

# GPRS Communication Protocol Version:V1.9

## catalogs

Description: .....	2
I. The terminal sends a command (the device automatically reports or requests) .....	3
1. Link Hold .....	3
2. Location data reporting .....	4
2.1 2G networks .....	4
2.2 3G or 4g non-CDMA network: .....	5
2.3 CDMA Networks .....	5
3. Alarm data reporting .....	5
3.1 2G networks .....	5
3.2 3G or G4G_Non-CDMA Networks .....	6
3.3 CDMA networks .....	6
4. CONFIG directive .....	6
5. ICCID Directive .....	6
6. Terminal detection of offline voice (watch) .....	7
7. appcontacttel instruction .....	7
8. DEVICEFUNCCOUNT, FFZDPAYH5, appcontacttel instructions .....	7
9. RYIMEI Directive .....	7
10. wwdimgq .....	7
11. Getting the weather <small>(A small number of devices cannot see the weather, but must answer if the device requests it.)</small> .....	8
II. The platform sends instructions .....	8
1. Data upload interval setting .....	8
2.SOS number setting .....	9
3. IP port settings (commonly used for multiple servers) .....	10
4. Restore factory settings .....	10
5. Setting the language and time zone .....	10
6. Version query .....	10
7. Reboot .....	11
8. Manual positioning commands .....	11
9. Shutdown command .....	11
10. Step counting time period setting .....	11
11. Flip detection time period setting .....	12
112. Classes disable time period setting / do not disturb mode (children's table has) .....	12
113. Find watch command (or known as device ringing) .....	13
14. Alarm Clock Setting Instructions .....	13
15. Voice version of medication reminder (terminal response required) .....	13
16. Voice chat intercom function (micro chat intercom) .....	14
17. Phrase display setting command (microchat send text) .....	15
18. Setting up the phone book .....	15
18.1 Without headshots (children's version) .....	15

18.2 with avatar (Elderly version, not supported yet) .....	16
19. Profiles (not supported by all watches) .....	17
20. Electronic security fence .....	17
21. <b>Fall alarm</b> (falls to be optimized) .....	17
22. Low power SMS alarm switch .....	18
23. <b>Turn on SMS collection:</b> .....	18
24. Do-not-call-switch-down protocol for strangers (switch) .....	19
25. <b>Timing switch protocol</b> .....	19
26. <b>Automatic answering</b> .....	19
[3g*9403043989*len*aa,1] .....	19
Appendix I: 3G2g/3G/4g_Non-CDMA Location Data Description .....	20
Appendix II: 4g_CDMA Location Data Description .....	22
Appendix III: Decoding of microchat videos and microchat pictures: .....	23

**The protocol of all data in accordance with the [vendor \* device ID \* content length \* content] format, in which the vendor identification is fixed to two bytes, content] length is fixed to four bytes of the ASCII code, the high position in front of the status in the back, for example, the length of the FFFF said 65535.**

**Description:**

- 1) If the server side receives **AQSH** string or hexadecimal data **starting with FF**, it means **the communication is encrypted**, please contact customer service.
- 2) If the server **receives unknown protocols several times**, please consult customer service.

# I. The terminal sends a command to (the device is automatically reported or requested)

## 1. Link maintenance

(1)

Terminal sends.

[CS\*YYYYYYYYYY\*LEN\*LK]

Example: [3G\*8800000015\*0002\*LK]

Platform Response.

[CS\*YYYYYYYYYY\*LEN\*LK]

Example: [3G\*8800000015\*0002\*LK]

Explanation: Link hold data is sent every 10 minutes, if the terminal does not receive a reply from the server, it will be sent every half a minute, and if it fails to connect to the server for three times, the terminal will disconnect and re-establish the connection.

(2) Terminal Transmission.

[CS\*YYYYYYYYYY\*LEN\*LK, 步数, 翻滚次数, 电量百分数]

Example: [3G\*8800000015\*000D\*LK, 50, 100, 100]

Platform Response.

[CS\*YYYYYYYYYY\*LEN\*LK]

Example: [3G\*8800000015\*0002\*LK]

Explanation: Link hold data is sent once every 10 minutes, if the terminal does not receive a reply from the server, it will be sent once every half a minute, and if it fails to connect to the server for three times, the terminal will disconnect and re-establish the connection.

Both of these scenarios are possible.

Note: customers docking server must dock this, this is not docked, the long connection is no way to maintain, the back of the data you want to pass up, a lot of customers server to do the location of the data do not dock this, and then asked why there is no location data, in fact, heartbeat packets are not docked well.

## 2. Location data reporting

### 2.1 2G networks

Terminal sends.

[CS\*YYYYYYYYYY\*LEN\*UD, 位置数据(见附录一)]

Example.

[3g\*8800000015\*00f6\*ud, 180916, 025723, a, 22.570733, n, 113.8626083, e, 0.00, 249.5, 0.0, 6, 100, 60, 0, 0, 00000010, 7, 255, 460, 1, 9529, 21809, 158, 9529, 63555, 133, 9529, 63554, 129, 9529, 21405, 126, 9529, 21242, 124, 9529, 21151, 120, 9529, 63556, 119, 0, 40.7]

Description:

Data content.

