

SIM7000 Series_Quick Start Application Guide V1.00

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About Document

Document Information

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Related Documents

- [1] SIM7000 Series AT Command Manual V1.04
- [2] SIM7000 Hardware Design_V1.04
- [3] SIM7000 Series_TCPIP_Application Note_V1.01
- [4] SIM7000 Series_HTTP_Application Note_V1.01
- [5] SIM7000 Series_HTTP(S)_Application Note_V1.00
- [6] SIM7000 Series_FTP_Application Note_V1.00
- [7] SIM7000 Series_FOTA_Application Note_V1.00
- [8] SIM7000 Series UART Application Note_V1.00
- [9] SIM7000 Series_MQTT_Application Note_V1.01
- [10] SIM7000 Series_NTP_Application Note_V1.00
- [11] SIM7000 Series_PING_Application Note_V1.00
- [12] SIM7000 Series_GNSS_Application Note_V1.01
- [13] SIM800F_SIM900_SIM5300E_Migration to SIM7000_Application Note_V1.00



This document applies to the following products:

Name	Туре	Size (mm)	Comments
SIM7000C/E/G	CAT-M1/NB1/EGP	24*24	C: China E: EMEA/Australia
	RS		G: Global
SIM7000JC	CAT-M1/NB1	24*24	JC: Japan
SIM7000A	CAT-M1/NB1	24*24	A: North America
SIM7000C-N/E-N	CAT-NB1 only	24*24	C: China E: EMEA

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1. PURPOSE OF THIS DOCUMNET

Based on module AT command manualand APP notes, this document will help developers to understand and develop application quickly and efficiently.

2. KEY SELLING POINTS

SIM7000G

- (1) Three modes: eMTC/NB-IOT/EGPRS
- (2) Global band LTE and Quad band EGPRS
- (3) Integrated GNSS (GPS,GLONASS,Galileo,BeiDou)
- (4) Strong extension capability with rich interfaces including UART, USB2.0, GPIO etc.
- (5) LCC Package and AT commands of SIM7000G mostly compatible with SIM900 and SIM800F
- (6) Designed for applications requiring low latency, medium throughput data communication in a variety of radio propagation conditions
- (7) Embedded TCP(TLS)/UDP(DTLS)/IPV4/IPV6 stack
- (8) Enhancedfeatures: HTTP(s)/FTP/MQTT/EMAIL/LBS/NTP/DNS/PING/COAP/LWM2M/SMS/DFOTA/VoLTE/FileSystem/ALI_IOT etc.
- (9) Wwan: NDIS (Windows)/ECM (Linux)
- (10) Minimum power consumption and extended coverage/PSM&eDRX
- (11) Cellular IoT SDK (CIOT)*
- (12) Extended temperature range: -40°C to +85°C



SIM7000E

- (1) Three modes: eMTC/NB-IOT/EGPRS
- (2) Multi band LTE and Dual band EGPRS for EMEA/Australia region
- (3) Integrated GNSS (GPS,GLONASS,Galileo,BeiDou)
- (4) Strong extension capability with rich interfaces including UART, USB2.0, GPIO etc.
- (5) LCC Package and AT commands of SIM7000E mostly compatible with SIM900 and SIM800F
- (6) Designed for applications requiring low latency, medium throughput data communication in a variety of radio propagation conditions
- (7) Embedded TCP(TLS)/UDP(DTLS)/IPV4/IPV6 stack
- (8) Enhanced features: HTTP(s)/FTP/MQTT/EMAIL/LBS/NTP/DNS/PING/COAP/LWM2M/SMS/DFOTA/VoLTE/FileSystem/ALI_IOT etc.
- (9) Wwan: NDIS (Windows)/ECM (Linux)
- (10) Minimum power consumption and extended coverage/PSM&eDRX
- (11) Cellular IoT SDK (CIOT)*
- (12) Extended temperature range: -40°C to +85°C



3. SIM7000 CONFIGURATION (AT COMMAND)

3.1 AT+CNMP Preferred mode selection

AT+CNMP=?

+CNMP: ((2-Automatic),(13-GSM Only),(38-LTE Only),(51-GSM And LTE Only))

OK

Parameters:

2-Automatic

13-GSM Only

38-LTE Only // CAT-M+NB-IoT

51-GSM And LTE Only // CAT-M+NBIoT+GPRS (default)

3.2 AT+CMNB Preferred selection between CAT-M and NB-IoT

AT+CMNB=?

+CMNB: ((1-Cat-M),(2-NB-IoT),(3-Cat-M And NB-IoT))

OK

Parameters:

1-Cat-M

2-NB-IoT

3-Cat-M And NB-IoT //default

SIM7000 Mode Configuration Examples:

Grammar	Description
AT+CNMP=51	CAT-M+NB-IOT+GPRS
AT+CMNB=3	Default setting
AT+CNMP=38	CAT-M+NB-IOT
AT+CMNB=3	
AT+CNMP=51	CAT-M+GPRS
AT+CMNB=1	
AT+CNMP=51	NB-IOT+GPRS
AT+CMNB=2	
AT+CNMP=38	CAT-M1 only
AT+CMNB=1	
AT+CNMP=38	NB-IOT only
AT+CMNB=2	
AT+CNMP=13	GPRS only



3.3 AT+NBSC Configure NB-IOT Scrambling Feature

AT+NBSC=?

+NBSC: (0,1)

OK

Parameters:

0 Disable the scrambling feature in NB-IOT network.

<u>1</u> Enable the scrambling feature in NB-IOT network.

//Default Value

3.4 AT+CBANDCFG Configure CAT-M Or NB-IOT Band

AT+CBANDCFG?//Default value for SIM7000G is as below

+CBANDCFG: "CAT-M",1,2,3,4,5,8,12,13,18,19,20,26,28,39

+CBANDCFG: "NB-IOT",1,2,3,5,8,12,13,17,18,19,20,26,28

OK

AT+CBANDCFG=?

+CBANDCFG: (CAT-M,NB-IOT),(1,2,3,4,5,8,12,13,17,18,19,20,26,28,39)

OK

SIM7000LPWA Band Configuration Examples:

AT+CBANDCFG="NB-IOT",8 //Fix to Band 8 only for NB-IOT

OK

AT+CBANDCFG="NB-IOT",20 //Fix to Band 20 only for NB-IOT

OK

AT+CBANDCFG="NB-IOT",8,20 //Fix to Band 8 and Band 20 for NB-IOT

OK

AT+CBANDCFG="CAT-M",20 //Fix to Band 20 for CAT-M (Like Orange/KPN/TIM)

OK



3.5 AT+CNBS Configure Band Scan Optimization For NB-IOT

3.6 AT+CGATT Attach or Detach from GPRS Service

AT+CGATT?

+CGATT: 1//Wait until get the "1" state

OK

OK

3.7 AT+CGNAPN Get Network APN in CAT-M Or NB-IOT

AT+CGNAPN

+CGNAPN: 1,"cmnbiot"//cmnbiot is the APN of China Mobile NB-IOT SIM card

OK

AT+CGNAPN

+CGNAPN: 1,"internet.nbiot.telekom.de" //The NB-IOT APN for DT

OK

Example: NB-IOT for DT (DEUTSCHE TELEKOM)

AT+COPS?

+COPS: 0,2,"26201",9



OK

AT+CPSI? +CPSI: LTE

NB-IOT,Online,262-01,0xE2AE,27219977,44,EUTRAN-BAND8,3740,0,0,-3,-79,-76,20

ОК

Example:NB-IOT for TIM (Italy)

AT+COPS?

+COPS: 0,0,"222 01",9

ОК

AT+CPSI?

