

# SIM7600-HTTP(S)-GPS

Sử dụng AT Command cho dịch vụ HTTP(S),  
GPS trên SIM7600 Simcom

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# AT Command cho HTTP(S) service

- Sơ đồ sử dụng dịch vụ HTTP(S) dạng đầy đủ

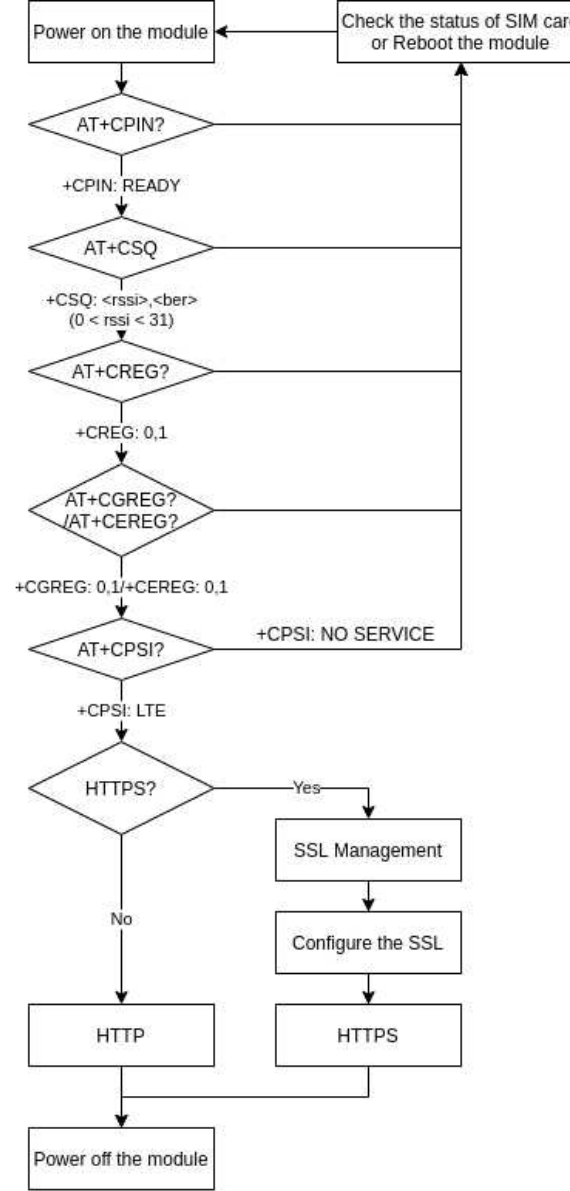
Query SIM card status:  
Execute AT+CPIN?,if response is  
+CPIN:READY,means SIM Card Status  
is normal.Reboot the module or check SIM card  
status if AT+CPIN? Fails to identify SIM card in 20s

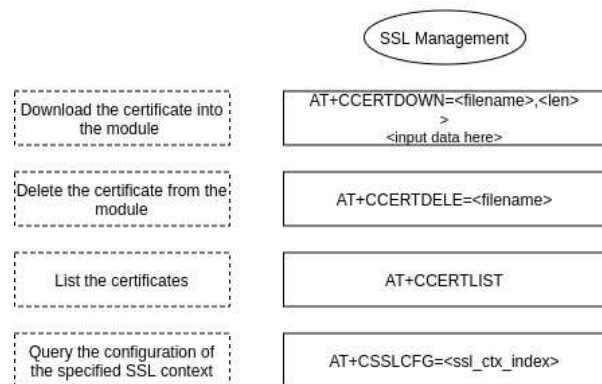
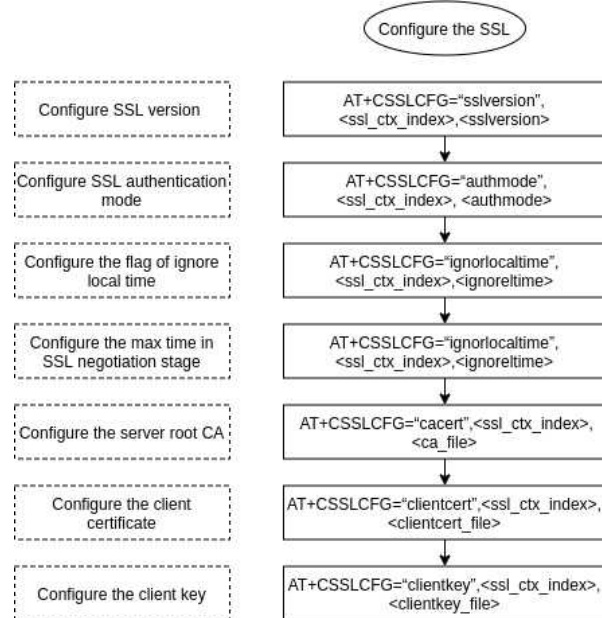
Query signal quality:  
Execute AT+CSQ to query signal quality.If rssi is  
equals to 99,please check SIM card status or reboot  
the module

Query CS service:  
If <stat> of AT+CREG? equals to 1,it means that the  
module has registered on CS domain service.  
Reboot the module if fails to registered on CS  
domain.

Query PS service:  
If <stat> of AT+CGREG?/AT+CEREG? equals to 1,it  
means that the module has registered on PS  
domain service.