UD3, command number

180916, date

025723, Time

A, gps location is valid

22.570733, latitude

N, for latitude

113.8626083, longitude

E, longitude

0.00, speed

249.5, Direction

0.0, elevation

6, Number of satellites

100, gsm signal strength

60, power

0, Steps

0, number of flips

00000010, Terminal status, data is hexadecimal, parsed into binary as 0000 0000 0000 0000 0000 0000 0001 0000

The first 4 bytes indicate the status, the next 4 bytes indicate the alarm, and the 4th bit in the data is 1, which indicates that the watch is stationary when parsed against the data at the end of the document. 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

0, Number of WiFi

40.7, Positioning accuracy in meters

Description: The terminal reports **position and status** information at set intervals and does not need the platform to reply.

## 2.2 3G or 4g non-CDMA network:

Terminal sends.

[CS\*YYYYYYYY\*LEN\*UD\_类型, 位置数据(见附录一)]

UD\_type: UD\_WCDMA, UD\_TDSCDMA, UD\_LTE,

WCDMA and TDSCDMA are 3G, e.g. China Unicom

UD\_LTE is 4G, e.g. China Mobile

Example:

[3g\*8800000015\*0130\*ud\_lte, 300519, 100618, v, 22. 566833, n, 113. 867482, e, 22. 0, 1. 585, -36. 28  
5, 19, 100, 80, 0, 0, 00000000, 1, 1, 460, 00, 9360.

225048919, 100, 5, LEKEMI, dc:fe:18:57:a5:ef, -47, ChinaNet-ifqN, dc:c6:4b:14:28:84, -48, Chin  
aNet-VMxi, d0:0f:6d:7f:bf:6b, -54, ChinaNet-sghp , 8c:14:b4:3d:fd:10, -65, ChinaNet-F2EW, 40:  
f4:20:e3:9d:5a, -66, 7. 3593774]

## 2.3 CDMA networks.

[CS\*YYYYYYYY\*LEN\*UD\_类型, 位置数据(见附录二)]

UD\_CDMA is the CDMA system, e.g. China Telecom

CDMA base station information including: SID, NID, BID

To determine the latitude and longitude location of the base station through the cdma base station code, you must know the Sid, Nid, and Bid base station data, and you can't do without any of them.

The SID is the System Identification Number, which is unique to one sid per prefecture. NID is the network identification number, which is managed by each local network, that is, it is assigned by the local branch office. There may be 1 to 3 NIDs per local level. The BID represents a cell in the network, which can be understood as a base station.

# 3. Alarm data reporting

## 3.1 2G networks

Terminal sends.

[CS\*YYYYYYYY\*LEN\*AL, 位置数据(见附录一)]

Example.

[3g\*8800000015\*00cd\*a1, 180916, 064153, a, 22. 570512, n, 113. 8623267, e, 0. 00, 154. 8, 0. 0, 11, 10  
0, 100, 0, 0, 00100018, 7, 0, 460, 1, 9529, 21809, 155,

9529, 21242, 9529, 21405, 131, 9529, 63554, 131, 9529, 63555, 130, 9529, 63556, 130

9529, 21242, 132, 9529, 21405, 131, 9529, 63554, 131, 9529, 63555, 130, 9529, 63556, 118, 9529, 21869,  
116, 0, 12. 4]

Platform Response.

[CS\*YYYYYYYY\*LEN\*AL]

Example: [3G\*8800000015\*0002\*AL]

Description: The terminal sends alarm information to the platform after generating an alarm, if the terminal does not receive a reply, it will report regularly until it receives an alarm confirmation.

### 3.2 3G or 4G\_Non-CDMA Networks

Terminal sends.

[CS\*YYYYYYYYYY\*LEN\*AL\_类型, 位置数据(见附录一)]

AL\_Type: AL\_WCDMA, AL\_TDSCDMA, AL\_LTE.

WCDMA and TDSCDMA are 3G, e.g. China Unicom

AL\_LTE is 4G, e.g. China Mobile

Example:

[3g\*8800000015\*0130\*a1\_lte, 300519, 095537, v, 22.567022, n, 113.866446, e, 22.0, 318.579, 81.264, 0, 100, 80, 0, 0, 00010000, 1, 1, 460, 00, 9360, 225048919, 100, 5, ChinaNet-ifqN, dc:c6:4b:14:28:84, -48, LEKEMI, dc:fe:18:57:a5:ef, -56, ChinaNet-VMxi, d0:0f:6d:7f:bf:6b, -49, ChinaNet-sghp, 8c:14:b4:3d:fd:10, -62, ChinaNet-vyC4, 48:a7:4e:88:5c:10, -75, 2.6328564]

### 3.3 CDMA network

[CS\*YYYYYYYYYY\*LEN\*AL\_类型, 位置数据(见附录二)]

AL\_CDMA is the CDMA system, e.g. China Telecom

CDMA base station information including: SID, NID, BID

To determine the latitude and longitude location of the base station through the cdma base station code, you must know the Sid, Nid, and Bid base station data.

The SID is the System Identification Number, which is unique to one sid per prefecture. NID is the network identification number, which is managed by each local network, that is, it is assigned by the local branch office. There may be 1 to 3 NIDs per local level. The BID represents a cell in the network, which can be understood as a base station.

## 4. CONFIG command

Terminal sends.

Example: [3G\*9516810529\*LEN\*CONFIG, data]

Platform Response.

Example: [3G\*9516810529\*0008\*CONFIG, 1]

Note: The customer does not have to parse the data uploaded by the terminal.

