

### Evolution binary format

Message sent by Evolution

```

1 2 3 4 1 2 3 4 12345678901234567890121 11 2 1 2 1 1 2 31 1 234 1 234 2 2 1 2 3 12 3 1 1 2 3 4 1 2 3 4 5 6 7 8
<0><5><2><0><0><0><0><a>          Test Miami  +|<3>½<3>?<d><2>'1<1>&βf<255>ää?<0><0><0><0><3>à|<0><0><9><5><0><0>]<2><5><b><e>?<8>:
    
```

Note: Characters that can not be printed is between <>

Field	Length	Message	Hex value	Dec Value	Notes
Header	4 bytes	<0><5><2><0>	00000500	1312	
PARM1	4 bytes	<0><0><0><a>	0000000a	10	Convert hex value to long (32 bits)
MDMID*	22 bytes	Test Miami	20202020202020202020202054657374204d69616d6920	Test Miami	Convert each hex value convert to character
GPIO data	1 byte	+	d9	217	Convert hex value to integer (16 bits)
GPIO direction	1 byte		c6	198	Convert hex value to integer (16 bits)
ADC-1	2 bytes	<3>½	03c0	960	Convert hex value to integer (16 bits)
ADC-2	2 bytes	<3>?	0370	880	Convert hex value to integer (16 bits)
Input Event code	1 byte	<d>	0d	13	Convert hex value to integer (16 bits)
GPS Date	3 bytes	<2>'1	022731	141105	Convert hex value to long (32 bits) (dmy)
GPS Status	1 byte	<1>	01	1	Convert hex value to integer (16 bits)
GPS latitude	3 bytes	&βf	26e1a0	2548128	Convert hex value to long (32 bits) 4 decimals implicit. GENERAL RULE: If the value is greater than 7FFFFFFF for LAT or 7FFFFFFFFF for LONG then the value received for LAT and LONG are subtracted from FFFFFFFF or FFFFFFFFFF, respectively to get a negative coordinate. So we received FCCFE9 for LAT, it's greater than 7FFFFFFF, so we subtract FCCFE9 from FFFFFFFF and the result is: 33016 HEX. Next convert the HEX value to decimal, 208918, and then divide this by 100,000 and give it a negative sign. So the Latitude received is: -

					2.08918
GPS Longitude	4 bytes	<255>àá?	ff85a01f	-8757280	Convert hex value to long (32 bits) 4 decimals implicit. GENERAL RULE: The same for Longitude, we received FF86A17E for LONG, it's greater than 7FFFFFFF, so we subtract FF86A17E from FFFFFFFF and the result is: 795E81 HEX. Next convert the HEX value to decimal, 7954049, and then divide this by 100,000 and give it a negative sign. So the Longitude received is: -79.54049
GPS Velocity	2 bytes	<0><0>	0000	0	Convert hex value to integer (16 bits)
GPS Heading	2 bytes	<0><0>	0000	0	Convert hex value to integer (16 bits)
GPS Time	3 byte	<3>à	03849c	230854	Convert hex value to integer (32 bits)
GPS Altitude	3 bytes	<0><0><9>	000009	9	Convert hex value to integer (32 bits)
GPS Num. of Satellites	1 byte	<5>	05	5	Convert hex value to integer (16 bits)
GPS Odometer	4 bytes	<0>]<2>	00005d02	23810	Convert hex value to integer (32 bits)
RTC Data	6 bytes	<5><b><e>?<8>:	050b0e17053a	051114230803	Convert each hex value to integer (ymdhms)
Battery level	1 bytes	A	4	64	Convert hex value to integer (16 bits)
GPS over speed	6 bytes	<0>2<0><<0><10>	00320036000a	005000600010	Convert each 2 hex value to integer (xyyzz)

\* If the bit 22 is 1, the size of the MODEM ID field will be 8.