+CPSI: LTE

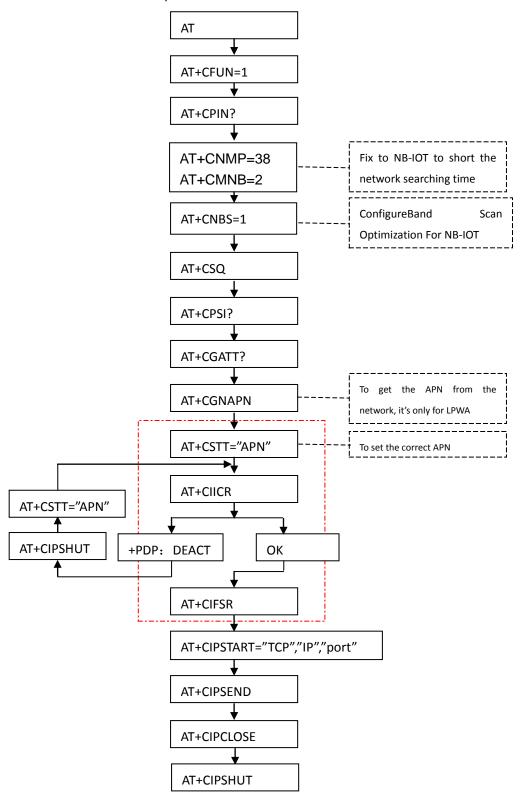
NB-IOT,Online,222-01,0x80EA,76845640,439,EUTRAN-BAND20,6290,0,0,-11,-74,-63,20

ОК



4. FLOW CHARTOF USING TCP/IP AT COMMANDS

Take NB-IOT as the example:





5. EXAMPLES

5.1 Modem Side (Compatible with SIM900/SIM800 series)

5.1.1, Establish a TCP Client Connection Under NB-IOT with IPV4

Grammar	Description
AT	AT SYNC, especially for Auto baud rate
OK AT IRRO	D. 1.5. N. SIMETONO
AT+IPR?	By default, SIM7000 series port set with Auto baud rate
+IPR: 0	Auto Daud Tate
OK	
AT+CFUN=1	Full functionality (Default)
ОК	
AT+CPIN?	Check SIM card status
+CPIN: READY	
ОК	
AT+CNMP=38	Set to CAT-M+NB-IoT
ОК	
AT+CMNB=2	Fix to NB-IOT
ОК	
AT+CBANDCFG?	Check Band configuration
+CBANDCFG: "CAT-M",20	
+CBANDCFG: "NB-IOT",8,20	
OK	
AT+CNBS=1	Set SNR level 0 band scan, to short the
	time for NB-IOT band scan
OK	
AT+CSQ	Query Signal Quality



a SUISEA AUT Company	
+CSQ: 19,99	
OK	
AT+COPS?	0 User-specified GSM access technology
	7 User-specified LTE M1 A GB access
+COPS: 0,0,"CHINA MOBILE CMCC",9	technology
	9 User-specified LTE NB S1 access
ОК	technology
AT+CPSI?	Inquiring UE system information
+CPSI: LTE	
NB-IOT,Online,460-00,0x5B57,27593498,435,	
EUTRAN-BAND8,3738,0,0,-5,-83,-78,11	
OK	Data Caminala statu
AT+CGATT?	Data Service's status
+CGATT: 1	Wait until get the "1" state
+CGATT: T	
OK	
AT+CGNAPN	GetAPN from network in CAT-M Or NB-IOT
	mode, it's not available for GPRS
+CGNAPN: 1,"cmnbiot"	,
OK	
AT+CSTT="cmnbiot"	Set theAPN, if customer know the correct
	APN, can set with this command directly.
OK	For GSM, check with local GSM provider to
47 000	get the correct APN
AT+CIICR	Bring Up Wireless Connection for
OK	CAT-M/NB-IOT/GPRS
AT+CIFSR	Get Local IP Address
AITOII OIX	Get Local II Addiess
100.75.203.78	
AT+CIPSRIP=1	Display IP address and Port of sender
OK	
AT+CIPHEAD=1	Add IP head in receiving data
OK	
AT+CIPSTART="TCP","117.131.85.139",8409	Start up the TCP connection
OK	
OK	



	The TCP connection has been established
CONNECT OK	successfully
AT+CIPSEND=5	Send data to TCP server
> 12345	
SEND OK	
RECV FROM:117.131.85.139:8409	Receive data from the remote TCP server
+IPD,13:HELLO SIM7000	
AT+CIPCLOSE	Close the connection
CLOSE OK	Connection is closed
AT+CIPSHUT	Deactivate the PDP context &close
	all connections
SHUT OK	

5.1.2, Establish a TCP Client Connection Under 2G (GPRS) with IPV4

Grammar	Description
AT	AT SYNC, especially for Auto baud rate
OK	
AT+IPR?	By default, SIM7000 series port set with
	Auto baud rate
+IPR: 0	
OK	
AT+CFUN=1	Full functionality (Default)
OK	
AT+CPIN?	Check SIM card status
+CPIN: READY	
OK	
AT+CNMP=13	Fix to GSM to short the band scan time
OK	
AT+CSQ	Query Signal Quality
+CSQ: 28,99	



a SUISEA AUTCOMPANY		
OK		
AT+COPS?	0 User-specified GSM access technology	
	7 User-specified LTE M1 A GB access	
+COPS: 0,0,"CHINA MOBILE CMCC",0	technology	
	9 User-specified LTE NB S1 access	
OK	technology	
AT+CPSI?	Inquiring UE system information	
+CPSI: GSM,Online,460-00,0x1816,21817,81		
EGSM 900,-56,0,47-157		
OK		
AT+CGATT?	Data Service's status	
00477	Wait until get the "1" state	
+CGATT: 1		
OK		
OK AT. CSTT_"CMNET"	For CCNA shook with least CCNA service	
AT+CSTT="CMNET"	For GSM, check with local GSM provider to	
OK	set the correct APN	
AT+CIICR	Dring IIn Wireless Connection for	
AI+CIICR	Bring Up Wireless Connection for	
OK	CAT-M/NB-IOT/GPRS	
AT+CIFSR	Cat Local ID Address	
AI+CIF3R	Get Local IP Address	
100.123.130.241		
AT+CIPSRIP=1	Display IP address and Port of sender	
ATTOM GIVE = 1	Display if dudiess and Fore of seriaer	
OK		
AT+CIPHEAD=1	Add IP head in receiving data	
ок		
AT+CIPSTART="TCP","117.131.85.139",8409	Start up the TCP connection	
,		
ок		
	The TCP connection has been established	
CONNECT OK	successfully	
AT+CIPSEND=5	Send data to TCP server	
> 12345		
SEND OK		
RECV FROM:117.131.85.139:8409	Receive data from the remote TCP server	
+IPD,13:HELLO SIM7000		
	<u>.</u>	



AT+CIPCLOSE	Close the connection
CLOSE OK	Connection is closed
AT+CIPSHUT	Deactivate the PDP context &close
	all connections
SHUT OK	

5.1.3, HTTP GET Under 2G (GPRS)