## 5. ICCID command

No need to reply.

**Note:** Very few devices require an answer, to answer or not, just observe if the server receives this protocol **multiple times** at **fixed** intervals! If it is received several times, an answer is required.

## 6. Terminal Detection Offline Voice (watch)

Terminal request recordings are sent out.

[3G\*YYYYYYYYYY\*LEN\*TKQ]

Server Reply:

[3G\*YYYYYYYYYY\*LEN\*TKQ]

The terminal requests a buddy recording to be sent down:

[3G\*YYYYYYYYYY\*LEN\*TKQ2]

Server Reply:

[3G\*YYYYYYYYYY\*LEN\*TKQ2]

## 7. appcontacttel command

No need to reply.

## 8. DEVICEFUNCCOUNT, FFZDPAYH5, appcontacttel commands

No need to reply.

## 9. RYIMEI command

Terminal sends.

Example: [3G\*9516810529\*LEN\*RYIMEI,data]

Platform Response.

Example: [3G\*9516810529\*0008\*RYIMEI,1]

**Note:** Individual models of devices can not answer, whether to answer or not, just need to observe whether the server receives this protocol **several times** at **a fixed** time interval! If it is received several times, it is necessary to answer.

## 10. wdingq

No need to reply.

## 11. Getting the weather ( A small number of devices can't see the weather but

have to answer if the device requests it)

Terminal Send:

2G 网络[CS\*YYYYYYYYYYY\*LEN\*WT,位置数据(见附录一)] 或

4G 网络[CS\*YYYYYYYYYYY\*LEN\*WT\_LTE,位置数据(见附录一)]

Example:

[3g\*9403043989\*009f\*wt\_lte, 260916, 020049, v, 22. 683546, n, 113. 9907380, e, 0. 00, 0. 0, 0. 0, 0, 1  
00, 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 Description, Weather  
Number, Current Temperature, Minimum Temperature, Maximum Temperature, City Name]

[3G\*9403043989\*009F\*WT\_LTE, Year-Month-Day, Hour:Minute:Second, Weather Description, Weather  
Number, Current Temperature, Minimum Temperature, Maximum Temperature, City Name]

Example:

[3g\*9403043989\*009f\*wt, 2016-09-24, 11:00:00, b6e0d4c6, 2, -5, -12, 22, 316df15733]

Note: Weather descriptions are encoded in GB2312, city names are encoded in Unicode.

Weather code: 0 - sunny 1 - cloudy 2 - rainy 3 - snowy

The year and month of the reply must match the current year and month of the device to be considered valid

Both need to reply as the watch sometimes switches to a 2G network

## II. Commands sent from the platform

### 1. Data upload interval setting

Platform sends.

[CS\*YYYYYYYYYYY\*LEN\*UPLOAD, 时间间隔] 时间间隔单位秒

Instance: [3G\*8800000015\*000A\*UPLOAD, 600]

Terminal Response.

[CS\*YYYYYYYYYYY\*LEN\*UPLOAD]

Example: [3G\*8800000015\*0006\*UPLOAD]

Description: Sets the interval for the timed upload from the terminal. This upload interval is for when the watch is in the vibration state, and the position data is not transmitted when the watch is stationary.

FOLLOW MODE: [3G\*8800000015\*0009\*UPLOAD,60] ---- not recommended  
Normal Mode: [3G\*8800000015\*000A\*UPLOAD,600] ---- Recommendation  
Power saving mode: [3G\*8800000015\*000B\*UPLOAD,3600]  
Hibernation Mode: [3G\*2503210496\*000C\*UPLOAD,60000] ---- Recommended The device does not upload the location actively, you can send CR command to locate the location manually, the protocol refers to CR command. When you want to know the location, you can trigger the CR command, which is very common and most power-saving.

## 2.SOS number setting

### (1) 1st SOS number setting

Platform sends.

[CS\*YYYYYYYYYY\*LEN\*SOS1, 电话号码]

Example: [3G\*8800000015\*0010\*SOS1,0000000000]

Terminal Response.

[CS\*YYYYYYYYYY\*LEN\*SOS1]

Example: [3G\*8800000015\*0004\*SOS1]

### (2) 2nd SOS number setting

Platform sends.

[CS\*YYYYYYYYYY\*LEN\*SOS2, 电话号码]

Example: [3G\*8800000015\*0010\*SOS2,0000000000]

Terminal Response.

[CS\*YYYYYYYYYY\*LEN\*SOS2]

Example: [3G\*8800000015\*0004\*SOS2]

### (3) 3rd SOS number setting

Platform sends.

[CS\*YYYYYYYYYY\*LEN\*SOS3, 电话号码]

Example: [3G\*8800000015\*0010\*SOS3,0000000000]

Terminal Response.

[CS\*YYYYYYYYYY\*LEN\*SOS3]

Example: [3G\*8800000015\*0004\*SOS3]

### (4) Simultaneous setting of 3 SOS numbers

Platform sends.

[CS\*YYYYYYYYYY\*LEN\*SOS, 电话号码, 电话号码, 电话号码]

Example: [3G\*8800000015\*0027\*SOS,0000000000,0000000000,0000000000]

Terminal Response.

[CS\*YYYYYYYYYY\*LEN\*SOS3]

Example: [3G\*8800000015\*0003\*SOS]

Explanation:After setting SOS number,when triggering sos alarm,the terminal will make a call to the set numbers,and if there is no answer,it will make two rounds of circular dialing,and after answering,it will not continue to make calls.

