Protocol

Command first byte is**D**, like**D**RPT /**D**OPT mean is**D**evice sent data to Server

Command first byte is**S**, like**S**RPT /**S**OPT mean is**S**erver sent data to Device

Command Table

|  |  |  |
| --- | --- | --- |
| **Comment** | **Description** | **Remarks** |
| **DLGI** | Device send “LOG IN” request to Server |  |
| **DRPT** | Tracker Log with GPS / AGPS fixed | Status Report (GPS / AGPS fixed) |
| **SRPT** | Server responses, confirms Tracker log in, setup Report frequency & Power Saving Mode |  |
| **DDPT** | Tracker responses, confirms log in OK, wait for OTA |  |
| **SOPT** | Server set out OTA comment to Tracker |  |
| **DOPT** | Tracker confirms receipt of OTA comment |  |
| **DLBS** | Status Report | Status Report (GPS / AGPS not fixed) |
| **DCHK** | Tracker Log without GPS / AGPS fixed, Send out Cell ID location |  |
| **SNOW** | Find Device Command | Tracker sent out Status Report after receipt of command |
| **SSVR** | Server inform Device to change IP / TCP setting |  |
| **DSVR** | Device responses IP / TCP port to Server |  |
| **SGFS** | Geofence Set up to Device |  |
| **DGFS** | Device responses Geofence Setting |  |
| **SFLO** | Forced Device to Logout |  |
| **SMDS** | Man down setting |  |
| **DMDS** | Device responses Man down setting |  |
| **DFLO** | Device Layout responses | Server Maintenance Purpose |

