

# Mictrack Communication Protocol

(for B2316)

V1.1



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## 1. Introduction

This document defines the communication rules between B2316 and the server. The protocol base on UDP standard, and use JSON format.

## 2. Data Package Structure

### 2.1 Uplink data package

Uplink data package as follow:

```
{
  "imei":"869768047575669", //device ID, Required fields.
  "data":
  [
    {
      "tm":1607557507,
      "wi":"603A7CCE57D2,-80;34967281274C,-75;1852825735DD,-95;320D9E863F59,-100;0495E6
50FCB1,-25"
      "st":2345,
      "te":235,
      "ba":3,
      "bp":"120,80"
      ... //fields description see the following table
    },
    {
      "tm":1607557808,
      "wi":"603A7CCE57D2,-80;34967281274C,-75;1852825735DD,-95;320D9E863F59,-100;"0495E650
FCB1,-25"
      "st":2350,
      "te": "235" ,
      "ba":3,
      "hr":80
      ... //fields description see the following table
    },
  ]
}
```

Field name are all lowercase.

The description of each field in "data" is as follows

Key	Type	Required	Description	Note
Tm	Int	Y	Timestamp	
Gp	String	N (optional)	longitude and latitude	E+ W- N+ S-; "gp":116.13070954,39.809007
Wi	String	N (optional)	WiFi location info: "bssid1,rssi1;bssid2,rssi2; bssidN,rssiN;"	"wi":603A7CCE57D2,-80;349672 81274C,-75;1852825735DD,-95;3 20D9E863F59,-100;0495E650FC B1,-25; "
B1	String	N (optional)	Bluetooth data type 1: "major,minor,rssi;major,mi nor,rssi;major,minor,rssi;"	
B2	String	N (optional)	Bluetooth data type 2: "mac,rssi;mac,rssi;mac,rs ssi;	
wn	int	N (optional)	Alarm	1: Low battery 2: SOS 3: Power OFF 4. Remove(no wear) 7. Wear 13. Disable SOS manual 14. Disable SOS
st	int	N (optional)	Steps	Total steps
ba	int	N (optional)	Battery Level	Number of cells: ba=0 means battery level is 10% ba=1 means battery level is 30% ba=2 means battery level is 60% ba=3 means battery level is 80% ba=4 means battery level is 100%
sn	int	N (optional)	Network Strength	Percentage
te	String	N (optional)	Temperature: "skin-temp,body"	1. If only epidermal temperature is available, upload "261". 2. If there is a body temperature "261,363" 3. If there is an ambient temperature "261,363,394" 4. The true value is one tenth of the reported value

Key	Type	Required	Description	Note
hr	num	N (optional)	Heart rate	
bp	string	N (optional)	blood pressure: "bsp,bdp"	"bp": "120,80"
bs	int	N (optional)	blood sugar	
bo	int	N (optional)	blood oxygen	
sl	string	N (optional)	Sleep format: "start_time,duration,status"	start_time: Start timestamp duration: continue time and unit is second. status: 1: Deep sleep 2: Light sleep 3: Wake up
ic	string	N (optional)	iccid	"8981030010000012356"
ve	string	N (optional)	version number	"b2316j.j.u.th17"
ci	string	N (optional)	LBS Data: mac,mnc,lac,cellid,rssi	"440,10,24889,112401938,-112"

## 2.2 Downlink data package

```
{
  "lp" : " 1,2" ,
  "li" : " 5@10001200,3@14001600" ,
  "hw" : " 1,1,300,120,50"
}
```

Key	Type	Required	Description	Note
eo	int	N (optional)	SOS enable of disable	0: SOS Disable 1: SOS enable
lp	String	N (optional)	Location Priority setting: Loc1, loc2, loc3	Location type 1: GPS Position 2: WiFi Position 3: Bluetooth Position 4: LBS Position Example if GPS>WiFi, then "lp" : " 1,2"
li	String	N (optional)	Positioning interval time: "interval@HHMMHHMM" , interval@HHMMHHMM, interval@HHMMHHMM, interval@HHMMHHMM"	Report interval unit is seconds HHMMHHMM:start time to end time Up to 4 time periods can be set. For example: "li" : " 5@10001200,3@14001600" Means every 5 minutes report data

				to server from 10:00 to 12:00, and every 3mins report to server from 14:00 to 16:00. "li":" means the time period is set to off
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### 2.2.1 OTA

Use the Bluetooth App to upgrade the firmware or config the devices

(End of the document)

mictrack

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