### 3. IP port setting (commonly used for multiple servers)

Platform sends.

[CS\*YYYYYYYYYY\*LEN\*IP, IP 或域名, 端口]

Example: [3G\*8800000015\*0014\*IP, 113. 81. 229. 9, 5900]

Terminal Response.

This command is not answered by the terminal, so it disconnects the current connection and connects to a new server.

Description:Set the IP and port to connect to the platform.

### 4. Restore factory settings

Platform sends.

[CS\*YYYYYYYYYY\*LEN\*FACTORY]

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

Terminal Response.

[CS\*YYYYYYYYYY\*LEN\*FACTORY]

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

Explanation:When the terminal is restored to factory settings, all the numbers set in it will be cleared.

### 5. Setting the language and time zone

Platform sends.

[CS\*YYYYYYYYYY\*LEN\*LZ, 语言, 时区]

Example: [3G\*8800000015\*0006\*LZ, 1, 8]

Terminal Response.

[CS\*YYYYYYYYYY\*LEN\*LZ]

Example: [3G\*8800000015\*0002\*LZ]

Description:Set the language and time zone of the terminal.

The following parameter values are for the languages supported by the terminal:

0: English (supported)

1: Simplified Chinese (supported)

Note: Not all items support these 10 languages, individual watches support more languages, please inquire for details.

### 6. Version query

Platform sends.

[CS\*YYYYYYYYYY\*LEN\*VERNO]

Example: [3G\*8800000015\*0005\*VERNO]

Terminal Response.

[CS\*YYYYYYYYYY\*LEN\*VERNO, 版本号]

Example: [3G\*8800000015\*0028\*VERNO, G29\_BASE\_V1.00\_2014.04.23\_17.46.49]

Description:Queries the terminal software version.

## 7. Reboot

Platform sends.

[CS\*YYYYYYYYYY\*LEN\*RESET]

Example: [3G\*8800000015\*0005\*RESET]

Terminal Response.

[CS\*YYYYYYYYYY\*LEN\*RESET]

Example: [3G\*8800000015\*0005\*RESET]

Explanation:The terminal is restarted after receiving the command. The terminal is restarted in the background and will not behave.

## 8. Manual positioning instructions

Platform sends.

[CS\*YYYYYYYYYY\*LEN\*CR]

Example: [3G\*8800000015\*0002\*CR]

Terminal Response.

[CS\*YYYYYYYYYY\*LEN\*CR]

Example: [3G\*8800000015\*0002\*CR]

Description:Immediately wake up the terminal GPS positioning function, continuous positioning for 3 minutes, according to the positioning data uploaded once every 20 seconds, after 3 minutes to close the gps positioning.

## 9. Shutdown command

Platform sends.

[CS\*YYYYYYYYYY\*LEN\* POWEROFF ]

Example: [3G\*8800000015\*0008\*POWEROFF]

Terminal Response.

[CS\*YYYYYYYYYY\*LEN\*RESET]

Example: [3G\*8800000015\*0008\*POWEROFF]

Explanation:The terminal is shut down after receiving the command.

## 10. Pedometer time period setting

Platform sends.

[CS\*YYYYYYYYYY\*LEN\*WALKTIME, 时间段, 时间段, 时间段]

Instance: [3G\*8800000015\*002C\*WALKTIME, 08:10-09:30, 10:10-11:30, 12:10-13:30]

Terminal Response.

[CS\*YYYYYYYYYY\*LEN\*WALKTIME]

Instance: [3G\*8800000015\*0008\*WALKTIME]

Description: Set the range of time period to turn on pedometer, pedometer will start automatically within the time period, and turn off when the time period is 00:00-00:00.

The number of steps received on the server side, is the cumulative value. That's why someone asked:

① Q: How to calculate today's value?

A: Today's pedometer value = Server reading now - Last updated value received yesterday.

Similarly: the above can be calculated by day, by minute and by hour, e.g. the last 10 minutes steps, the last 1 hour steps can also get the value.

②Q: How to clear 0?

A: Clear 0 = just received value A - just received value A, or understand just received the latest value as the starting 0 value scale, it is very natural to walk another 100 steps after the count 100 = server latest value - value A.

## 11. Flip detection time period setting

Platform sends.

[CS\*YYYYYYYYYY\*LEN\*SLEEPTIME, 时间段]

Example: [3G\*8800000015\*0014\*SLEEPTIME, 21:10-7:30]

Terminal Response.

[CS\*YYYYYYYYYY\*LEN\*SLEEPTIME]

Instance: [3G\*8800000015\*0009\*SLEEPTIME]

Description: Set the range of time period for rollover detection, if the time period is 00:00-00:00, it will be turned off.



## 12. Class Disable Time Period Setting / Do Not Disturb Mode (available for children's table)

Platform sends.

[CS\*YYYYYYYYYY\*LEN\*SILENCETIME2,时间段-星期,时间段-星期,时间段-星期,时间段-星期]

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 Response.

[CS\*YYYYYYYYYY\*LEN\*SILENCETIME2]

Example.

```
[3G*5678901234*000B*SILENCETIME2]
```

Description: Sets the time range for disabling classes, in weekly order: Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday. 0 means off, 1 means on.

