYYYYYYYY*LEN*BTWARNSET,lowbt,highbt,open,type,tel]
lowbt : Low temperature reminder critical point (double data type)
highbt: High temperature warning critical point (double data type)
open: switch: 0: off 1: on
type: Reminder Type: 0: SMS 1: Call
tel: Reminder receiving number

Terminal reply:
[3G*YYYYYYYYYY*LEN*BTWARNSET]

(5)Temperature measurement at regular intervals send command

(Note: This function is not a cyclic measurement function. Timing measurement and cyclic measurement are two functions. When BT=2, there is a cyclic measurement function. The timing measurement function configuration is TM=1)
Server sends:
[3G*YYYYYYYYYY*LEN*BTTIMESET,count,time_str]
count : Number of timing measurement points
time_str : Timing measurement setting format string: time point-typeTime point: hour and minute (24-hour system), type: 0: every day 1: once
Example: [3G*YYYYYYYYYY*LEN*BTTIMESET,3,08:30-0,18:00-1,22:00-1]

Terminal reply:
[3G*YYYYYYYYYY*LEN*BTTIMESET]

31.Function control switch settings

[3G*9403043989*len*APPLOCK,WX-1, PH-1, DW-1, YJ-1]

Note: 1 - On 0 - Off
Mobile mode function switch mark: PH - Default: On
GPS positioning function switch mark: DW - Default: On
Night mode switch mark: YJ - Default: Off
[3G*9403043989*len*APPLOCK]

2)、Special function protocol for the elderly

1.Heart Rate Protocol

Platform Send:
[3G*8800000015*len*hrtstart,x]
x is the upload interval in seconds. The minimum time for continuous upload is not less than 300 seconds and the maximum is not more than 65535 seconds.
Example：[3G*8800000015*len*hrtstart,300]
The terminal will detect the heart rate every 300 seconds

If x is 1, it means the terminal heart rate is uploaded once and automatically closed after uploading.
If x is 0, it means the terminal heart rate upload is closed.
Terminal reply
[3G*8800000015*len*hrtstart]

2.Blood pressure and heart rate upload (measuring blood pressure and heart rate simultaneously)

Terminal upload：
[3G*8800000015*len*bphrt,xx,xx,xx,xx,xx,xx,xx]

The first parameter represents systolic blood pressure, with 0 indicating invalidity.
The second parameter represents diastolic blood pressure, with 0 indicating invalidity.
The third parameter represents heart rate, with 0 indicating invalidity.

The fourth parameter represents height in centimeters.
The fifth parameter represents gender: 1 for male and 2 for female.
The sixth parameter represents age.
The seventh parameter represents weight in kilograms.

Platform reply：
[3G*8800000015*len*bphrt]

3.Blood Oxygen Reporting Protocol
Terminal upload:

[3G*YYYYYYYYYY*LEN*oxygen,type,oxy]
type:Measurement type: 0 - Active measurement on the device side
oxy：Blood oxygen level, double type

Server Reply：
[3G*YYYYYYYYYY*LEN*oxygen,status]
status:Response Status Code: 1: Normal 0: Processing exception -2: Parameter error

3.Fall alarm sensitivity setting function setting (function configuration item: LS=3+6)

Note: LS — Fall alarm sensitivity setting function (current value + maximum value)
Default: None (0+0)
Note: Concatenated with "+" (the larger the value, the lower the sensitivity)

1 <= Current sensitivity value <=Maximum value

Server sends:
[3G*YYYYYYYYYY*LEN*LSSET,ls]
ls ： Sensitivity setting format: Current value + Maximum value, for example: 3+6
Terminal reply：
[3G*YYYYYYYYYY*LEN*LSSET]

Note: If there is a modification issued by the APP side, the modified value must be reported each time the function configuration is reported, rather than the default value set during software production.

4.Fall alarm command

Platform Send：
[3G*YYYYYYYYYY*LEN*FALLDOWN,X,Y]
X:Fall alarm switch.
Y, switch for whether to call the center number after a fall
Terminal reply
[3G*YYYYYYYYYY*LEN*FALLDOWN]

、3) 3G/4G special protocol

1. 3G or 4G_Non-CDMA reporting command

Terminal upload:
[3G*YYYYYYYYYY*LEN*UD_Type, location data (see Appendix I)]
UD_Type：UD_WCDMA, UD_TDSCDMA, UD_LTE,
WCDMA和TDSCDMA is 3G, such as China Unicom.
UD_LTE is 4G, such as China Mobile.