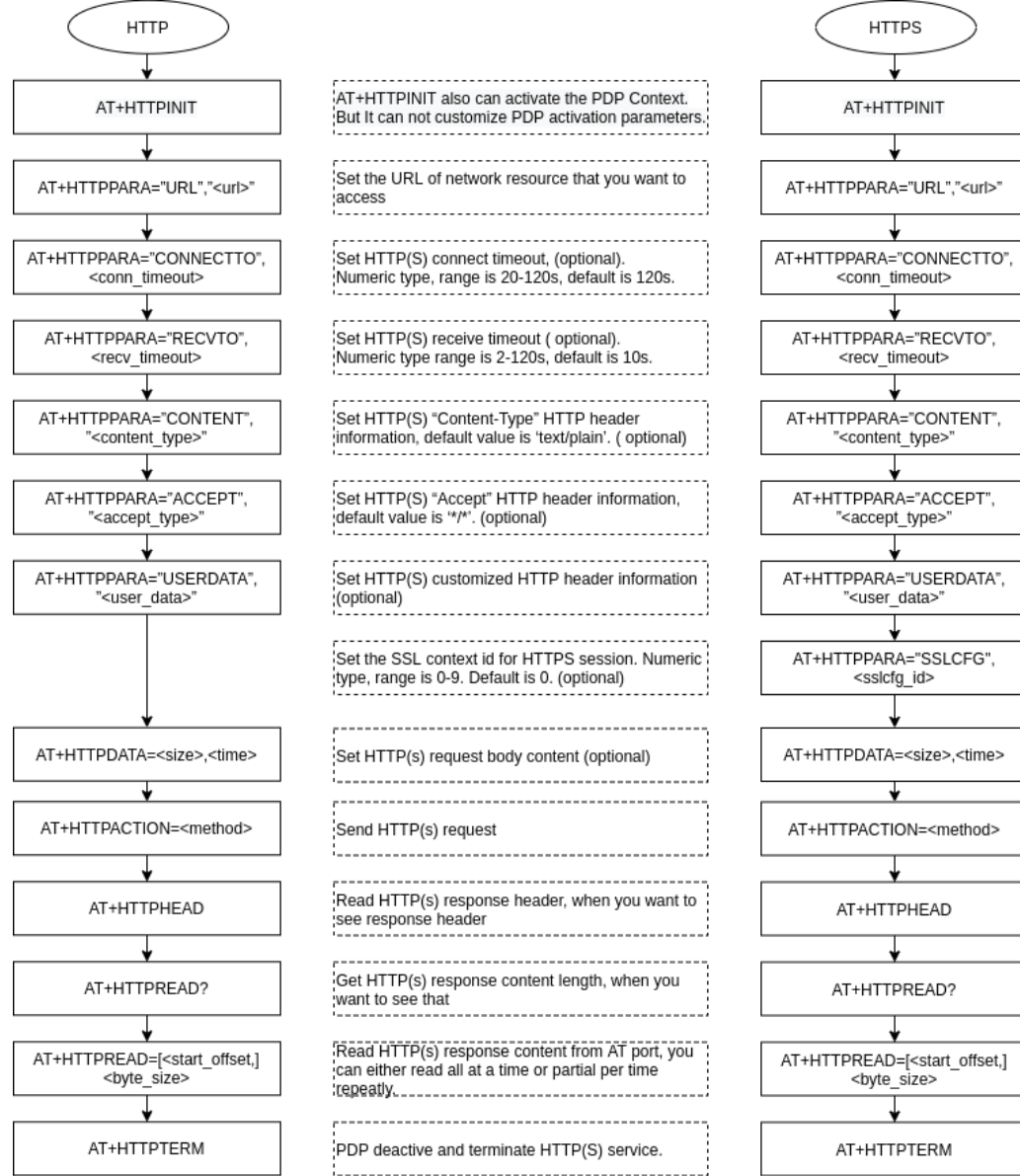
Query UE system information:  
If <system mode> is "NO SERVICE",it means  
network status has some problem