### 13. Find Watch command (or known as Device Ring)

Platform sends.

```
[CS*YYYYYYYYYY*LEN*FIND]
```

Example: [3G\*8800000015\*0004\* FIND ]

Terminal Response.

```
[CS*YYYYYYYYYY*LEN*FIND]
```

Example: [3G\*8800000015\*0004\*FIND]

Explanation: Send this command and the terminal will ring for 1 minute. Press the button to confirm.

### 14. Alarm Clock Setting Instructions

Platform sends.

```
[CS*YYYYYYYYYY*LEN* REMIND , 闹钟 1, 闹钟 2, 闹钟 3]
```

Example: [3G\*8800000015\*0018\*REMIND, 08:10-1-1, 08:10-1-2, 08:10-1-3-0111110]

Terminal Response.

```
[CS*YYYYYYYYYY*LEN*REMIND]
```

Example: [3G\*8800000015\*0006\*REMIND]

Description: Alarm format is: time-switch-frequency (1: once; 2: daily; 3: customized)

08:10-1-1: Alarm time 8:10, turned on, rang once

08:10-1-2: Alarm time 8:10, turn on, ring daily

08:10-1-3-0111110: Alarm time 8:10, turn on, customize Mon-Fri turn on

### 15. Voice version of medication reminder (requires terminal response)

The platform was issued:

```
[3G*8800000015*len*TAKEPILLS, reminder setting, number, reminder text, voice data]
```

Attention:

- 1, reminder settings: data format with the same alarm clock (time - switch - frequency - customized)
2. Numbering 1 - 3 (up to 3 reminders)
3. Reminder text using unicode encoding
- 4, voice data can be empty (that is, not set voice), but the protocol parameters format remains unchanged (that is, there will be a comma ",")

Example:

[3g\*8800000015\*001f\*takepils,15:54-1-1,1,4f60597d,]

Terminal response: [3G\*8800000015\*0002\*TAKEPILLS,status code]

Status Code: 1 - Success 0 - Failure

Example:

[3g\*8800000015\*000b\*takepils,1]

Remarks: One command at a time

## 16. Voice chat intercom function (micro chat intercom)

(1) The device or server receives voice.

[CS\*YYYYYYYYYY\*LEN\*TK, AMR 格式音频数据]

Re.

[CS\*YYYYYYYYYY\*LEN\*TK, 接收结果]

Received:1 - Success

0 - Failed

ARM format audio data needs to be translated as follows, the server or device receiving the voice encounters the left side of the data is translated into the right side of the data:

0X7D 0X01 --> 0X7D

0X7D 0X02 --> 0X5B

0X7D 0X03 --> 0X5D

0X7D 0X04 --> 0X2C

0X7D 0X05 --> 0X2A

(2) The device or server sends voice.

[CS\*YYYYYYYYYY\*LEN\*TK, AMR 格式音频数据]

Re.

[CS\*YYYYYYYYYY\*LEN\*TK, 接收结果]

Received:1 - Success

0 - Failed

ARM format audio data needs to be translated as follows, the device or server sending voice encounters the left side of the data is translated into the right side of the data.

0X7D --> 0X7D 0X01

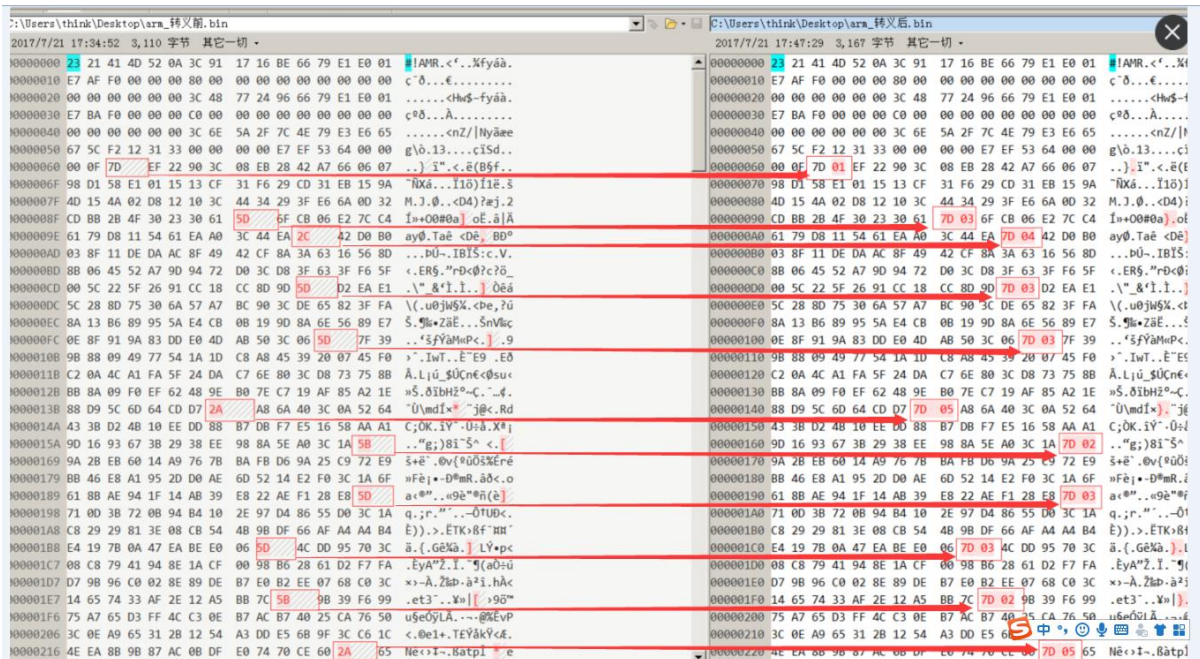
0X5B --> 0X7D 0X02

0X5D --> 0X7D 0X03

0X2C --> 0X7D 0X04

0X2A --> 0X7D 0X05

Note: To control the length of the voice sent from the server within 15 seconds (including 15 seconds), please do not string escape.