**Format:ASCLL code**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **LEAD CODE** | **COMMAND CODE** | **CONNECTING SESSION** | **Total byte check** | **Parameter** |
| @ 1 byte | CCCC 4 byte | CCC  (0..999) 3 byte  \*Server to Device:  An odd accumulation \*Device to Server:  An even accumulation | Ccc(000..999) 3 byte | (command string ) Please refer to every command. |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Function** | | **Command** | **Description** | |
| Log In Request | Device Power ON /  Initialize  (Device 🡺 Server) | **DLGI** |  | |
| e.g. | @DLGI008045352352025153767MPERS\_FamilyPal\_2053\_CMNET\_209  **@** is LEAD code  **DIGI** is command code  **008** is connecting session  **045** is Total 85 byte  **352352025153767** is IMEI  **MPERS\_FamilyPal\_2053\_CMNET\_20**9 is firmware Version |
| Status & GPS  Location Report | Status Report  Format  (Device 🡺 Server) | DRPT |  | |
| e.g. | @DRPT00808535235202515376711120802541222.320729N111.3560030E32100000A000000000000000  **@** is LEAD code  **DRPT** is command code  **008** is connecting session  **085** is Total 85 byte  **352352025153767** is IMEI  **111208**  = 2008/12/11  **025412** = UTC time 2:54:12  **22.320729N**  = GPS Latitude  **113.560030E**  = GPS Longitude  **000.0** = Speed Over Ground is 0  **321** = Course Over Ground ( direction 321°)  **00000**  = Reserve  **A** = GPS status  **000000000000000**  = 15 bytes reserve**Refers to “Status Report Format”** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Function** | | **Command** | **Description** | |
|  | Status Report  Format  (Server 🡺Device ) | **SRPT** | HH MM SS  Reporting Frequency: Type0-9, Hour(0-99), Minutes (0-59), seconds(0-59) | |
| e.g. | @SRPT009007000030  **@** is LEAD code  **SRPT** is command code  **009** is connecting session  **007** is Total 7 byte  **000030** is Report Frequency 30 sec |
|  | Status Report  Format  (Device 🡺 Server) | DDPT | HH MM SS  Reporting Frequency: Type0-9, Hour(0-99), Minutes (0-59), seconds(0-59) | |
| e.g. | @DDPT009007352352025153767000030  **@** is LEAD code  **DDPT** is command code  **009** is connecting session  **007** is Total 7 byte  **352352025153767** is IMEI  **000030** is Report Frequency 30 sec |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Function** | | **Command** | **Description** | |
| Parameter  setup | Device Initialization  OTA setting  (Server 🡺Device ) | **SOPT** | SMS Setting Password , if you want use SMS to setting any parameter, you must use this password, the password set in Webs Type 0-9,  Length = 4  Lone worker  0: OFF  1: ON (default 30 min)    Lone worker Active (Min.)  0001~1000  Lone work countdown time  01-30 (Min)  No Movement  0: OFF  1: ON (default 720 min)  No Movement Active (HR.)  001~720  Auto-answer  0: OFF  1: ON  Language  00-08  Mobile Number  Type 0-9; Length = no control; Separate by “,”; use “,” to separate; Max. 6 Group | |
| e.g. | @SOPT014069000010030301720100+886289673211,+886289672515,+886968123456,+886,+886,+886  **@** is LEAD code  **SOPT** is command code  **014** is connecting session  **069** is Total 69 byte  **0000** is SMS Setting Password  **1** is Lone worker on  **0030** is Lone worker Active at 30 min.  **30** is Lone work countdown time (1-30min)  **1** is No Movement on  **720** is No Movement Active at 720 HR.  **1** is auto answer on  **00** is voice Language English  Mobile phone number is  **+886289673211,+886289672515,+886968123456,+886,+886,+886**, |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Function** | | **Command** | **Description** | |
| Parameter  setup | Device Initialization  OTA setting  (Device 🡺 Server) | **DOPT** | SMS Setting Password , if you want use SMS to setting any parameter, you must use this password, the password set in Webs Type 0-9,  Length = 4  Lone worker  0: OFF  1: ON (default 30 min)    Lone worker Active (Min.)  0001~1000  Lone work countdown time  01-30 (Min)  No Movement  0: OFF  1: ON (default 720 min)  No Movement Active (HR.)  001~720  Auto-answer  0: OFF  1: ON  Language  00-08  Mobile Number  Type 0-9; Length = no control; Separate by “,”; use “,” to separate; Max. 6 Group | |
| e.g. | @DOPT014069352352025153767000010030301720100+886289673211,+886289672515,+886968123456,+886,+886,+886  **@** is LEAD code  **SOPT** is command code  **014** is connecting session  **069** is Total 69 byte  **352352025153767** is IMEI  **0000** is SMS Setting Password  **1** is Lone worker on  **0030** is Lone worker Active at 30 min.  **30** is Lone work countdown time (1-30min)  **1** is No Movement on  **720** is No Movement Active at 720 hr.  **1** is auto answer on  **00** is voice Language English  Mobile phone number is  **+886289673211,+886289672515,+886968123456,+886,+886,+886**, |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Function** | | **Command** | **Description** | |