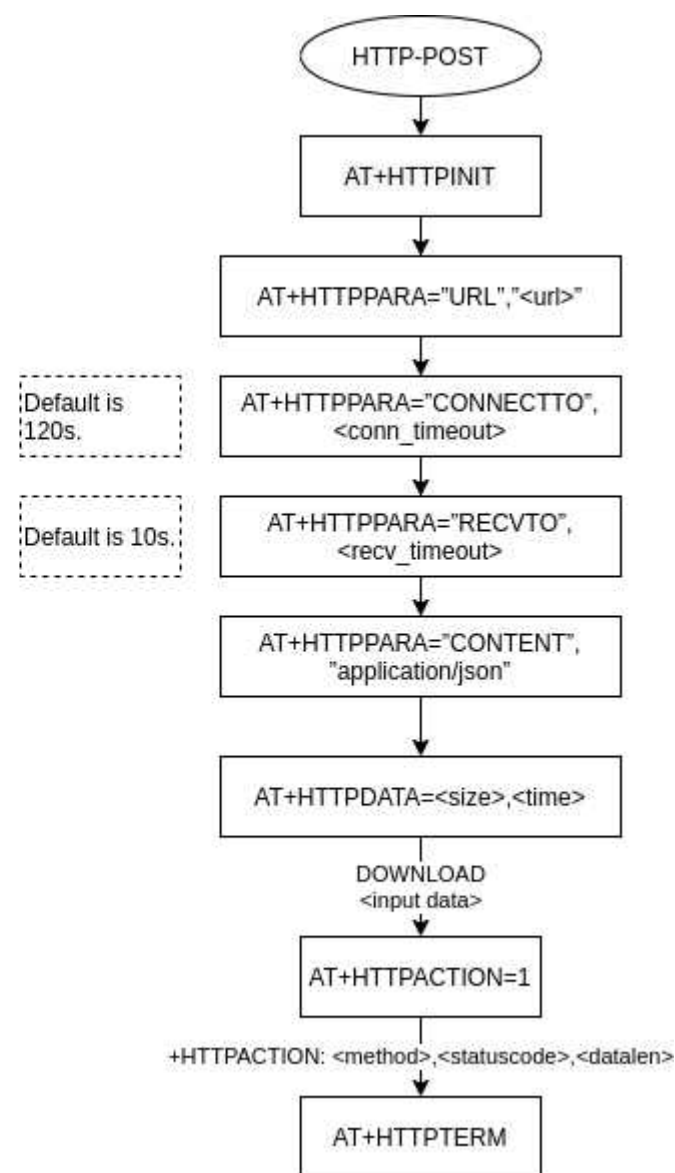
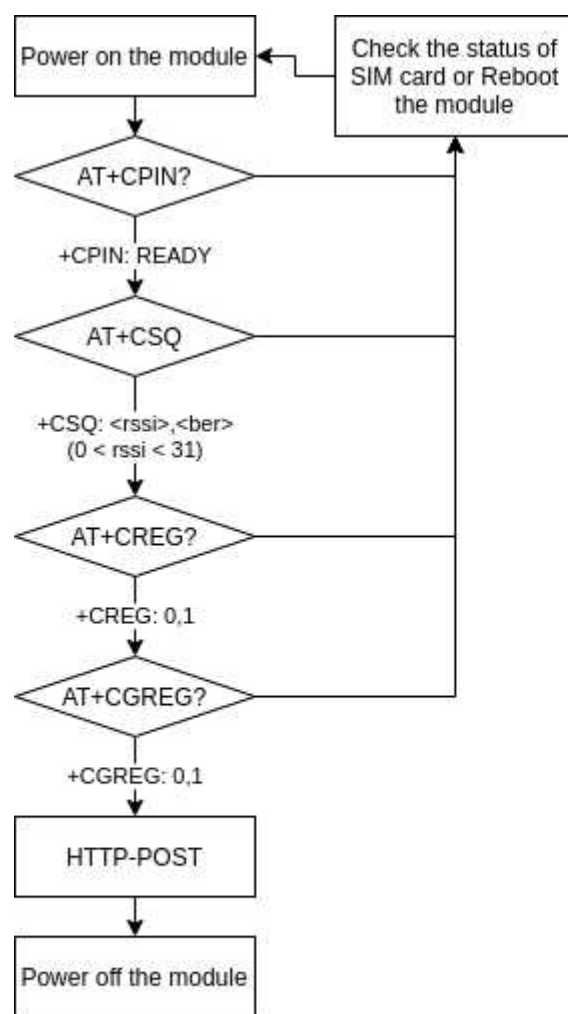
#### Defined Values

<ssl_ctx_index>	The SSL context ID. The range is 0-9.
<sslversion>	The SSL version, the default value is 4. 0 – SSL3.0 1 – TLS1.0 2 – TLS1.1 3 – TLS1.2 4 – All  The configured version should be support by server. So you should use the default value if you can't confirm the version which the server supported.
<authmode>	The authentication mode, the default value is 0. 0 – no authentication. 1 –server authentication. It needs the root CA of the server. 2 –server and client authentication. It needs the root CA of the server, the cert and key of the client. 3–client authentication and no server authentication. It needs the cert and key of the client.
<ignoreltime>	The flag to indicate how to deal with expired certificate, the default value is 1. 0 – care about time check for certification. 1 – ignore time check for certification  When set the value to 0, it need to set the right current date and time by AT+CCLK when need SSL certification.
<negotiatetime>	The timeout value used in SSL negotiate stage. The range is 10-300 seconds. The default value is 300.
<ca_file>	The root CA file name of SSL context. The file name must have type like ".pem" or ".der".The length of filename is from 5 to 128 bytes.  If the filename contains non-ASCII characters, the file path parameter should contain a prefix of {non-ascii} and the quotation mark (The string in the quotation mark should be hexadecimal of the filename's UTF8 code).  There are two ways to download certificate files to module: 1. By AT+CCERTDOWN. 2. By FTPS or HTTPS commands. Please refer to: SIM7500_SIM7600_SIM7800 Series_FTPS_AT Command Manual and SIM7500_SIM7600_SIM7800 Series_HTTP_AT Command Manual