Grammar	Description
AT	AT SYNC, especially for Auto
	baud rate
OK	
AT+IPR?	By default, SIM7000 series
	port set with Auto baud rate
+IPR: 0	
OK	
AT+CFUN=1	Full functionality (Default)
OK	
AT+CPIN?	Check SIM card status
- ODINI- DE ADV	
+CPIN: READY	
OK	
AT+CNMP=13	Fix to 2G
ATTOMWIT - 13	11X to 20
OK	
AT+CSQ	Query Signal Quality
	garay angular garanty
+CSQ: 28,99	
ОК	
AT+COPS?	0 User-specified GSM
	access technology
+COPS: 0,0,"CHINA MOBILE CMCC",0	7 User-specified LTE M1 A
	GB access technology
OK	9 User-specified LTE NB
	S1 access technology
AT+CPSI?	Inquiring UE system
	information



a SUISEA AIDT company	
+CPSI: GSM,Online,460-00,0x1816,21817,81 EGSM 900,-50,0,53-163	
ОК	
AT+CGATT?	Data Service's status
	Wait until get the "1" state
+CGATT: 1	vali and got the Totale
TOOKI I. I	
OV.	
OK	
AT+SAPBR=3,1,"Contype","GPRS"	Configure bearer profile
OK	Set the correct APN, CMNET
AT+SAPBR=3,1,"APN","CMNET"	is the one for China Mobile
	2G.
ОК	For LPWA, need to set the
	correct one getting from the
	network (AT+CGNAPN).
AT. SADDD_1 1	
AT+SAPBR=1,1	Open bearer
OK	
AT+SAPBR=2,1	Query bearer
+SAPBR: 1,1,"100.107.223.18"	
ОК	
AT+HTTPINIT	Init HTTP service
OK	
	Catalana Can HTTD
AT+HTTPPARA="CID",1	Set parameters for HTTP
	session
OK	
AT+HTTPPARA="URL","http://www.baidu.com"	
OK	
AT+HTTPACTION=0	GET session start
ОК	<method></method>
	0 GET
+HTTPACTION: 0,200,153140	1 POST
111111 AO 11011. 0,200, 100 140	
	2 HEAD
	3 DELETE
AT+HTTPREAD	Read the data of HTTP
	server
+HTTPREAD: 153140	



```
<!DOCTYPE html>
<!--STATUS OK-->
document.cookie="NOJS=;expires=Sat, 01
                                         Jan
                                              2000
00:00:00 GMT";
</script>
</body>
</html>
OK
                                                     Terminate HTTP service
AT+HTTPTERM
OK
AT+SAPBR=0,1
                                                     Close bearer
OK
```

5.1.4, PING Under NB-IOT

Grammar	Description
AT	AT SYNC, especially for Auto baud rate
OK	
AT+IPR?	By default, SIM7000 series port set with
	Auto baud rate
+IPR: 0	
OK	
AT+CFUN=1	Full functionality (Default)
OK	
AT+CPIN?	Check SIM card status
+CPIN: READY	
OK	
AT+CNMP=38	Set to CAT-M+NB-IoT



OK	
AT+CMNB=2	Fix to NB-IOT
ОК	
AT+CBANDCFG?	Check Band configuration
+CBANDCFG: "CAT-M",20	
+CBANDCFG: "NB-IOT",8,20	
OK	
AT+CNBS=1	Set SNR level 0 band scan, to short the
OK	time for NB-IOT band scan
AT+CSQ	Query Signal Quality
AI+CSQ	Query Signal Quality
+CSQ: 19,99	
1004. 10,00	
ок	
AT+COPS?	0 User-specified GSM access technology
	7 User-specified LTE M1 A GB access
+COPS: 0,0,"CHINA MOBILE CMCC",9	technology
	9 User-specified LTE NB S1 access
OK	technology
AT+CPSI?	Inquiring UE system information
+CPSI: LTE	
NB-IOT,Online,460-00,0x5B57,27593498,435,	
EUTRAN-BAND8,3738,0,0,-5,-83,-78,11	
OK	
OK AT+CGATT?	Data Service's status
AITOGAIII	Wait until get the "1" state
+CGATT: 1	Trait and get the T state
100/11.1	
ОК	
AT+CGNAPN	Get APN from network in CAT-M Or NB-IOT
	mode, it's not available for GPRS
+CGNAPN: 1,"cmnbiot"	
OK	
AT+CSTT="cmnbiot"	Set the APN, if customer know the correct
	APN, can set with this command directly.



OK	For GSM, check with local GSM provider to	
	get the correct APN	
AT+CIICR	Bring Up Wireless Connection for	
	CAT-M/NB-IOT/GPRS	
OK		
AT+CIFSR	Get Local IP Address	
100.75.203.78		
AT+CIPPING="www.baidu.com",4,8,300,64	Ping request	
+CIPPING: 1,"111.13.100.92",17800,55		
+CIPPING: 2,"111.13.100.92",4725,55		
+CIPPING: 3,"111.13.100.92",9960,55		
+CIPPING: 4,"111.13.100.92",960,55		
OK		

5.1.5, EMAIL SMTP Under 2G (GPRS)

Grammar	Description
AT	AT SYNC, especially for
	Auto baud rate
OK	
AT+IPR?	By default, SIM7000 series
	port set with Auto baud
+IPR: 0	rate
OK	
AT+CFUN=1	Full functionality (Default)
OK	
AT+CPIN?	Check SIM card status
+CPIN: READY	
OK	
AT+CNMP=13	Fix to 2G
OK	
AT+CSQ	Query Signal Quality



+CSQ: 28,99	
OK	
AT+COPS?	0 User-specified GSM access technology
+COPS: 0,0,"CHINA MOBILE CMCC",0	7 User-specified LTE M1 A GB access technology
ОК	9 User-specified LTE NB S1 access technology
AT+CPSI?	Inquiring UE system information
+CPSI: GSM,Online,460-00,0x1816,21817,81 EGSM 900,-50,0,53-163	
OK	
AT+CGATT?	Data Service's status Wait until get the "1"
+CGATT: 1	state
OK	
AT+SAPBR=3,1,"Contype","GPRS"	Configure bearer profile
ОК	Set the correct APN,
AT+SAPBR=3,1,"APN","CMNET"	CMNET is the one for China Mobile 2G.
OK	For LPWA, need to set the correct one getting from
	the network (AT+CGNAPN).
AT+SAPBR=1,1	Open bearer
ОК	
AT+SAPBR=2,1	Query bearer
+SAPBR: 1,1,"100.107.223.18"	
ОК	
/Use NTP to do the time & date SYNC/	
AT+CNTPCID=1	Set NTP Use bear profile 1
OK	
AT+CNTP="ntp1.aliyun.com",32	Set NTP service url and



	local time zone
OK	
AT+CNTP	Start Sync Network Time
OK	
+CNTP: 1,"2019/01/04,16:47:28"	
AT+CCLK?	Get local date and time
+CCLK: "19/01/04,16:47:43+32"	Timezone may be different with thatin CNTP setting
OK	
AT+EMAILCID=1	Set parameters of Email
OK	
AT+EMAILTO?	
+EMAILTO: 30	
OK	
AT+SMTPSRV="smtp.sina.com",25	Set SMTP server address and port
OK	
AT+SMTPAUTH=1,"km***tw","ok***ok"	Set user name and password
OK	
AT+SMTPFROM="km178tw@sina.com","okwapok"	Set sender address and name
OK	
AT+SMTPRCPT=0,0,"liangliang.wu@simcom.com","Light"	Set the recipient(To:)
OK	
AT+SMTPSUB="TEST Email"	Set the subject
OK AT+SMTPBODY=19	Set the body
AI+SWIIPDUDI=19	,
DOWNLOAD	Input data "This is a new
This is a new Email	par aata Tiilo lo a licv



	Email"
OK	
AT+SMTPSEND	Send the Email
ОК	
	1 The Email has been sent
+SMTPSEND: 1	successfully
AT+SAPBR=0,1	Close bearer
OK	



