

WP-30CCN

PROTOCOL



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Telematics | IOT and Industrial IOT | Electric Vehicle Solutions | Smart Parking Solutions | Smart City Solutions

Last Version	VTS_ALL_WP30_AES_0.1
New version	VTS_ALL_WP30_OBD_0.1
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Protocol Description

There are two different packet formats in WP30CCN to server protocol.
One format for GPS tracking & IO information and the other for OBD data.

1.The GPS protocol is having the following fields:

SL.No	Description	Example
1	Space in ASCII, fixed for all packets	0x20
2	Data Type: 0x01---Live Data, 0x03----Memory Data	0x01
3	Signature of protocol	ATL
4	Firmware Version	1.4_800F_VTS3A3_0.8_OBD_CCN
5	HEADER	NP (For detailed description refer to TABLE-A)
6	IMEI number of device	356895037533745
7	DATE STAMP (DDMMYY)	100208
8	TIME STAMP (GMT-HHMMSS)	220516
9	Latitude(Decimal Degree)	5.433836
10	Latitude Direction(N/S)	N
11	Longitude (Decimal Degree)	100.306620
12	Longitude Direction(E/W)	E
13	Speed(Knots)	2.1
14	Course of Motion(Degrees)	40
15	Odometer(Km)	0.0
16	ADC1	0.0
17	Mobile country code[3 digits]	502
18	MNC-Mobile Network Code[3 digits]	16
19	Location area code(Mobile)[6 digits]	59ee
20	GSM cell ID[5 digits]	a002
21	GSM signal Strength	18
22	Altitude(meters above MSL)	254.0
23	Temperature on board	34.5
24	Battery Voltage(mV)	4021
25	Serial Data1	00000000
26	Alerts	#0110100000000000(For detailed description refer to TABLE-B)
27	Signature	ATL
28	END Character 0x02---Live Data, 0x04----Memory Data	0X02
29	0x7A	Checksum

TABLE-1
Different Header values

Sl.No.	Header	Description
1	NP	Normal Packet
2	MO	Main Power connected
3	MF	Main Power disconnected
4	DO	Door Open
5	DC	Door Closed
6	HE	Harsh event
7	HB	Harsh breaking
8	HA	Harsh acceleration
9	IF	Ignition OFF
10	IO	Ignition ON
11	SD	Device shut down due to environmental lockout
12	TA	Tempering alert

TABLE-2

Input Details

INPUTS	Use	Description
I1	High Sense	Ignition
I2	Low sense	Door
I3	Low sense	SOS
I4	GOUT1 STATUS	RESERVED
I5	Low sense	RESERVED
I6	High Sense	RESERVED
I7	Low sense	RESERVED
I8	High Sense	Main Power(Fixed)
I9	Harsh speeding	0=Normal
I10	Harsh braking	0=Normal
I11	ARM/DIASRM	1=ARM & 0=DISARM
I12	GOUT2 Status	RESERVED
I13	GOUT0 status	RESERVED
I14	Status of accelerometer	1=In motion& 0= Not in motion

Example

Format :-

0x20START CHARATERSIGNATURE,VERSION,HEADER,IMEI,DATE,TIME,LATITUDE,DIRECTION,LONGITUDE,
DIRECTION,SPEED_KNOTS,COURSE_OF_MOTION,ODOMETER,ADC1,MCC,MNC,LAC,CID,SIGNAL_STRENGTH,
ALTITUDE,TEMPERATURE,BATTERY,RF,#11121314151617181911011112113114, SIGNATUREEND CHARACTER ,Checksum

- Live data

0x200x01ATL,1.4_800F_VTS3A3_0.8_OBD_CCN,NP,863351022928213,191118,063730,5.433836,
N,100.306620,E,2.1,40,0.0,0.0,502,16,59ee,a002,18, 254.0,34,4021,00000000,#01101000000000,ATL0x02,

- Memory data

0x200x03ATL,1.4_800F_VTS3A3_0.8_OBD_CCN,NP,863351022928213,191118,063730,5.433836,
N,100.306620,E,0.2,40,0.0,0.0,502,16,59ee,a002,18,254.0,34.5,4021,00000000,#01101000000000,ATL0x04,

Checksum Calculating Method :-

```
voidchksum_gprs(char * ptr)
{
  unsignedint i = 0;
  charchksum=0;
  for(i=0;i<1000 && *ptr != 0x00;i++)
  {
    chksum ^= *ptr++;
  }
  return(chksum);
}
```

NOTE: FOR ALL DATA PACKETS, AT LAST YOU WOULD GET

CHECKSUM OF ALL BYTES IN PACKET BETWEEN STARTING CHARACTER AND END CHARACTER (INCLUDING BOTH STARTING CHARACTER AND END CHARACTER).

2.The OBD protocol having following fields

SL.No	Description	Example
1	SIGNATURE	ATLOBD
2	DATA_TYPE(LIVE-L/HISTORY-H)	L
3	IMEI	356895037533745
4	IME STAMP (GMT-HHMMSS)	220516
5	DATE STAMP (DDMMYY)	100208
6	PROTOCOL (CAN/J1939)	CAN
7	CMD1:RESPONCE1	COMMAND:RESPONSE (MAX 20 CMD & RESPONCE)
8	SIGNATURE	\$ATLOBD
9	CHECKSUM	;

Example

Format :-

SIGNATURE,DATA_TYPE,IMEI,TIME,DATE,PROTOCOL,CMD1:RESPONCE1,CMD2:RESPONCE2,CMD20:RESPONCE20,
\$SIGNATURE,CHECKSUM

- Live data

```
ATLOBD,L,862951022899026,072243,180818,CAN,0101:00000000,0103:XXXX,0104:8A,0105:91,  
010A:XX,010B:91,010C:0000,010D:68,010E:XX,010F:8A,0110:8A40,0111:XX,011C:06,011F:0065,  
0121:XXXX,010C:0040,,,,,$ATLOBD,;
```

- Memory data

```
ATLOBD,H,862951022899026,072243,180818,CAN,0101:00000000,0103:XXXX,0104:8A,0105:91,  
010A:XX,010B:91,010C:0000,010D:68,010E:XX,010F:8A,0110:8A40,0111:XX,011C:06,011F:0065,  
0121:XXXX,010C:0040,,,,,$ATLOBD,;
```