## 17. Phrase display setting command (microchat send text)

Platform sends.

[CS\*YYYYYYYY\*LEN\*MESSAGE, 短语内容]

Example: [3G\*8800000015\*0018\*MESSAGE, 597D003100320033] (good 123)

Terminal Response.

[CS\*YYYYYYYY\*LEN\*MESSAGE]

Example: [3G\*8800000015\*0007\*MESSAGE]

Description: Sends a phrase text to the terminal. The text is sent to the terminal using Unicode encoding.

## 18. Setting up the phone book

### 18.1 Without headshots (children's version)

Platform sends (1):

[3g\*8800000015\*len\*phb, no., name, no., name, no., name, no., name]

len: Transmit length Hexadecimal representation Occupies 2 bytes.

Number: ascii characters

Name: Unicode

Maximum 5 sets of numbers and names, with numbers not exceeding 20 ascii characters and names not exceeding 10 Unicode characters.

Example.

[3g\*8800000015\*0010\*phb, 110, 5f204e09]

Terminal response: [3G\*8800000015\*0003\*PHB].

The platform sends (2):

[3g\*8800000015\*len\*phb2, no., name, no., name, no., name, no., name, no., name]

len: Transmit length Hexadecimal representation Occupies 2 bytes.

Number: ascii characters

Name: Unicode

Maximum 5 sets of numbers and names, with numbers not exceeding 20 ascii characters and names not exceeding 10 Unicode characters.

Example.

[3g\*8800000015\*0010\*phb2, 110, 5f204e09]

Terminal Response: [3G\*8800000015\*0004\*PHB2]

The platform sends (3):

[3g\*8800000015\*len\*phb3, number, name, number, name, name, name, number, name, name, name, name, name, name]

len: Transmit length Hexadecimal representation Occupies 2 bytes.

Number: ascii characters

Name: Unicode

Maximum 5 sets of numbers and names, with numbers not exceeding 20 ascii characters and names not exceeding 10 Unicode characters.

Example.

[3g\*8800000015\*0010\*phb3, 110, 5f204e09]

Terminal Response: [3G\*8800000015\*0004\*PHB2]

Note: PHB is 1-5 numbers, phb2 is 6-10 numbers, phb3 is 11-15 numbers.

Note: There are two kinds of phone books for the watch, supporting 10 and 15. Make judgment according to the actual situation of the watch

## 18.2 with avatar (elderly version, not supported yet)

Platform down:

[3G\*7893267563\*len\*PHBX, number, name, phone, photo data]

Note: 1, 30 phone numbers

2、Number 1--30

3、Photo data can be empty (i.e., no photo is set), but the protocol parameter format is unchanged (i.e., there will be comma ",")

Terminal response: [3G\*7893267563\*0002\*PHBX, status code]

Status code: 1 - Success 0 - Failure

### 19.3 Phone book with avatar deleted

Platform down:

[3G\*7893267563\*0002\*DPHBX,No.]

Terminal Response.

[3G\*7893267563\*0002\*PHBX,Status Code]

Status Code: 1 - Success 0 - Failure

Note: Photo data needs to be escaped just like speech. The format of avatar is jpg, the size is under 15k. The resolution is 96\*96DPI and the height and width is 132 pixels.

## 19. Profiles (not supported by all watches)

Platform sent:

[CS\*YYYYYYYYYY\*LEN\*profile,x]

The value of X can be respectively:

0. turn off profile, 1. ring and vibrate, 2. ring, 3. vibrate, 4. mute

Terminal reply:

[CS\*YYYYYYYYYY\*LEN\*fprofile]

## 20. Electronic security fence

This function practice: set up a good area (such as neighborhoods, schools, nursing homes, etc.), when the server reads the positioning data is out of the security area (round area is best to do), the server can send an alarm notification.

This function needs to be done server-side.

## 21. Fall alarm (falls still to be optimized)

**The first:**

Platform sent:

[CS\*YYYYYYYYYY\*LEN\*FALLDOWN,X]

The value of X can be 0,1 respectively.

0: represents closure

1: Represents opening

Terminal Response:

[CS\*YYYYYYYYYY\*LEN\*FALLDOWN]

2、 Fall alarm sensitivity setting function setting (function configuration item: LS=3+8)

Remarks: LS - fall alarm sensitivity setting function (current value + maximum value) default none (0+0)  
Note: spliced with "+" (the larger the value, the lower the sensitivity). Some table maximum value is 6, some is 8

1 <= sensitivity current value <= maximum value

Server sends.