5.2AP Side

5.2.1, Establish a TCP Client Connection UnderNB-IOTwith IPV4

Grammar	Description
AT	AT SYNC, especially for Auto baud rate
OK	
AT+IPR?	By default, SIM7000 series port set with
	Auto baud rate
+IPR: 0	
OK	
AT+CFUN=1	Full functionality (Default)
OK	
AT+CPIN?	Check SIM card status
+CPIN: READY	



a SUISEANIT company	
OK	CALL CAT MAND LET
AT+CNMP=38	Set to CAT-M+NB-IoT
OK	
AT+CMNB=2	Fix to NB-IOT
ATTOMIND-2	TIX to NB 101
ок	
AT+CBANDCFG?	Check Band configuration
	-
+CBANDCFG: "CAT-M",20	
+CBANDCFG: "NB-IOT",8,20	
OK	
AT+CNBS=1	Set SNR level 0 band scan, to short the time for NB-IOT band scan
OK	for NB-101 band scan
AT+CSQ	Query Signal Quality
AITOOK	Query Signal Quality
+CSQ: 19,99	
ОК	
AT+COPS?	0 User-specified GSM access technology
	7 User-specified LTE M1 A GB access
+COPS: 0,0,"CHINA MOBILE CMCC",9	technology
	9 User-specified LTE NB S1 access
OK	technology
AT+CPSI?	Inquiring UE system information
+CPSI: LTE	
NB-IOT,Online,460-00,0x5B57,27593498,435,	
EUTRAN-BAND8,3738,0,0,-5,-83,-78,11	
5,5 53,5,5, 5, 55, 5,	
ок	
AT+CGATT?	Data Service's status
	Wait until get the "1" state
+CGATT: 1	
OK	
AT+CNACTCFG?	IP Protocol Type Configuration
+CNACTCFG: "IPV4"	Default value is IPV4
TONACTORG. IFV4	
ОК	



AT+CNACT=1	Open the wireless connection
ATTONACT=1	AT+CNACT= <mode>[,<apn>]</apn></mode>
OK	ATTENACT=\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
+APP PDP: ACTIVE	
AT+CNACT?	Get local IP
+CNACT: 1,"100.81.245.27"	
OK	
AT+CACID=0	Device identification
OK	
AT+CASSLCFG=0,ssl,0	Whether to use the SSL, If TCP/UDP
OK	connection, the parameter is 0.
OK	0 Not support SSL 1 Support SSL
AT+CASSLCFG=0,protocal,0	Set the protocol type. Set to 0 is TCP. If it is
ATTOROGEOT G=0,protocal,	UDP, it should be set to 1.
OK	obt, it should be set to 1.
AT+CAOPEN=0,"117.131.85.139",8409	Setup a TCP connection
, , , , , , , , , , , , , , , , , , , ,	Return URC the first parameter is
+CAOPEN: 0,0	identification,
	the second parameter is the result of setup
OK	connection, 0 means success.
AT+CASEND=0,5	Request to send 5 bytes data
>	Input data
OK	
OAOFNID OOF	
+CASEND: 0,0,5	Data transmit success
+CADATAIND: 0 AT+CARECV=0,100	Connection with an identifier of 0 has data
AITOANEOV=0,100	Request to get 100 bytes data sending from
+CARECV: 13,HELLO SIM7000	server.
	In fact, receive 13 bytes data
ок	Output data received "HELLO SIM7000"
AT+CACLOSE=0	Close the connection of Identification 0
OK	
AT+CNACT=0	Disconnect the wireless connection
OK	



+APP PDP: DEACTIVE	

5.2.2, Establish a TCP Client Connection Under 2G (GPRS)with IPV4

Grammar	Description
AT	AT SYNC, especially for Auto baud rate
OK	
AT+IPR?	By default, SIM7000 series port set with
JDD: 0	Auto baud rate
+IPR: 0	
OK	
AT+CFUN=1	Full functionality (Default)
	, ,
OK	
AT+CPIN?	Check SIM card status
+CPIN: READY	
OK	
AT+CNMP=13	Fix to 2G
7.1.01 = 10	- T. M. CO 2-0
ОК	
AT+CSQ	Query Signal Quality
+CSQ: 28,99	
OK	
AT+COPS?	0 User-specified GSM access technology
A1+00101	7 User-specified LTE M1 A GB access
+COPS: 0,0,"CHINA MOBILE CMCC",0	technology
	9 User-specified LTE NB S1 access
OK	technology
AT+CPSI?	Inquiring UE system information
0001 0011 0 11 400 00 0 400 00 00 00	
+CPSI: GSM,Online,460-00,0x1816,21817,81	
EGSM 900,-50,0,53-163	
ОК	
AT+CGATT?	Data Service's status
<u> </u>	<u> </u>



	Wait until get the "1" state
+CGATT: 1	Wait until get the T State
+CGATT. T	
OK	
OK	ID Doots and Time of Confirmation
AT+CNACTCFG?	IP Protocol Type Configuration
	Default value is IPV4
+CNACTCFG: "IPV4"	
OK	
AT+CNACT=1,"CMNET"	Set the correct APN and Open wireless
	connection
OK	
+APP PDP: ACTIVE	
AT+CNACT?	Get local IP
+CNACT: 1,"100.96.12.159"	
OK	
AT+CACID=0	Device identification
OK	
AT+CASSLCFG=0,ssl,0	Whether to use the SSL, If TCP/UDP
, ,	connection, the parameter is 0.
OK	0 Not support SSL
	1 Support SSL
AT+CASSLCFG=0,protocal,0	Set the protocol type. Set to 0 is TCP. If it is
,	UDP, it should be set to 1.
OK	02.7, 10 3.10 3.10 3.00 1.00 2.1
AT+CAOPEN=0,"117.131.85.139",8409	Setup a TCP connection
ATTOACT EN-0, TITTIOTION 100 ,0400	Return URC the first parameter is
+CAOPEN: 0,0	identification,
10/10/ 214: 0,0	the second parameter is the result of setup
OK	connection, 0 means success.
AT+CASEND=0,5	Request to send 5 bytes data
ALI ONOLIND-0,0	nequest to seria 5 bytes data
	Input data
OK	Impat data
+CASEND: 0.0.5	Data transmit success
+CASEND: 0,0,5	Data transmit success
+CADATAIND: 0	Data transmit success Connection with an identifier of 0 has data
	Connection with an identifier of 0 has data
+CADATAIND: 0	



	In fact, receive 13 bytes data
OK	Output data received "HELLO SIM7000"
AT+CACLOSE=0	Close the connection of Identification 0
ОК	
AT+CNACT=0	Disconnect the wireless connection
OK	
+APP PDP: DEACTIVE	

5.2.3, Establish a UDP Client Connection UnderNB-IOTwith IPV6

Grammar	Description
AT	AT SYNC, especially for Auto baud rate
OK	
AT+IPR?	By default, SIM7000 series port set with
	Auto baud rate
+IPR: 0	
OK	
AT+CFUN=1	Full functionality (Default)
OK	
AT+CPIN?	Check SIM card status
+CPIN: READY	
OK	
AT+CNMP=38	Set to CAT-M+NB-IoT
OK	
AT+CMNB=2	Fix to NB-IOT
OK	
AT+CBANDCFG?	Check Band configuration
+CBANDCFG: "CAT-M",20	



V-0.000 (3,4 - 3.003 (0.004) (30)	
+CBANDCFG: "NB-IOT",8,20	
OK	
AT+CNBS=1	Set SNR level 0 band scan, to short the time for NB-IOT band scan
OK	
AT+CSQ	Query Signal Quality
	Quelly organic
+CSQ: 19,99	
OK	
AT+COPS?	0 User-specified GSM access technology
	7 User-specified LTE M1 A GB access
+COPS: 0,0,"CHINA MOBILE CMCC",9	technology
, ,	9 User-specified LTE NB S1 access
OK	technology
AT+CPSI?	Inquiring UE system information
, e. e	inquining of system information
+CPSI: LTE	
NB-IOT,Online,460-00,0x5B57,27593498,435,	
EUTRAN-BAND8,3738,0,0,-5,-83,-78,11	
2011/11/ 2/11/20,5/30,0,0, 3, 65, 76,11	
OK	
AT+CGATT?	Data Service's status
AITOGAIT:	Wait until get the "1" state
+CGATT: 1	wait until get the 1 State
TOGATI: 1	
OK	
AT+CNACTCFG?	IP Protocol Type Configuration
ATTORACTOR OF	Default value is IPV4
+CNACTCFG: "IPV4"	Detaute value is if v4
TONACTOL G. IF V4	
ОК	
AT+CNACTCFG="IPV6"	Sat ID Protocol Type to IDV6
AITCNACIONGE IPVO	Set IP Protocol Type to IPV6
OK	
OK AT CNACT 4	Ones the winders remorting
AT+CNACT=1	Open the wireless connection
OK	AT+CNACT= <mode>[,<apn>]</apn></mode>
OK	
ADD DDD: ACTIVE	
+APP PDP: ACTIVE	Catharatin
AT+CNACT?	Get local IP