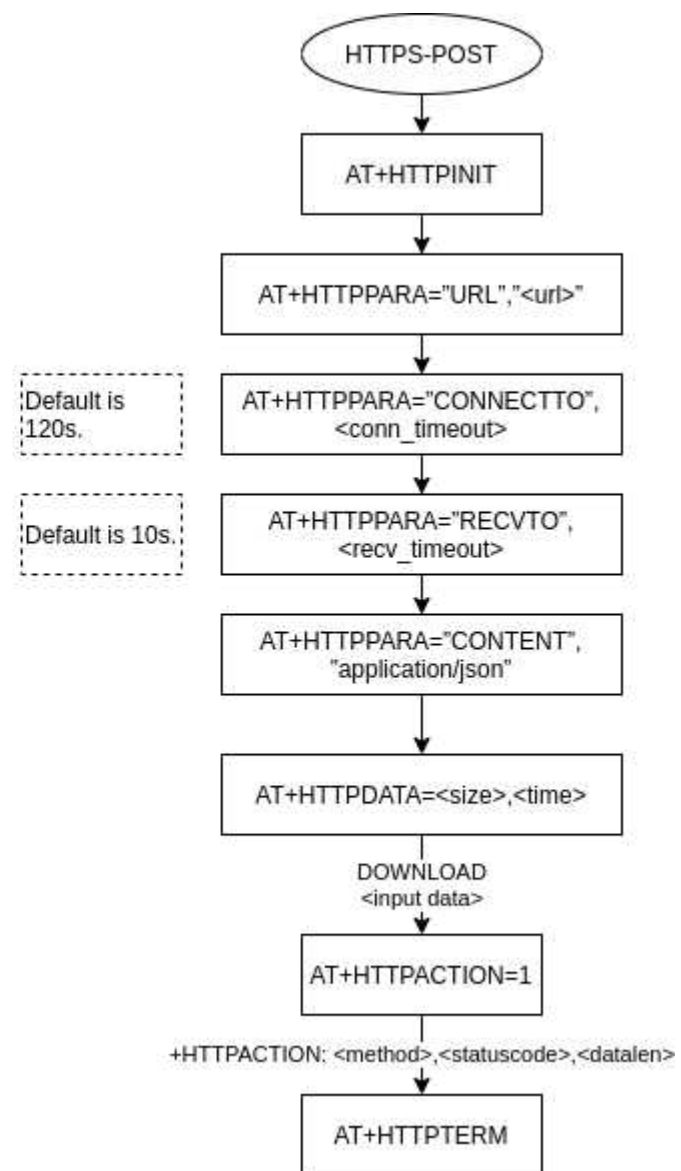
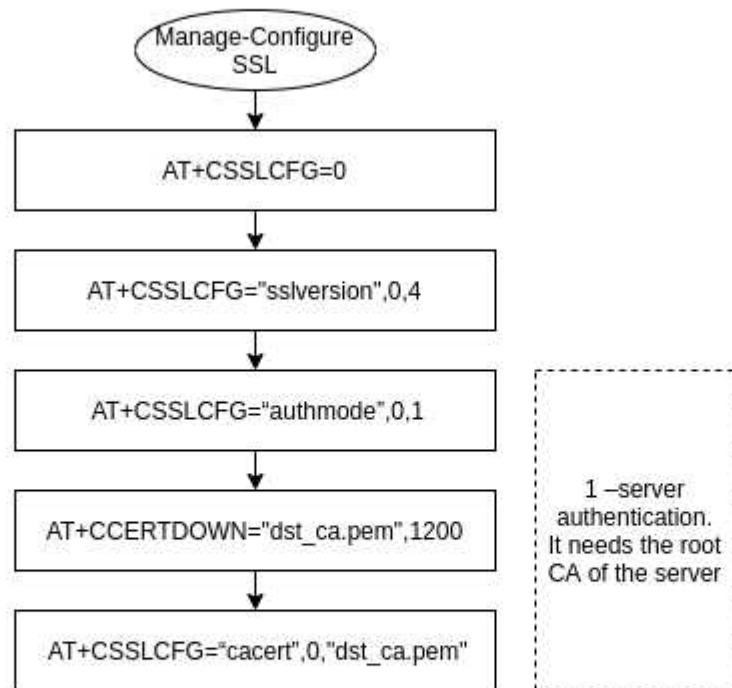
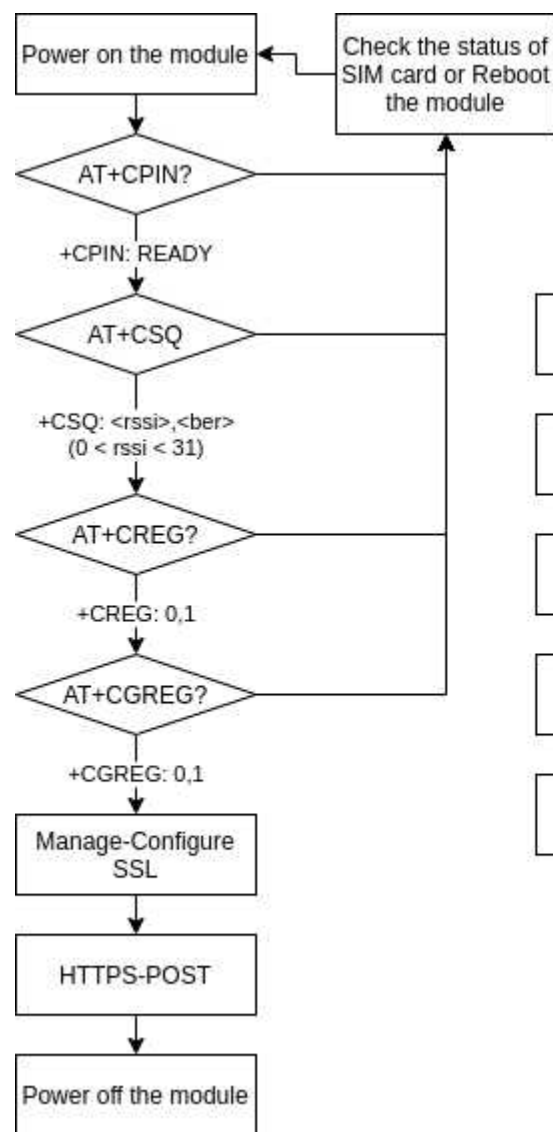