| Status &  Cell ID  Location Report  (GPS no fix) | Status Report  Format  (Device 🡺 Server) | ****DLBS**** |  | |
| e.g. | @DLBS00808535235202515376711120802541222.320729N113.560030E000.032100000V000000000000000  **@**  is  LEAD  code  **DLBS** is command code  **008** is connecting session  **085** is Total 85 byte  **352352025153767** is IMEI  **111208** =2008/12/11  **025412**= UTC time 2:54:12  **22.320729N** = Cell ID Latitude  **113.560030E** = Cell ID Longitude  **000.0** = Speed Over Ground is 0  **321** = Course Over Ground ( direction 321°)  **00000** = Reserve  **V** = without =GPS  **000000000000000** = 15 bytes reserve  **Refers to “Status Report Format”** |
|  | Check Connection  (Device 🡺 Server) | DCHK | IMEI NO.  Type 0-9 , Length 15 | |
| e.g. | @DCHK004015352352025153767  **@** is LEAD code  **DCHK** is command code  **004** is connecting session  **015** is Total 15 byte  **352352025153767** is IMEI |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Function** | | **Command** | **Description** | |
|  | Find Device  (Server -> Device) | ****SNOW**** | IMEI No.  Type 0-9, Length 15 | |
| e.g. | @SNOW004015352352025153767  **@**  is  LEAD code  **SNOW**  is command code  **004**  is  connecting  session  **015**  is Total  15  byte  **352352025153767**  is  IME |
|  | Server Domain / Port  Setup  (Server -> Device) | SSVR | Change Server Domain &  Port | |
| e.g. | @SSVR018016seniorcare.vicp.hk:6868  **@**  is  LEAD code  **SSVR** is command code  **018**  is connecting session  **016** is total 16 byte  **seniorcare.vicp.hk**  is Domain  **686 8** is  Port |
|  | Server Domain / Port  Responses  (Device -> Server) | DSVR | Server Domain &  Port | |
| e.g. | @DSVR018016352352025153767seniorcare.vicp.hk:6868  **@**  is  LEAD code  **DSVR**  is  command code  **018**  is  connecting session  **016**  is  total  16  byte  **352352025153767**  is IME  **seniorcare.vicp.hk**  is  Domain  **686 8** is  Port |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Function** | | **Command** | **Description** | |
|  | Geo fence Setup  (Server 🡺 Device) | ****SGFS**** | Geo fence Center point / Longitude / Latitude / Radius (Meter)/Time(Min)  All “Zero” if the Geo fence is turn OFF.  Time : 00 ~ 59 Min. | |
| e.g. | @SGFS01901825.040701,121.815928,50,10  **@** is LEAD code  **SGFS** is command code  **019** is connecting session  **018** is total 18 byte  **25.040701** is Latitude  **121.815928** is Longitude  **50** is radius (Meter)  **10** is time (Min) |
|  | Geo fence Setup  Format  (Device 🡺 Server) | DGFS | Geo fence Center point / Longitude / Latitude / Radius (Meter)/Time(Min)  All “Zero” if the Geo fence is turn OFF.  Time : 00 ~ 59 Min. | |
| e.g. | @DGFS01901835235202515376725.040701,121.815928,50,10  **@** is LEAD code  **SGFS** is command code  **019** is connecting session  **018** is total 18 byte  **352352025153767**  is IME  **25.040701** is Latitude  **121.815928** is Longitude  **50** is radius (Meter)  **10** is time (Min) |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Function** | | **Command** | **Description** | |
|  | Man down Setup  (Server 🡺 Device) | ****SMDS**** | Man down  0 : OFF  1: ON  Man down time  00~59 (min) | |
| e.g. | @SMDS020003001  **@** is LEAD code  **SMDS** is command code  **020** is connecting session  **018** is total 18 byte  **0** is Man down off  **01** is time (Min) |
|  | Man down Setup  Format  (Device 🡺 Server) | DMDS | Man down  0 : OFF  1: ON  Man down time  00~59 (min) | |
| e.g. | @SMDS020003352352025153767001  **@** is LEAD code  **SMDS** is command code  **020** is connecting session  **018** is total 18 byte  **352352025153767**  is IME  **0** is Man down off  **01** is time (Min) |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Function** | | **Command** | **Description** | |
|  | Forced Logout  (Server 🡺 Device) | ****SFLO**** | IMEI No.  Type 0-9, Length 15 This command to be used when Server Maintenance or abnormal operation was found | |
| e.g. | @SFLO004015352352025153767  **@** is LEAD code  **SFLO** is command code  **004** is connecting session  **015** is Total 15 byte  **352352025153767** is IMEI |
|  | Logout Responses  (Device 🡺 Server) | DFLO | IMEI No.  Type 0-9, Length 15  This command to be used when Power off device. | |
| e.g. | @DFLO004015352352025153767  **@** is LEAD code  **DFLO** is command code  **004** is connecting session  **015** is Total 15 byte  **352352025153767** is IMEI |