2. 4G_CDMA Reporting command

[3G*YYYYYYYYYY*LEN*UD_Type, location data (see Appendix II)]

UD_CDMA is a CDMA standard, such as China Telecom.
CDMA base station information includes: SID, NID, BID
To determine the longitude and latitude of a CDMA base station using its code, it is essential to know three base station data points: Sid, Nid, and Bid, and none of them can be missing.

SID (System Identification Number) is a system identification code. Each prefecture-level city has only one unique SID.
NID (Network Identification Number) is a network identification code managed by each local network, that is, allocated by prefecture-level branches. Each prefecture-level city may have 1 to 3 NIDs.
BID (Base Station Identification Number) refers to a specific cell in the network, which can be understood as a base station.。

3. 4G_CDMA alarm reporting

[3G*YYYYYYYYYY*LEN*AL_Type, location data (see Appendix II)]
AL_CDMA is a CDMA standard, such as China Telecom.
CDMA base station information includes: SID, NID, BID
To determine the longitude and latitude of a CDMA base station using its code, it is essential to know three base station data points: Sid, Nid, and Bid, and none of them can be missing.。
SID (System Identification Number) is a system identification code. Each prefecture-level city has only one SID, which is unique.
NID (Network Identification Number) is a network identification code managed by each local network, that is, allocated by prefecture-level branches. Each prefecture-level city may have 1 to 3 NIDs.

BID (Base Station Identification Number) refers to a specific cell in the network, which can be understood as a base station.

Appendix

Appendix I: Location Data Note

Item	Example(ASII Code)	Note
Date	120414	(Date, Month, Year) April 12, 2014
Time	101930	(Hour, Minute, Second) 10:19:30
Positioning	A	A: Positioned V: Not Positioned
Latitude	22.564025	According to the DD.DDDDDD format definition, this latitude value is:22.564025.
Latitude ID	N	N stands for north latitude and S stands for south latitude.

Longitude	113.242329	According to the DDD.DDDDDD format definition, this longitude value is:113.242329.
Longitude ID	E	E stands for east longitude, W stands for west longitude
Speed	5.21	5.21 km/h.
Direction	152	Direction is 152 degrees.
Altitude	100	Unit is meter
Number of satellites	9	Indicates the number of GPS satellites
GSM signal strength	100	Indicates the current GSM signal strengt (0-100)
Battery level	90	Indicates the current battery level percentage
Number of steps	1000	The number of steps is 1000
Number of rollovers	50	Roll 50 times
Terminal State	0	Expressed in hexadecimal string, the meanin is as follows:
		The upper 16 bits indicate alarm, and th lower 16 bits indicate status.
		Bit position (starting from 0) Meaning (1 is valid)
		0 Low power state
		1 Out of fence state
		2 In fence state
		3 Bracelet on and off state
		4 Watch running and static state
		16 SOS alarm
		17 Low power alarm
		18 Out of fence alarm
		19 In fence alarm
		20 Bracelet removal alarm
		21 Elderly watch SOS alarm (fall)
		22 Abnormal heart rate alarm
Number of base stations	4	Report the number of base stations, 0 means n base station information is reported

Connected base station ta	1	GSM delay
MCC country code	460	460 represents China
MNC network number	2	02 represents China Mobile
Connected base station location area code	10133	Area code
Connected base station number	5173	Base station number
Connected base station signal strength	100	Signal strength
Nearby base station 1 location area code	10133	Area code
Nearby base station 1 number	5173	Base station number
Nearby base station 1 signal strength	100	Signal strength
Nearby base station 2 location area code	10133	Area code
Nearby base station 2 number	5173	Base station number
Nearby base station 2 signal strength	100	Signal strength
Nearby base station 3 location area code	10133	Area code
Nearby base station 3 number	5173	Base station number
Nearby base station 3 signal strength	100	Signal strength
…	…	…
Wifi information quantity	5	Number of Wifi (up to 5), sorted by signal strength.
Wifi 1 name	rrr	Name of the first wifi
Wifi 1 MAC address	1c:fa:68:13:a5:b4	MAC address of the first wifi
Wifi 1 signal strength	-61	Signal strength of the first wifi
Wifi 1 name	abc	Name of the second wifi