# AT Command cho HTTP(S) service

- Sơ đồ thực hiện POST HTTP(S) dạng thu gọn

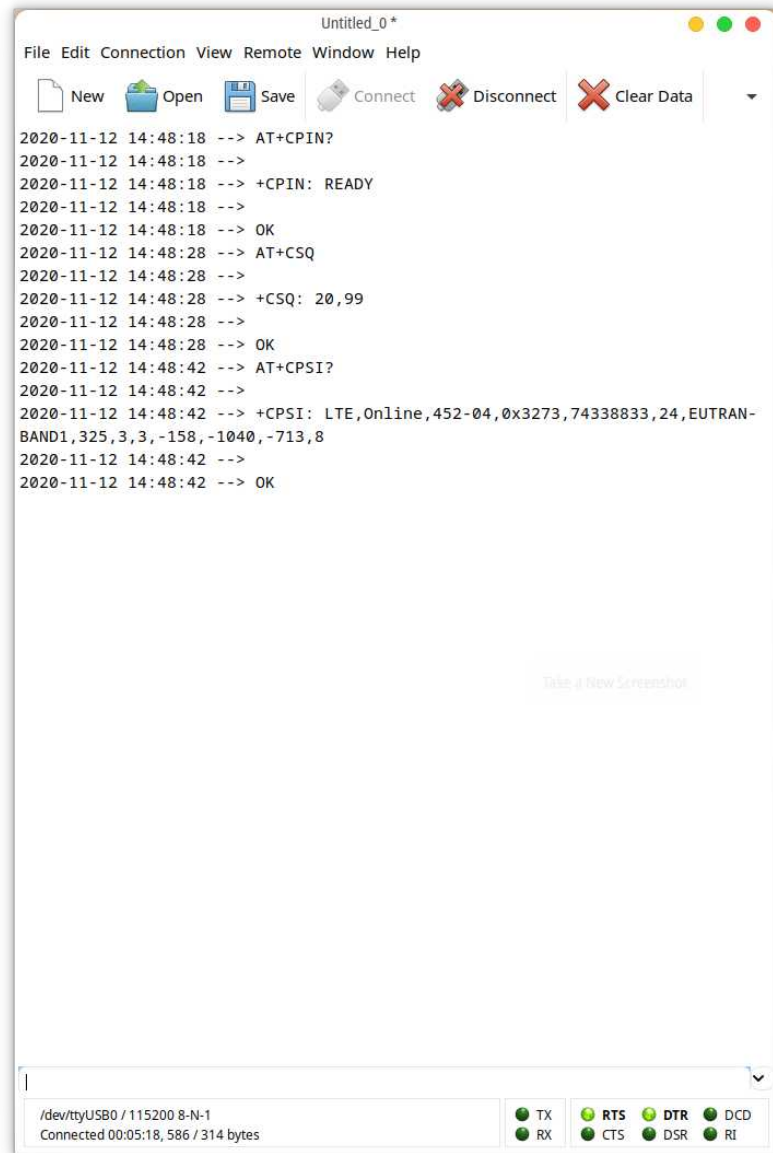






# AT Command cho HTTP(S) service

- Sơ đồ thực hiện POST HTTP(S) dạng thu gọn
  - Minh họa



# HTTP:

```
File Edit Connection View Remote Window Help
New Open Save Connect Disconnect Clear Data

2020-11-12 14:45:35 --> AT+HTTPINIT
2020-11-12 14:45:35 -->
2020-11-12 14:45:35 --> OK
2020-11-12 14:45:43 --> AT+HTTPPARA="URL","http://webhook.site/-
479a6379-7c13-4625-9875-1fbabd18e186"
2020-11-12 14:45:43 -->
2020-11-12 14:45:43 --> OK
2020-11-12 14:45:48 --> AT+HTTPPARA="CONTENT","application/json"
2020-11-12 14:45:48 -->
2020-11-12 14:45:48 --> OK
2020-11-12 14:45:56 --> AT+HTTPDATA=69,10000
2020-11-12 14:45:56 -->
2020-11-12 14:45:56 --> DOWNLOAD
2020-11-12 14:46:00 -->
{"Temperature(oC)": "28.5", "Humidity(%)": "75.0", "PM2.5(ug_m3)": "30.5"}
2020-11-12 14:46:00 --> OK
2020-11-12 14:46:08 --> AT+HTTPACTION=1
2020-11-12 14:46:08 -->
2020-11-12 14:46:08 --> OK
2020-11-12 14:46:11 -->
2020-11-12 14:46:11 --> +HTTPACTION: 1,200,0
2020-11-12 14:46:11 -->
2020-11-12 14:46:11 --> +HTTP_PEER_CLOSED
2020-11-12 14:46:17 --> AT+HTTPTERM
2020-11-12 14:46:17 -->
2020-11-12 14:46:17 --> OK
```

/dev/ttyUSB0 / 115200 8-N-1  
Connected 00:03:09, 426 / 286 bytes

TX RTS DTR DCD  
RX CTS DSR RI

(1) Webhook.site - Test, p x

webhook.site/#1/479a6379-7c13-4...