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+CNACT:	
1,"2401:E180:9008:16:7D6E:E1F7:C16C:E8F"	
OK	
AT+CACID=0	Device identification
OK	
AT+CASSLCFG=0,ssl,0	Whether to use the SSL, If TCP/UDP
	connection, the parameter is 0.
OK	0 Not support SSL
	1 Support SSL
AT+CASSLCFG=0,protocal,1	Set the protocol type. Set to 0 is TCP. If it is
	UDP, it should be set to 1.
OK	
AT+CASSLCFG=0,localport,8888	Set local port
	(0-65536)
OK	
AT+CAOPEN=0,"2406:da14:5c8:1401:	Setup a UDP connection
4b55:c73d:cb95:8ec8",2301	
	Return URC the first parameter is
+CAOPEN: 0,0	identification,
	the second parameter is the result of setup
OK	connection, 0 means success.
AT+CASEND=0,5	Request to send 5 bytes data
>	Input data
OK	
· CACEND, O.O.F.	
+CASEND: 0,0,5	Data transmit success
+CADATAIND: 0	Connection with an identifier of 0 has data
AT+CARECV=0,100	Poguest to get 100 bytes data and ding from
LCAPECV: 13 HELLO SIM7000	Request to get 100 bytes data sending from
+CARECV: 13,HELLO SIM7000	In fact, receive 12 bytes data
OK	In fact, receive 13 bytes data Output data received "HELLO SIM7000"
AT+CACLOSE=0	Close the connection of Identification 0
AITOAULUSE=U	Close the connection of Identification of
OK	
AT+CNACT=0	Disconnect the wireless connection
AITORAO I -U	Disconnect the wheless conflection
OK	
+APP PDP: DEACTIVE	
WILL DISPERSORVE	



5.2.4, Establish a TCP TLS1.2 Client Connection UnderNB-IOTwith IPV4

Grammar	Description
AT	AT SYNC, especially for Auto baud
	rate
OK	
AT+IPR?	By default, SIM7000 series port set
	with Auto baud rate
+IPR: 0	
OK	
AT+CFUN=1	Full functionality (Default)
ATTO ONE I	Tail failetionality (Belautt)
ок	
AT+CPIN?	Check SIM card status
+CPIN: READY	
OK	
AT+CNMP=38	Set to CAT-M+NB-IoT
OK	
OK AT+CMNB=2	Fix to NB-IOT
ATTOWNING=2	TIA LO IND-IOT
ОК	
AT+CBANDCFG?	Check Band configuration
+CBANDCFG: "CAT-M",20	
+CBANDCFG: "NB-IOT",8,20	
OK AT, CNDC 4	Cat CND level O hand again to their
AT+CNBS=1	Set SNR level 0 band scan, to short the time for NB-IOT band scan
OK	the time for IND-IOT balla Scall
AT+CSQ	Query Signal Quality
+CSQ: 19,99	
ОК	
AT+COPS?	0 User-specified GSM access
	technology
+COPS: 0,0,"CHINA MOBILE CMCC",9	7 User-specified LTE M1 A GB



	access technology
OK	9 User-specified LTE NB S1 access
	technology
AT+CPSI?	Inquiring UE system information
+CPSI: LTE	
NB-IOT,Online,460-00,0x5B57,27593498,435,	
EUTRAN-BAND8,3738,0,0,-5,-83,-78,11	
OK	
AT+CGATT?	Data Service's status
	Wait until get the "1" state
+CGATT: 1	
OK	
AT+CNACTCFG?	IP Protocol Type Configuration
	Default value is IPV4
+CNACTCFG: "IPV4"	
OK	
AT+CNACT=1	Open the wireless connection
	AT+CNACT= <mode>[,<apn>]</apn></mode>
OK	
+APP PDP: ACTIVE	
AT+CNACT?	Get local IP
ON A OT 1 11400 04 045 071	
+CNACT: 1,"100.81.245.27"	
OV.	
OK	
1, Ignore CA root	Desire the effective
AT+CACID=0	Device identification
OK	
	Cat the protocol time of CCI with an
AT+CSSLCFG="sslversion",0,3	Set the protocol type of SSL with an identifier of 0.
OK	3 indicate TLS1.2
AT+CASSLCFG=0,ssl,1	Whether to use the SSL
A1TOAGGEOFG=0,551,1	
OK	0 Not support SSL Support SSL
AT+CASSLCFG=0,protocal,0	Set the protocol type. Set to 0 is TCP.
ATTOAGGEOFG=U,protocat,u	
OK	If it is UDP, it should be set to 1.
	Set protocol type
AT+CASSLCFG=0,crindex,0	Set protocol type



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	Identifier for AT+CSSLCFG
OK	corresponding SSL configuration
AT+CAOPEN=0,"eun-celli-13383-dev-	Setup a TCP SSL connection
01-iothub1.azure-devices.net",8883	Return URC the first parameter is
	identification,
+CAOPEN: 0,0	the second parameter is the result of
	setup
OK	connection, 0 means success.
AT+CACLOSE=0	Close the connection of
	Identification 0
OK	
2, With CA root (Build a one-way authentication SSL conne	ction)
AT+CFSINIT	Get Flash Data Buffer
OK	
AT+CFSWFILE=3,baltimore_cyberTrust_Root.cer,	Download the CA root file into
0,891,10000	module flash
DOWNLOAD	
文件大小: 891	
波特率 115200bps	
需要时间:大约 0 秒	
请稍候	
发送完毕!	
OK	
AT+CFSTERM	Free the Flash Buffer Allocated by
	CFSINIT
OK	
AT+CACID=0	Device identification
OK	
AT+CSSLCFG="sslversion",0,3	Set the protocol type of SSL with an
	identifier of 0.
OK	3 indicate TLS1.2
AT+CASSLCFG=0,ssl,1	Whether to use the SSL
	0 Not support SSL
OK	1 Support SSL
AT+CASSLCFG=0,protocal,0	Set the protocol type. Set to 0 is TCP.
	If it is UDP, it should be set to 1.
OK	
AT+CASSLCFG=0,crindex,0	Set protocol type
	Identifier for AT+CSSLCFG
OK	corresponding SSL configuration