[3G\*YYYYYYYYYYY\*LEN\*LSSET,ls]

ls: sensitivity setting format: current value + maximum value, e.g.: 3 + 8

Terminal Response:

[3G\*YYYYYYYYYYY\*LEN\*LSSET]

Note: If there is a downstream modification on the APP side, each time the feature configuration is reported, the modified value should be reported, not the default value when the software is in production

### The second:

Platform sent:

[3g\*7104157409\*000c\*falldown,x,y]

x=1 on; x=0 off fall function

y=1 Telephone alarm notification after a fall; y=0 Disable telephone alarm notification

The terminal answers:

[3g\*7104157409\*0008\*falldown]

Note: Refer to the first for fall sensitivity.

## 22. Low power SMS alarm switch

Platform sends.

[3G\*YYYYYYYYYYY\*LEN\*LOWBAT, 0 或 1]

Instance: [3G\*8800000015\*0008\*LOWBAT, 1]

Terminal Response.

[3G\*YYYYYYYYYYY\*LEN\*LOWBAT]

Example: [3G\*8800000015\*0006\*LOWBAT]

Description: Set whether to send SMS to the center number after generating a low alarm (0: off, 1: on).

## 23. Turn on SMS collection:

[3G\*YYYYYYYYYYY\*LEN\*devmsgswitch, 1 或 0]

1 for on, 0 for off

Collection of SMS reporting agreements

Terminal sends.

[3G\*YYYYYYYYYY\*LEN\*DEVMESSAGE, message, tel, timep]

Message: the content of the SMS, unicode code string expression form

Tel: the number of the incoming text message

Timep: timestamp when the SMS was received

Server response: none

## 24. Do-not-call switch down protocol (switch)

Note: Default Off

The server sends it:

[3G\*YYYYYYYYYY\*LEN\*DEVREFUSEPHONESWITCH,open]

open: switch status, 0 - off, 1 - open

Terminal Response:

[3G\*YYYYYYYYYY\*LEN\*DEVREFUSEPHONESWITCH]

----- reporting intercepted numbers -----

Reporting protocol for refusing calls from strangers

Terminal sends.

[3G\*YYYYYYYYYY\*LEN\*DEVREFUSEPHONE,tel,timep]

Tel: the number of the incoming call

Timep: timestamp when the call was received

## 25. Chime Switch Protocol

server request

[3G\*YYYYYYYYYY\*LEN\*telltimeswatch, open]

open: switch status, 0 - off, 1 - open

The terminal answers:

[3G\*YYYYYYYYYY\*LEN\*telltimeswatch]

## 26. Auto Answer

[3g\*9403043989\*len\*aa,1]

Note: 1--On 0--Off Default: Off

Example:

Platform sent:

[3G\*7104157409\*0004\*aa,1] Enable auto-answer

## Appendix I: 2g/3G/4g\_Non-CDMA Location Data Description

name (of a thing)	Example (ASII code)	clarification
dates	120414	(dd/mm/yyyy) April 12, 2014
timing	101930	(hours, minutes, seconds) 10:19:30
Positioning or not	A	A:Positioned V:Not positioned
longitude	22.564025	Defined in DD.DDDDDD format, this latitude value is: 22.564025.
latitude indicator	N	N for north, S for south.
longitudes	113.242329	Defined in the DDD.DDDDDD format, this longitude value is 113.242329.
longitude marker	E	E for east longitude, W for west longitude.
tempo	5.21	5.21 km/h.
orientations	152	Orientation at 152 degrees.
height above sea level	100	Units in meters
Number of satellites	9	Indicates the number of GPS satellites
GSM signal strength	100	Indicates current GSM signal strength (0-100)
quantity of electric charge or current	90	Indicates current power level percentage
pacemaker	1000	Step count is 1,000.
Number of rolls	50	Roll 50 times.
terminal state	00000000 (hexadecimal)	Expressed as a binary string 0000 0000 0000 0000 0000 0000 0000 0000 0000 Meaning as follows. The high 16bit on the left side indicates the alarm, the low 16bit on the right side indicates the status. Bit bit (from 0) Meaning (1 valid) 0 Low power state 3 Bracelet on and off status 4 Watches running stationary 16 SOS Alarm 17 Low Power Alarm 20 Bracelet Removal Alarm 21 Fall alarm 22 Abnormal heart rate alarm Example: SOS only: 0000 0000 0000 0001 0000 0000 0000 0000 Low power only: 0000 0000 0000 0010 0000 0000 0000 0000 0000 Both SOS and low power:

		0000 0000 0000 0011 0000 0000 0000 0000
Number of base stations	4	The number of reported base stations,0 means no base station information is reported.
Connection to base station ta	1	GSM Latency
MCC country code	460	460 for China
MNC network number	02	02 for 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 BTS1 location area code	10133	area code
Nearby Base Station 1 No.	5173	Base Station Number
Signal strength of nearby BTS1	100	signal strength
Nearby base station 2 location area code	10133	area code
Nearby Base Station 2 No.	5173	Base Station Number
Nearby BTS2 Signal Strength	100	signal strength
Nearby BTS3 location area code	10133	area code
Nearby Base Station 3 No.	5173	Base Station Number
Nearby BTS3 signal strength	100	signal strength
...	...	...
Number of Wifi messages	5	Number of Wifi (up to 5), sorted by signal strength.
Wifi 1 name	rrr	1st wifi message name
Wifi 1 MAC address	1c:fa:68:13:a5:b4	1st wifi MAC address
Wifi 1 Signal Strength	-61	1st wifi Signal strength
Wifi 1 name	abc	2nd wifi name
Wifi 1 MAC address	1c:fa:68:13:a5:b5	2nd wifi MAC address
Wifi 1 Signal Strength	-87	2nd wifi signal strength
...	...	...