Webhook.site

Password Alias Schedule CSV Export Custom Actions Settings... Run Now XHR Redirect

Settings... Redirect Now CORS Headers Auto Navigate Hide Details More

### Request Details

Permalink Raw content Export as Delete

POST http://webhook.site/479a6379-7c13-4625-9875-1fbabd18e186

Host 171.255.127.165 whois

Date 11/12/2020 2:46:11 PM (a few seconds ago)

Size 69 bytes

ID c5e8ad39-4691-403b-8fb7-17ef774df4ac

### Files

### Headers

content-length	69
accept	
content-type	application/json
user-agent	
host	webhook.site

### Query strings

(empty)

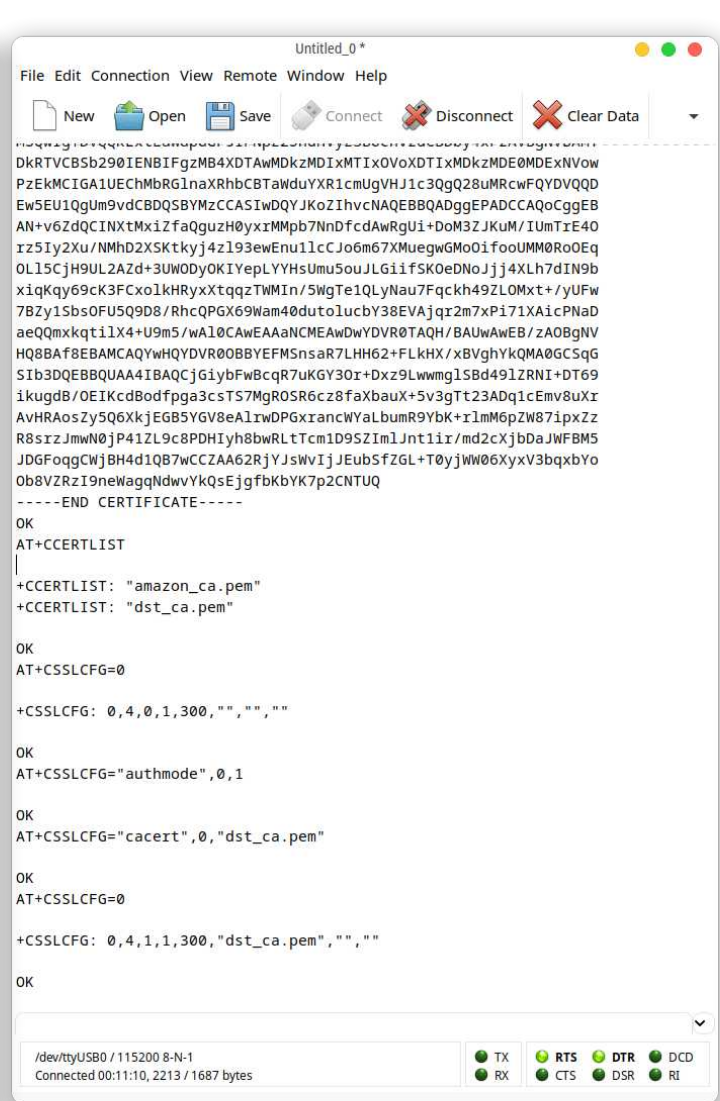
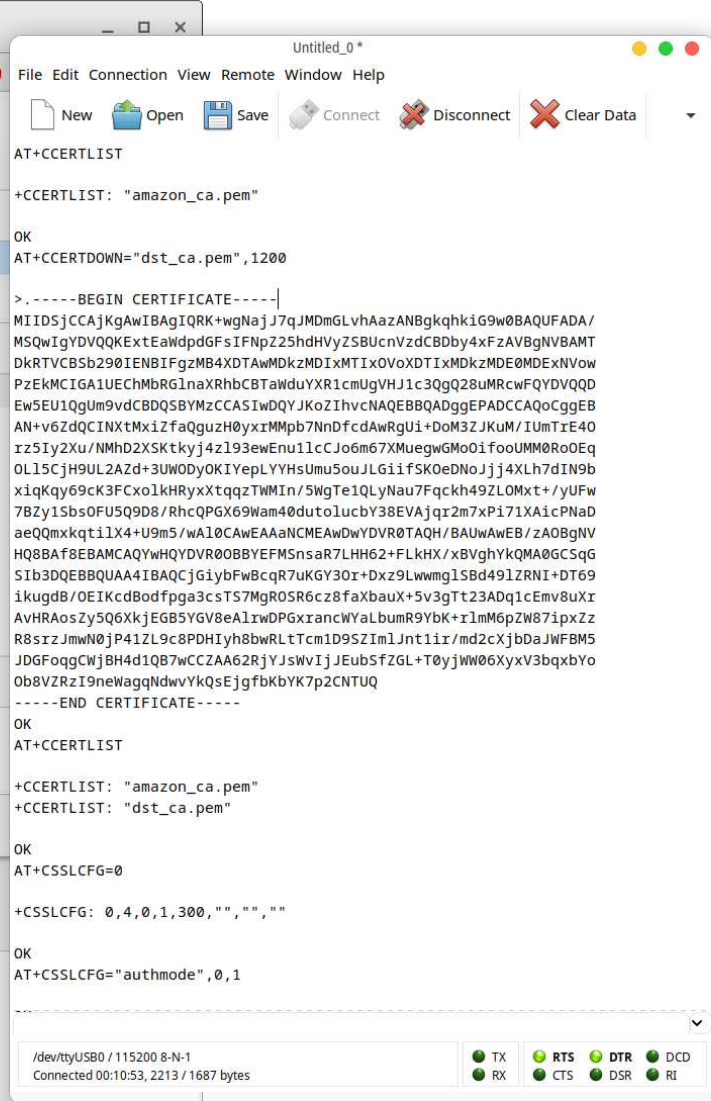
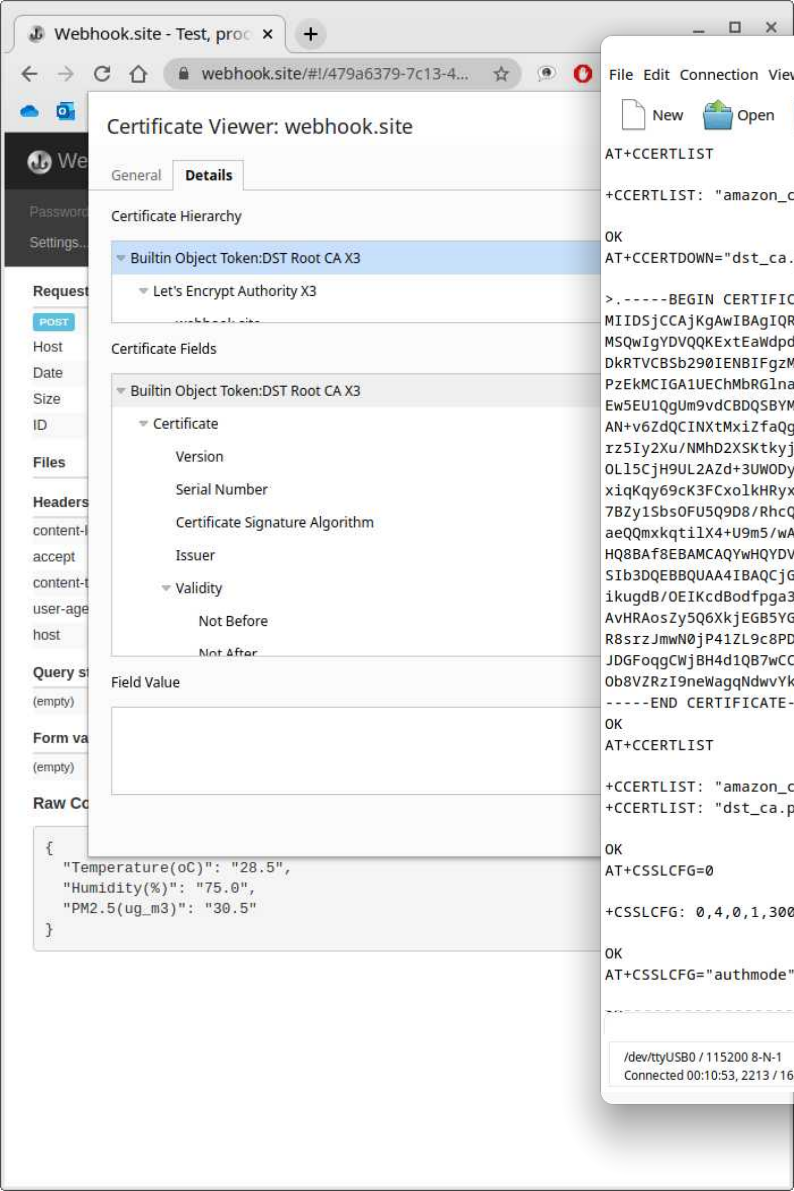
### Form values