Wifi 1 MAC address	1c:fa:68:13:a5:b5	MAC address of the second wifi
Wifi 1 signal strength	-87	Signal strength of the second wifi
…	…	…
n	23.6	Positioning accuracy

A

Latitude	22.564025	According to the DD.DDDDDD format definition, this latitude value is: 22.564025.
Latitude ID	N	N stands for north latitude and S stands for south latitude.
Longitude	113.242329	According to the DDD.DDDDDD format definition, this longitude value is: 113.242329.
Longitude ID	E	E stands for east longitude, W stands for west longitude
Speed	5.21	5.21 km/h.
Direction	152	Direction is 152 degrees.
Altitude	100	Unit is meter
Number of satellites	9	Indicates the number of GPS satellites
GSM signal strength	100	Indicates the current GSM signal strength (0-100)
Battery level	90	Indicates the current battery level percentage
Number of steps	1000	Step count is 1000
Number of rollovers	50	Rolls 50 times
Terminal State	00000000 (Hexadecimal)	Represented as a binary string
		0000 0000 0000 0000 0000 0000 0000 0000 The meaning is as follows:

		The high 16 bits on the left indicate the alarm, and the low 16 bits on the right indicate the status.
		Bit (starting from 0) Meaning (valid at 1)
		0 Low power state
		3 Bracelet on and off state
		4 Watch running and static state
		16 SOS alarm
		17 Low power alarm
		20 Bracelet removal alarm
		21 Fall alarm
		22 Abnormal heart rate alarm
Number of base stations	1	Report the number of base stations, 0 means no base station information is reported
Connected base station ta	1	GSM delay
MCC country code	460	460 represents China
MNC network number	2	02 represents China Mobile
SID	10133	System identification code
NID	5173	Network identification code
BID	100	Base station
Wifi information quantity	5	Number of Wifi (up to 5), sorted by signal strength.
Wifi 1 name	rrr	Name of the first wifi information
Wifi 1 MAC address	1c:fa:68:13:a5:b4	MAC address of the first wifi
Wifi 1 signal strength	-61	Signal strength of the first wifi
Wifi 1 name	abc	Name of the second wifi
Wifi 1 MAC address	1c:fa:68:13:a5:b5	MAC address of the second wifi

Wifi 1 signal strength	-87	Signal strength of the second wifi
…	…	…

ppendix II: 4g_CDMA Location Data Note

1. Call Logs

Terminal reporting:
[3G*YYYYYYYYYY*LEN*calllog,tel,contact_name,type,status,call_timestamp,call_seconds]
tel:Call number
contact_name :Contact name (unicode encoding)
type :Call type (1-incoming call, 2-outgoing call)
status :Call status (1-connected, 2-not connected)
call_timestamp :Call initiation timestamp (unit: seconds)
call_seconds :Call seconds
Server Reply:
[3G*YYYYYYYYYY*LEN*calllog,status]
status :Report status (0-Failure, 1-Success, -1-Server error)

Watch password verification code to check whether the device is bound

Terminal reporting:
[3G*YYYYYYYYYY*LEN*DEVPWDCHECKBIND
Server Reply:
[3G*YYYYYYYYYY*LEN*DEVPWDCHECKBIND,status, isBind]
Success, -2-Parameter error, -1, server busy status.isBind:status is returned when it is 1, 0-unbound, 1-bound

ICCID Reporting Command

[3G*8800000015*len*ICCID, iccid, imei, imsi, eid, protocol]
Protocol Value: Optional mqtt、1wm2m
Iccid is a required parameter. Other parameters can be empty, but must be enclosed in a comma (,) format.
Example:[3G*8800000015*len*ICCID,89860041191504366046,,,,mqtt]

Command for reporting IMEI on the watch

[3G*YYYYYYYYYY*LEN*RYIMEI,imei]
Server Reply
[3G*YYYYYYYYYY*LEN*RYIMEI,status]
Status：1 Success 0：abnormal（Failure）