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AT+CSSLCFG="convert",2,"baltimore_	Configuring the type of certificate to
cyberTrust_Root.cer"	be converted, and 2 is a root
	certificate.
OK	Configure the name of the certificate
	to be converted, and the name after
	the conversion is consistent with the
	existing certificate name.
AT+CASSLCFG=0,"cacert","baltimore_	Set root certificate. The root
cyberTrust_Root.cer"	certificate must be a certificate that
	has been converted through
ОК	AT+CSSLCFG. This item can be
	omitted. If omitted, all server
	certificates are trusted by default.
AT+CAOPEN=0,"eun-celli-13383-dev-01-iothub1.	Setup a TCP SSL connection
azure-devices.net",8883	Return URC the first parameter is
·	identification,
+CAOPEN: 0,0	the second parameter is the result of
	setup
ОК	connection, 0 means success.
AT+CACLOSE=0	Close the connection of
	Identification 0
OK	
3, Build a two-way authentication SSL connection	
AT+CFSINIT	Get Flash Data Buffer
ОК	
AT+CFSWFILE=3,root.pem,0,1758,10000	Download the CA root file into
. , , ,	module flash
DOWNLOAD	
文件大小: 1220	
波特率 115200bps	
需要时间:大约 0 秒	
请稍候	
发送完毕!	
ОК	
AT+CFSWFILE=3,client.pem,0,1220,10000	Download theclient.pem file into
	module flash
DOWNLOAD	
文件大小: 1220	
波特率 115200bps	
需要时间:大约 0 秒	
1 m 女 [1] [1] (人 5) U イク	
请稍候	



a SUISEA AUT company	
发送完毕!	
OK	
AT+CFSWFILE=3,client.key,0,1675,10000	Download theclient.key file into
DOMAIN OAD	module flash
DOWNLOAD	
文件大小: 1220	
波特率 115200bps 需要时间:大约 0 秒	
请稍候	
发送完毕!	
OK AT CECTEDM	Fire the Flesh Duffer Allegated by
AT+CFSTERM	Free the Flash Buffer Allocated by
OK	CFSINIT
OK AT+CACID=0	Dovice identification
AT+CACID=0	Device identification
OK	
AT+CSSLCFG="sslversion",0,3	Set the protocol type of SSL with an
ATTOOSEO G- SSIVEISION ,0,5	identifier of 0.
OK	3 indicate TLS1.2
AT+CSSLCFG="convert",2,"root.pem"	Configure the type of certificate to
ATTCSSECTG= Convert ,2, Toot.pent	be converted, and 2 is a root
OK	certificate.
OK .	Configure the name of the certificate
	to be converted, and the name after
	the conversion is consistent with the
	existing certificate name.
AT+CSSLCFG=convert,1,client.pem,client.key	Configure the type of certificate to
ATTOOLOT O=CONVERT, 1, CHERT. Peril, CHERT. Rey	be converted, and 1 is client
ОК	certificate.
	Configure the certificate name that
	needs to be converted, and the client
	certificate needs to enter the
	certificate file and the private key
	file.
	The name after conversion is
	identical to the name of the
	certificate,that is "client.pem".
AT+CASSLCFG=0,ssl,1	Whether to use the SSL
, ,	0 Not support SSL
ок	1 Support SSL
AT+CASSLCFG=0,protocal,0	Set the protocol type. Set to 0 is TCP.
	If it is UDP, it should be set to 1.
	,



OK	
AT+CASSLCFG=0,crindex,0	Set protocol type
	Identifier for AT+CSSLCFG
OK	corresponding SSL configuration
AT+CASSLCFG=0,"cacert","root.pem"	Set root certificate. The root
	certificate must be a certificate that
OK	has been converted through
	AT+CSSLCFG. This item can be
	omitted. If omitted, all server
	certificates are trusted by default.
AT+CASSLCFG=0,"clientcert","client.pem"	Set up client certificates.
	The root certificate must be
OK	converted to a certificate that can be
	directly used by AT+CSSLCFG.
AT+CAOPEN=0,a3vyo55owhy462.iot.	Setup a TCP SSL connection
eu-west-1.amazonaws.com,8883	Return URC the first parameter is
	identification,
+CAOPEN: 0,0	the second parameter is the result of
	setup
OK	connection, 0 means success.
AT+CACLOSE=0	Close the connection of
	Identification 0
OK	
AT+CNACT=0	Disconnect the wireless connection
01/	
OK	
+APP PDP: DEACTIVE	

5.2.5, HTTP GET Under 2G (GPRS)

Grammar	Description
AT	AT SYNC, especially for Auto
	baud rate
OK	
AT+IPR?	By default, SIM7000 series
	port set with Auto baud rate
+IPR: 0	
OK	
AT+CFUN=1	Full functionality (Default)



a SUISEA AUTCOMpany OK	
AT+CPIN?	Check SIM card status
+CPIN: READY	
ок	
AT+CNMP=13	Fix to 2G
ОК	
AT+CSQ	Query Signal Quality
+CSQ: 28,99	
ОК	
AT+COPS?	0 User-specified GSM access technology
+COPS: 0,0,"CHINA MOBILE CMCC",0	7 User-specified LTE M1 A GB access technology
OK	9 User-specified LTE NB S1 access technology
AT+CPSI?	Inquiring UE system
	information
+CPSI: GSM,Online,460-00,0x1816,21817,81 EGSM 900,-50,0,53-163	
OK	
AT+CGATT?	Data Service's status Wait until get the "1" state
+CGATT: 1	
ОК	
/active PDP/	
AT+CNACTCFG?	IP Protocol Type
+CNACTCFG: "IPV4"	Configuration Default value is IPV4
OK	
AT+CNACT=1,"CMNET"	Set the correct APN and
ОК	Open wireless connection
+APP PDP: ACTIVE	
AT+CNACT?	Get local IP
	<u> </u>



a SUISEA AUTCOMPANY	
+CNACT: 1,"100.96.12.159"	
ОК	
/HTTP GET test/	
AT+SHCONF="URL","http://www.baidu.com"	Set connect server
	parameter
OK AT+SHCONF="BODYLEN",350	
ATTORIOGNI - BODTELN ,330	
OK	
AT+SHCONF="HEADERLEN",350	
OK	
AT+SHCONN	HTTP build
ОК	
AT+SHREQ="http://www.baidu.com",1	Set request type "1" is GET.
OK	Get data size is 153083 <type></type>
	1 GET
+SHREQ: "GET",200,153083	2 PUT
	3 POST
	4 PATCH 5 HEAD
AT+SHREAD=0,153083	Read data length is 153083
	-
OK	
+SHREAD: 2048	
html	
STATUS OK	
•	
'index_form':"#form",	
'index_kw':"#kw",	
'result_form':"#form",	
'result_kw':"#kw"	
<pre>}); </pre>	
, 30po	
<script></th><th></th></tr></tbody></table></script>	



if(navigator.cookieEnabled){	
document.cookie="NOJS=;expires=Sat, 01 Jan 2000	
00:00:00 GMT";	
}	
AT+SHDISC	Disconnect HTTP connect
OK	
AT+CNACT=0	Disconnect the wireless
	connection
OK	
+APP PDP: DEACTIVE	

Note: For the detail, please refer to "SIM7000 Series_HTTP(S)_Application Note_V1.00".

5.2.6, HTTPSGET Under 2G (GPRS)

Grammar	Description
AT	AT SYNC, especially for Auto
	baud rate
OK	
AT+IPR?	By default, SIM7000 series
	port set with Auto baud rate
+IPR: 0	
OK	
AT+CFUN=1	Full functionality (Default)
OK	
AT+CPIN?	Check SIM card status
+CPIN: READY	
OK	
OK	
AT+CNMP=13	Fix to 2G
OK	
OK	
AT+CSQ	Query Signal Quality



0.000 (0.03 m/g) \$6.00	
+CSQ: 28,99	
OK	
AT+COPS?	0 User-specified GSM
	access technology
+COPS: 0,0,"CHINA MOBILE CMCC",0	7 User-specified LTE M1 A
	GB access technology
OK	9 User-specified LTE NB
	S1 access technology
AT+CPSI?	Inquiring UE system
	information
+CPSI: GSM,Online,460-00,0x1816,21817,81 EGSM	
900,-50,0,53-163	
OK	
AT+CGATT?	Data Service's status
	Wait until get the "1" state
+CGATT: 1	
OK	
/import certificate to flash/	
AT+CFSINIT	Get Flash Data Buffer
ОК	
	Download
AT+CFSWFILE=3,"baidu_ca.crt",0,1282,5000	thebaidu_ca.crtfile into
	module flash
DOWNLOAD	
the size of file: 1282	
baudrate 115200bps	
time: about 0 秒	
please wait	
finish!	
OK	
	Get File Size.
AT+CFSGFIS=3,"baidu_ca.crt"	Double check for the file
	size, to make sure the file
+CFSGFIS: 1282	has successfully been
	written into module flash
ОК	WITHER THO HIDGUIC HASH
AT+CFSTERM	Free the Flash Buffer
AITOI UILIM	