(empty)

### Raw Content

☒ Format JSON ☒ Word-Wrap Copy

```
{
  "Temperature(oC)": "28.5",
  "Humidity(%)": "75.0",
  "PM2.5(ug_m3)": "30.5"
}
```



# HTTPS:

```
Untitled_0 *
File Edit Connection View Remote Window Help

New Open Save Connect Disconnect Clear Data

2020-11-12 14:40:22 --> AT+HTTPINIT
2020-11-12 14:40:22 -->
2020-11-12 14:40:22 --> OK
2020-11-12 14:40:28 --> AT+HTTPPARA="URL","https://webhook.site/-
479a6379-7c13-4625-9875-1fbabd18e186"
2020-11-12 14:40:28 -->
2020-11-12 14:40:28 --> OK
2020-11-12 14:41:26 --> AT+HTTPPARA="SSLCFG",0
2020-11-12 14:41:26 -->
2020-11-12 14:41:26 --> OK
2020-11-12 14:41:42 --> AT+HTTPPARA="CONTENT","application/json"
2020-11-12 14:41:42 -->
2020-11-12 14:41:42 --> OK
2020-11-12 14:41:53 --> AT+HTTPDATA=69,10000
2020-11-12 14:41:53 -->
2020-11-12 14:41:53 --> DOWNLOAD
2020-11-12 14:42:02 -->
{"Temperature(oC)": "28.5", "Humidity(%)": "75.0", "PM2.5(ug_m3)": "30.5"}
2020-11-12 14:42:02 --> OK
2020-11-12 14:43:58 --> AT+HTTPACTION=1
2020-11-12 14:43:58 -->
2020-11-12 14:43:58 --> OK
2020-11-12 14:44:01 -->
2020-11-12 14:44:01 --> +HTTPACTION: 1,200,0
2020-11-12 14:44:01 -->
2020-11-12 14:44:01 --> +HTTP_PEER_CLOSED
2020-11-12 14:44:10 --> AT+HTTPTERM
2020-11-12 14:44:10 -->
2020-11-12 14:44:10 --> OK

/dev/ttyUSB0 / 115200 8-N-1
Connected 00:00:59, 85 / 30 bytes

TX RX RTS CTS DTR DSR DCD RI
```

