



# Update and Baud rate PMTK command packet

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## **GlobalTop Tech Inc.**

3<sup>rd</sup> Floor., No.7 Nan-ke 3<sup>rd</sup> Rd Science-based Ind. Park, Tainan 741-47, Taiwan, R.O.C.  
Tel:+886-6-6007799 Fax:+886-6-5053381 <http://www.gtop-tech.com/> email: sales@gtop-tech.com  
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## 1. MTK NMEA packet format

Preamble	TalkerID	PktType	DataField	*	CHK1	CHK2	CR	LF
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Maximum packet length is restricted to 255 bytes.

Field	Length	Type	Description
Preamble	1 byte	Character	"\$"
TalkerID	4 byte	Character string	"PMTK"
PktType	3 byte	Character string	From "000" to "999", an identifier used to tell the decoder how to decode the packet
DataField	Variable		A "," must be inserted before each data filed to help decoder process the DataField
*	1 byte	Character	The star symbol is used to mark the end of DataField
CHK1, CHK2	2 byte	Character string	Checksum of the data between preamble "\$" and "*"
CR, LF	2 byte	Binary data	Used to identify the end of a packet

Sample Packet: \$PMTK000\*32<CR><LF>

In order to inform the sender whether the receiver has received the packet, an acknowledge packet PMTK\_ACK should return after the receiver receives a packe

Pkt Type	Abbreviation / Syntax	Data Field	Meaning / Example / Return
000	PMTK_TEST	None	Test Packet \$PMTK000*32<CR><LF>
001	PMTK_ACK PMTK001,Cmd,Flag	Cmd: Command / packet type the acknowledge responds Flag: 0 = Invalid command / packet 1 = Unsupported command / packet type 2 = Valid command / packet, but action failed 3 = Valid command / packet, and action succeeded	Acknowledge of PMTK command \$PMTK001,604,3*32<CR><LF>
010	PMTK_SYS_MSG PMTK001,Msg	Msg: System message. 0 : Unknown 1: Startup	Output system message \$PMTK010,001*2E<CR><LF>

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## 2. MTK update rate command packet

### **Packet Type: 220 PMTK\_SET\_NMEA\_UPDATERATE**

#### **Packet Meaning:**

Set NMEA port update rate

#### **DataField:**

Position fix interval(msec). The possible interval values range between 200 and 10000 msec.

#### **Example:**

```
$PMTK220,1000*1F<CR><LF>
```

#### **Note :**

1000(msec) = 1(sec) → 1pps = 1Hz

200(msec) = 0.2(sec) → 1/0.2 pps = 5 Hz

- 1F is checksum
- CR, LF : Two bytes binary data
- The two bytes are used to identify the end of a packet

## 3. MTK baud rate command packet

### **Packet Type : 251 PMTK\_SET\_NMEA\_BAUDRATE**

#### **Packet Meaning :**

Set NMEA port baudrate

#### **DataField :**

PMTK251, Baudrate

Baudrate : 115200, 57600, 38400, 19200, 14400, 9600,4800

#### **Example :**

```
$PMTK251,38400*27<CR><LF>
```

#### **Note :**

- 27 is checksum
- CR, LF : Two bytes binary data
- The two bytes are used to identify the end of a packet

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## 4. Notice:

4.1 How to acquire that CheckSum value by checksum tool.

Example: `$PMTK226,3,30*4<CR><LF>`

### 1. Key in command contents



### 2. Click Translation

### 3. That checksum will display

4.2 Those command packet for module baud and update rate changed only temporary, when module power reset those update rate and baud rate must be back to original setting. If user want to change baud rate and update rate of module to other value that need Gtop reedit new firmware and bunning it to module.