**Status Report Format : (Total 70 Characters)**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **IMEI** | **Greenwich**  **Date** | **Greenwich**  **Time** | **Latitude** | **N/S** | **Longitude** | **E/W** | **Speed** | **Direction** | **Distance** | **GPS Fix** | **Status Alert** |
| **Xxxxxxxxx**  **xxxxx** | **nnnnnn** | **nnnnnn** | **nn.nnnnnn** | **C** | **nn.nnnnnn** | **C** | **nnn.n** | **nnn** | **nnnnn** | **C** | **CCCCCCCCCCCCCCC** |
|  | **DDMMYY** | **HHMMSS** | **nn.nnnnnn**  **degree** | **N:NL S:SL** | **nn.nnnnnn**  **degree** | **E:EL W:WL** | **(NM)** | **(degree)** | **(Meter)** | **Realtime: A:Fix OK V:Fix NG** | **Format refers to**  **(P1)** |
| **15** | **6** | **6** | **9** | **1** | **10** | **1** | **5** | **3** | **5** | **1** | **15** |

(P1) Status Alert

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Column** | **1** | **2** | **3/4** | **5/6/7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** |
| **Content** | **0** | **0** | **00** | **000** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| **Status** | **Check** | **Geo fence Check** | **GSM signal Check** | **Battery Voltage**  **Check** | **Charging**  **Check** | **Battery Low**  **Check** | **Reserved** | **Man Down**  **Check** | **Lone worker**  **Check** | **No Movement Check** | **Reserved** | **Reserved** |

Status Alert Details

|  |  |  |
| --- | --- | --- |
| **[1] 1st byte Detection SOS button** | | |
| **Value** | **Description** | |
| 0 | Default, ( SOS off ) | |
| 1 | SOS Key on | |
| 2 | SOS Key off | |
| 3 | Lone worker SOS | |
| 4 | Man Down | |
| **[2] Geo fence Check** | | |
| **Value** | **Description** | |
| 0 | Default, No report on Geo fence | |
| 1 | Exclusion zone | |
| 2 | Inclusion zone | |
| **[3/4] GPRS Check** | | |
| **Value** | **Description** | |
| 0~99 | CSQ : 0~99 | |
| 4> CSQ = 99 | No signal |
| 4 < CSQ <10 | Level 1 |
| 10 < CSQ <16 | Level 2 |
| 16 <CSQ <22 | Level 3 |
| 22 < CSQ <28 | Level 4 |
| 28 < CSQ | Level 5 |

|  |  |
| --- | --- |
| **[5/6/7] Battery Voltage Check** | |
| **Value** | **Description** |
| 000~999 | Voltage with 2 decimal points (e,g. 4.15V >> 415) |
| **[2] Geo fence Check** | |
| **Value** | **Description** |
| 0 | Default, No report on Geo fence |
| 1 | Exclusion zone |
| 2 | Inclusion zone |
| **[8] Charging Check** | |
| **Value** | **Description** |
| 0 | Default, Not under Charging |
| 1 | Under Charging |
| **[9] Low Battery Check** | |
| **Value** | **Description** |
| 0 | Default, Battery normal |
| 1 | Low Battery, below 25% |
| 2 | No Battery, 5% remained |
| **[10] Reserved** | |

|  |  |
| --- | --- |
| **[11] Man Down Check** | |
| **Value** | **Description** |
| 0 | Default, No report |
| 1 | Man down Active |
| **[12] Lone worker Check** | |
| **Value** | **Description** |
| 0 | Default, no report |
| 1 | Lone worker Alert Active (Server set time reached) |
| **[13] No Movement Check** | |
| **Value** | **Description** |
| 0 | Default, no report |
| 1 | No Movement Alert Active (Server set time reached) |
| **[14] Reserved** | |
| **[15] Reserved** | |