(1) Webhook.site - Test, p x

webhook.site/#1/479a6379-7c13-4...

relax Project Study EdgeX ths

Webhook.site

Password Alias Schedule CSV Export Custom Actions Settings... Run Now XHR Redirect

Settings... Redirect Now CORS Headers Auto Navigate Hide Details More

Request Details

Post https://webhook.site/479a6379-7c13-4625-9875-1fbabd18e186

Host 171.255.127.4 whois

Date 11/12/2020 2:44:00 PM (a few seconds ago)

Size 69 bytes

ID 62a5d9b0-6864-4926-8b12-477d63a1cd92

Files

Headers

content-length 69

accept

content-type application/json

user-agent

host webhook.site

Query strings

(empty)

Form values

(empty)

Raw Content

Format JSON Word-Wrap Copy

{ "Temperature(oC)": "28.5", "Humidity(%)": "75.0", "PM2.5(ug\_m3)": "30.5" }

# AT Command cho GPS service



## 17.1 Overview of AT Commands for GPS

Command	Description
AT+CGPS	Start/Stop GPS session
AT+CGPSINFO	Get GPS fixed position information
AT+CGPSCOLD	Cold start GPS
AT+CGPSHOT	Hot start GPS
AT+CGPSURL	Set AGPS default server URL
AT+CGPSSSL	Set AGPS transport security
AT+CGPSAUTO	Start GPS automatic
AT+CGPSNMEA	Configure NMEA sentence type
AT+CGPSNMEARATE	Set NMEA output rate
AT+CGPSMD	Configure AGPS MO method
AT+CGPSFTM	Start GPS test mode
AT+CGPSDEL	Delete the GPS information
AT+CGPSXE	Enable/Disable GPS XTRA function
AT+CGPSXD	Download XTRA assistant file
AT+CGPSXDAUTO	Download XTRA assistant file automatically
AT+CGPSINFOCFG	Report GPS NMEA-0183 sentence
AT+CGPSPMD	Configure positioning mode
AT+CGPSMSB	Configure based mode switch to standalone
AT+CGPSHOR	Configure positioning desired accuracy
AT+CGPSNOTIFY	LCS respond position request
AT+CGNSSINFO	Get GNSS fixed position information
AT+CGNSSMODE	Configure GNSS support mode
AT+CGPSIPV6	Set AGPS IPV6 Addr&Port
AT+CGPSXTRADATA	Query the validity of the current gpsOne XTRA data



File Edit Connection View Remote Window Help



```
2020-11-10 12:43:59 --> AT+CGPS=1
2020-11-10 12:43:59 -->
2020-11-10 12:43:59 --> OK
2020-11-10 12:44:07 --> AT+CGPSINFO
2020-11-10 12:44:07 -->
2020-11-10 12:44:07 --> +CGPSINFO: 2100.407791,N,10550.599344,E,101120,054407.0,12.6,0.0,316.3
2020-11-10 12:44:07 -->
2020-11-10 12:44:07 --> OK
2020-11-10 12:44:17 --> AT+CGPSINFO
2020-11-10 12:44:17 -->
2020-11-10 12:44:17 --> +CGPSINFO: 2100.407724,N,10550.599159,E,101120,054417.0,13.6,0.0,316.3
2020-11-10 12:44:17 -->
2020-11-10 12:44:17 --> OK
2020-11-10 12:44:35 --> AT+CGPSINFO
2020-11-10 12:44:35 -->
2020-11-10 12:44:35 --> +CGPSINFO: 2100.408079,N,10550.599066,E,101120,054435.0,14.5,0.0,14.4
2020-11-10 12:44:35 -->
2020-11-10 12:44:35 --> OK
2020-11-10 12:44:48 --> AT+CGPSINFO
2020-11-10 12:44:48 -->
2020-11-10 12:44:48 --> +CGPSINFO: 2100.407409,N,10550.598680,E,101120,054448.0,13.7,0.0,14.4
2020-11-10 12:44:48 -->
2020-11-10 12:44:48 --> OK
2020-11-10 12:45:56 --> AT+CGPS=0
2020-11-10 12:45:56 -->
2020-11-10 12:45:56 --> OK
2020-11-10 12:45:58 -->
2020-11-10 12:45:58 --> +CGPS: 0
```

I

/dev/ttyUSB0 / 115200 8-N-1  
Connected 00:09:47, 2130 / 407 bytes

TX	RTS	DTR	DCD
RX	CTS	DSR	RI

# AT Command khác

3.2.17 AT+CCLK Real time clock management

Description

This command is used to manage Real Time Clock of the module.

AT+CCLK Real time clock management	
Test Command AT+CCLK=?	Response OK
Read Command AT+CCLK?	Response +CCLK: <time>  OK
Write Command AT+CCLK=<time>	Response OK or ERROR

Defined values

<time>	String type value; format is "yy/MM/dd,hh:mm:ss±zz", where characters indicate year (two last digits), month, day, hour, minutes, seconds and time zone (indicates the difference, expressed in quarters of an hour, between the local time and GMT; three last digits are mandatory, range -47...+48). E.g. 6 <sup>th</sup> of May 2008, 14:28:10 GMT+8 equals to "08/05/06,14:28:10+32".  <b>NOTE:</b> 1. Time zone is nonvolatile, and the factory value is invalid time zone.
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