	Allocated by CFSINIT
OK	
/active PDP/	
AT+CNACTCFG?	IP Protocol Type
	Configuration
+CNACTCFG: "IPV4"	Default value is IPV4
OK	
AT+CNACT=1,"CMNET"	Set the correct APN and
	Open wireless connection
OK	
+APP PDP: ACTIVE	
AT+CNACT?	Get local IP
+CNACT: 1,"100.96.12.159"	
OK	
/HTTPS GET test/	
AT+CSSLCFG="convert",2,"baidu_ca.crt"	Conversion CA certificate
	format
OK	2 means ca type baidu.cer is ca certificate
	name
AT+SHSSL=1,"baidu_ca.crt"	Set HTTP SSL Configure
OK	
AT+SHCONF="URL","https://www.baidu.com"	Set connect server parameter
ОК	parameter.
AT+SHCONF="BODYLEN",350	
OK AT+SHCONF="HEADERLEN",350	
AITOHOOM - HEADERLEN ,350	
ОК	
AT+SHCONN	HTTPS build
OK	
OK AT+SHREQ="https://www.baidu.com",1	Set request type "1" is GET.
7. O. H. La Hitpo.// WWw.ballad.com , i	Get data size is 227
	l



+SHREQ: "GET",200,227 2 PUT 3 POST 4 PATCH 5 HEAD AT+SHREAD=0,227 OK +SHREAD: 227 <a "));="" ."http:="" <="" href="https://" script=""> /nead> /nead> /nead> /nead> /noscript> /nead> /noscript> /noscri	OK	<type></type>	
AT+SHREAD=0,227 AT+SHREAD: 227 <hre></hre>		1 GET	
AT+SHREAD=0,227 OK +SHREAD: 227 -(html> -(head> -(script>) -(script> -(head> -(socript> <meta) -(socript=""><meta) -(head=""> -(socript>) -(noscript><meta) -(noscript=""><meta) -(noscript=""><meta) -(noscript=""></meta)> -(hody> -(noscript>) -(hody> -(html>) AT+SHDISC Disconnect HTTP connect OK AT+CNACT=0 Disconnect the wireless connection</meta)></meta)></meta)></meta)>	+SHREQ: "GET",200,227	2 PUT	
AT+SHREAD=0,227 OK +SHREAD: 227 -(html> -(head> -(script> -(script> -(head> -(script> -(noscript> <meta content="0;url=http://www.baidu.com/" http-equiv="refresh"/> -(noscript> -(body> -(head> -(head		3 POST	
AT+SHREAD=0,227 OK +SHREAD: 227 <a "));<="" ,"http:="" href="https://" th=""><th></th><th>4 PATCH</th>		4 PATCH	
OK +SHREAD: 227 <html> <head></head></html>		5 HEAD	
+SHREAD: 227 <a ""="" .http:="" href="https://"> <a ""="" ".http:="" href="http</th><th>AT+SHREAD=0,227</th><th>Read data length is 227</th></tr><tr><th>+SHREAD: 227 <a ""="" .http:="" href="https://"> <a ""="" .http:="" href="https://"> <a ""="" .http:="" href="https://"> <a ""="" .http:="" href="https://"> <a "));="" ","http:="" c="" href="http</th><th></th><th></th></tr><tr><th><pre><html> <head></th><th>OK</th><th></th></tr><tr><th><pre><html> <head></th><th></th><th></th></tr><tr><th><pre><head></th><th></th><th></th></tr><tr><th> contaion.replace(location.href.replace(" https:="" script="" =""> c/head> chody> cnoscript><meta content="0;url=http://www.baidu.com/" http-equiv="refresh" =""/> c/body> c/html> AT+SHDISC Disconnect HTTP connect OK OK OK OK OK OK OK			
location.replace(location.href.replace("https://","http://")); <body> <noscript><meta content="0;url=http://www.baidu.com/" http-equiv="refresh"/></noscript> </body> AT+SHDISC Disconnect HTTP connect OK AT+CNACT=0 Disconnect the wireless connection			
<pre> <body></body></pre>	<script></th><th></th></tr><tr><th><pre></script> <body></body>	location replace/location brof replace("https://" "http://")):	
<pre> <body></body></pre>			
<pre><body></body></pre>	·		
<pre></pre>			
content="0;url=http://www.baidu.com/"> AT+SHDISC OK AT+CNACT=0 Disconnect the wireless connection OK			
<pre> AT+SHDISC OK AT+CNACT=0 Disconnect the wireless connection OK</pre>	·		
AT+SHDISC OK AT+CNACT=0 Disconnect HTTP connect Disconnect the wireless connection	·		
OK AT+CNACT=0 Disconnect the wireless connection	-		
AT+CNACT=0 Disconnect the wireless connection	AT+SHDISC	Disconnect HTTP connect	
AT+CNACT=0 Disconnect the wireless connection			
OK	OK		
OK	AT+CNACT=0	Disconnect the wireless	
		connection	
+APP PDP: DEACTIVE	OK		
+APP PDP: DEACTIVE			
	+APP PDP: DEACTIVE		

Note: For the detail, please refer to "SIM7000 Series_HTTP(S)_Application Note_V1.00".

5.2.7, HTTPS POST Under NB-IOT

Grammar	Description
AT	AT SYNC, especially for Auto
	baud rate
OK	
AT+IPR?	By default, SIM7000 series
	port set with Auto baud rate
+IPR: 0	
OK	



a SUISEA AUTCOMpany	1
AT+CFUN=1	Full functionality (Default)
OK	
AT+CPIN?	Check SIM card status
AITOI IN:	Check Shivi card status
+CPIN: READY	
ОК	
AT+CNMP=38	Set to CAT-M+NB-IoT
OK	
AT+CMNB=2	Fix to NB-IOT
OK AT ORANDOFOO	Charle Band and Carrettan
AT+CBANDCFG?	Check Band configuration
+CBANDCFG: "CAT-M",20	
TODANISON C. GAN MI,20	
+CBANDCFG: "NB-IOT",8,20	
ОК	
AT+CNBS=1	Set SNR level 0 band scan,
	to short the time for NB-IOT
OK	band scan
AT+CSQ	Query Signal Quality
.000,40.00	
+CSQ: 19,99	
OK	
AT+COPS?	
+COPS: 0,0,"CHINA MOBILE CMCC",9	
OK	1
AT+CPSI?	Inquiring UE system
ODOLUTE ND IOTO II	information
+CPSI: LTE NB-IOT, Online, 460-00, 0x5B57, 27593498, 435,	
EUTRAN-BAND8,3738,0,0,-5,-83,-78,11	
OK	
OK AT+CGATT?	Data Service's status
AITOGAI I :	Wait until get the "1" state
+CGATT: 1	Trait divini get the 1 state
	i.