## Appendix II: 4g\_CDMA Location Data Description

name (of a thing)	Example (ASCII code)	clarification
dates	120414	(dd/mm/yyyy) April 12, 2014
timing	101930	(hours, minutes, seconds) 10:19:30
Positioning or not	A	A:Positioned V:Not positioned
longitude	22.564025	Defined in DD.DDDDDD format, this latitude value is: 22.564025.
latitude indicator	N	N for north, S for south.
longitudes	113.242329	Defined in the DDD.DDDDDD format, this longitude value is 113.242329.
longitude marker	E	E for east longitude, W for west longitude.
tempo	5.21	5.21 km/h.
orientations	152	Orientation at 152 degrees.
height above sea level	100	Units in meters
Number of satellites	9	Indicates the number of GPS satellites
GSM signal strength	100	Indicates current GSM signal strength (0-100)
quantity of electric charge or current	90	Indicates current power level percentage
pacemaker	1000	Step count is 1,000.
Number of rolls	50	Roll 50 times.
terminal state	00000000 (hexadecimal)	Expressed as a binary string 0000 0000 0000 0000 0000 0000 0000 0000 Meaning as follows. The high 16bit on the left side indicates the alarm, the low 16bit on the right side indicates the status. Bit bit (from 0) Meaning (1 valid) 0 Low power state 3 Bracelet on and off status 4 Watches running stationary 16 SOS Alarm 17 Low Power Alarm 20 Bracelet Removal Alarm 21 Fall alarm 22 Abnormal heart rate alarm
Number of base stations	1	The number of reported base stations,0 means no base station information is reported.
Connection to base	1	GSM Latency

station ta		
MCC country code	460	460 for China
MNC network number	02	02 for China Mobile
SID	10133	area code
NID	5173	Base Station Number
BID	100	signal strength
Number of Wifi messages	5	Number of Wifi (up to 5), sorted by signal strength.
Wifi 1 name	rrr	1st wifi message name
Wifi 1 MAC address	1c:fa:68:13:a5:b4	1st wifi MAC address
Wifi 1 Signal Strength	-61	1st wifi Signal strength
Wifi 1 name	abc	2nd wifi name
Wifi 1 MAC address	1c:fa:68:13:a5:b5	2nd wifi MAC address
Wifi 1 Signal Strength	-87	2nd wifi signal strength
...	...	...

### Appendix 3: Microchat Video and Microchat Picture Decoding:

The video is in arm format, escaped as follows:

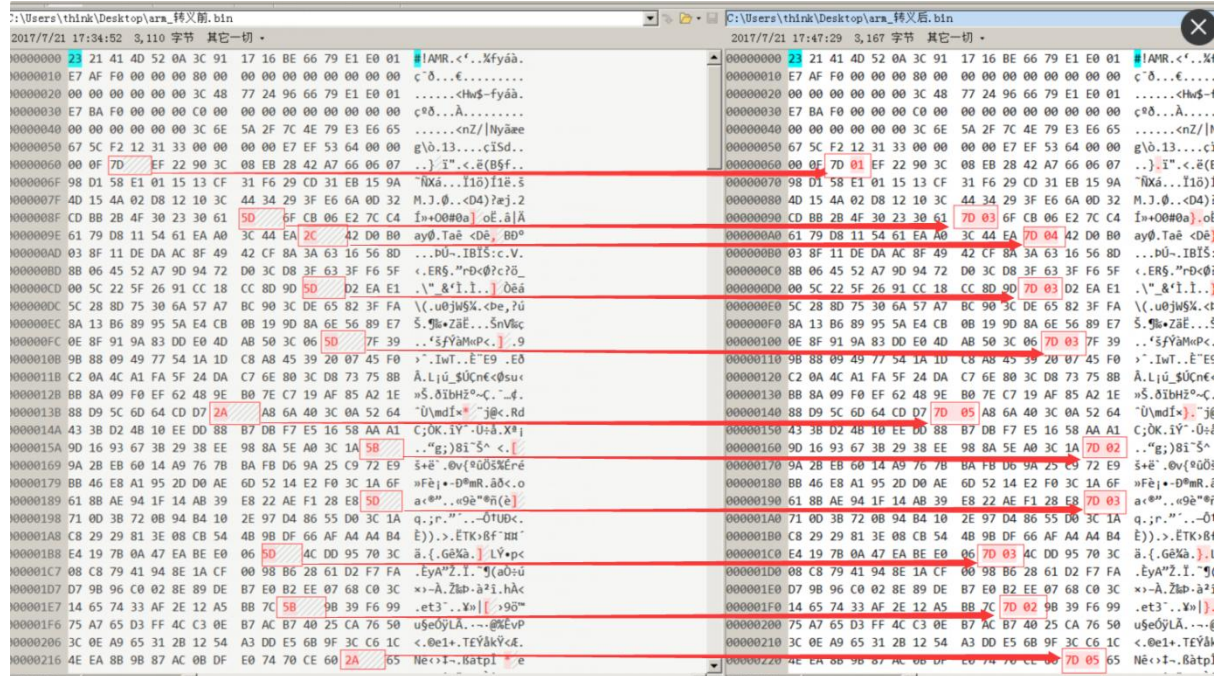


Image escaping as well, save as png format