ОК	
AT+CNACTCFG?	IP Protocol Type
	Configuration
+CNACTCFG: "IPV4"	Default value is IPV4
OK	
AT+CNACT=1	Open the wireless
	connection
OK	AT+CNACT= <mode>[,<apn></apn></mode>
ADD DDD: ACTIVE]
+APP PDP: ACTIVE AT+CNACT?	Get local IP
AITCNACT:	Get local ir
+CNACT: 1,"100.81.245.27"	
, , , , , , , , , , , , , , , , , , , ,	
OK	
/HTTPS POST test/	
AT+SHCONF="URL","https://www.kpnsemafonie.nl"	Set connect server
AT+SHCONF= OKL , https://www.kphsemaionie.hi	Set connect server parameter
OK	parameter
AT+SHCONF="BODYLEN",1024	
OK	
AT+SHCONF="HEADERLEN",350	
OK	
AT+CSSLCFG="sslversion",0,3	Set the protocol type of SSL
OK	with an identifier of 0.
OK AT+SHCONN	3 indicate TLS1.2 Connect
AT+SHCONN	Connect
ОК	
AT+SHBOD=" xml version=\"1.0\"</th <th>Set body value</th>	Set body value
encoding=\"utf-8\"?><>",405	·
ОК	
AT+SHAHEAD="Content-Lenght","405"	Add head value
OK	
AT+SHAHEAD="Content-Type","text/xml; charset=utf-8"	Add head value
OK	
OK	



AT+SHREQ="https://www.kpnsemafonie.nl/soap.asmx",	Set request type "3" is POST.
3	Post data size is 305
	<type></type>
OK	1 GET
	2 PUT
+SHREQ: "POST",200, <mark>305</mark>	3 POST
	4 PATCH
	5 HEAD
AT+SHREAD=0,305	Read data length is 305
OK	
+SHREAD: 305	
xml version="1.0" encoding="utf-8"? <>	
AT+SHDISC	Disconnect HTTP connect
OK	
AT+CNACT=0	Disconnect the wireless
	connection
OK	
+APP PDP: DEACTIVE	
TAFF FUF. DEACTIVE	

Note: For the detail, please refer to "SIM7000 Series_HTTP(S)_Application Note_V1.00".

5.2.8, FOTA Under 2G (GPRS)

Grammar	Description
AT	AT SYNC, especially for Auto
	baud rate
OK	
AT+GMR	Check the FW version inside
	SIM7000
Revision:1529B01SIM7000G	
ОК	
AT+IPR=115200	Fix the baud rate to get the
	URC after module power up
OK	
AT+CFUN=1	Full functionality (Default)
OK	



+CPIN: READY OK AT+CNMP=13 OK AT+CSQ Query Signal Quality CSQ: 28,99 OK AT+COPS? OK AT+COPS? OK AT+COPS? OK AT+CPSI: GSM.Online, 460-00,0x1816,21817,81 GSM.Online, 460-00,0x1816,21817,81 GSM.Online, 460-00,0x1816,21817,81 OK AT+CGATT? CGATT: OK AT+CNACT=1, "CMNET" OK AT+CNACT=1, "CMNET" OK AT+CNACT: 1, "100.96.12.159" OK OPen the HTTP get session to Devadad file to AP file */FOTA test/* AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ OPen the HTTP get session to Devadad file to AP file **IP Devadad file to AP file	a SUISEA AUT company	
OK AT+CNMP=13 OK AT+CSQ +CSQ: 28,99 OK AT+COPS: 0,0,"CHINA MOBILE CMCC",0 OK AT+CPSI? -CPSI: SSM,Online, 460-00,0x1816,21817,81 OK AT+CGATT? -CGATT: 1 OK AT+CNACT=1,"CMNET" OK AT+CNACT=1,"CMNET" OK AT+CNACT: 1,"100.96.12.159" OK */FOTA test/* AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ -CSQ: 28,99 O User-specified GSM access technology 7 User-specified LTE M1 A GB access technology 9 User-specified LTE NB S1 ac	AT+CPIN?	Check SIM card status
AT+CNMP=13 OK AT+CSQ +CSQ: 28,99 OK AT+COPS? -COPS: 0,0,"CHINA MOBILE CMCC",0 OK AT+CPSI? -CPSI: GSM,Online, 460-00,0x1816,21817,81 EGSM 900,-50,0,53-163 OK AT+CGATT? -CGATT: 1 OK AT+CNACT=1,"CMNET" OK AT+CNACT=1,"CMNET" OK AT+CNACT: 1,"100.96.12.159" OK AT+CNACT: 1,"100.96.12.159" OK AT+CNACT: 1,"100.96.12.159" OK AT+CNACT="MITTPTOFS="http://117.131.85.139:6002/myweb/ Open the HTTP get session to Download file to AP file	+CPIN: READY	
AT+CNMP=13 OK AT+CSQ +CSQ: 28,99 OK AT+COPS? -COPS: 0,0,"CHINA MOBILE CMCC",0 OK AT+CPSI? -CPSI: GSM,Online, 460-00,0x1816,21817,81 EGSM 900,-50,0,53-163 OK AT+CGATT? -CGATT: 1 OK AT+CNACT=1,"CMNET" OK AT+CNACT=1,"CMNET" OK AT+CNACT: 1,"100.96.12.159" OK AT+CNACT: 1,"100.96.12.159" OK AT+CNACT: 1,"100.96.12.159" OK AT+CNACT="MITTPTOFS="http://117.131.85.139:6002/myweb/ Open the HTTP get session to Download file to AP file	OK	
OK AT+CSQ +CSQ: 28,99 OK AT+COPS? -COPS: 0,0,"CHINA MOBILE CMCC",0 OK -COPS: 0,0,"CHINA MOBILE CMCC",0		
AT+CSQ +CSQ: 28,99 OK AT+COPS? OUSET-Specified GSM access technology T User-specified LTE MI A GB access technology OK AT+CPSI? AT+CPSI? CRAMINA MOBILE CMCC",0 AT+CPSI: GSM, Online, 460-00,0x1816,21817,81 EGSM 900,-50,0,53-163 OK AT+CGATT: CRAMINA GB access technology Inquiring UE system information Data Service's status Wait until get the "1" state Wait until get the "1" state OK AT+CNACT=1, "CMNET" OK AT+CNACT=1, "CMNET" OK AT+CNACT: 1, "100.96.12.159" OK */FOTA test/* AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ Open the HTTP get session to Download file to AP file To AP Powel and the Company of the C	AT+CNMP=13	Fix to 2G
CK AT+COPS? +COPS: 0,0,"CHINA MOBILE CMCC",0 OK AT+CPSI? +CPSI: GSM_Online, 460-00,0x1816,21817,81 OK AT+CGATT: 1 OK AT+CNACT=1,"CMNET" OK AT+CNACT: 1,"100.96.12.159" OK AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ Open the HTTP get session to Download file to AP file		
OK AT+COPS? +COPS: 0,0,"CHINA MOBILE CMCC",0 OK OK AT+CPSI? AT+CPSI? CSM,Online, 460-00,0x1816,21817,81 CK AT+CGATT? CK AT+CGATT: 1 OK AT+CNACT=1,"CMNET" OK AT+CNACT: 1,"100.96.12.159" OK AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ AT-COPS: 0,0,"CHINA MOBILE CMCC",0 To Powel and Gash access technology To User-specified LTE MI A GB access technology To User-specified LTE MI A GB access technology Inquiring UE system information Data Service's status Wait until get the "1" state Set the correct APN and Open wireless connection OK */FOTA test/* AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ OPen the HTTP get session to Download file to AP file	AT+CSQ	Query Signal Quality
AT+COPS? +COPS: 0,0, "CHINA MOBILE CMCC",0 OK OK 9 User-specified LTE MI A GB access technology 9 User-specified LTE NB S1 access technology Inquiring UE system information OK AT+CPSI: GSM,Online,460-00,0x1816,21817,81 EGSM 900,-50,0,53-163 OK AT+CGATT? +CGATT: 1 OK AT+CNACT=1,"CMNET" OK AT+CNACT=1,"CMNET" OK AT+CNACT: 1,"100.96.12.159" OK */FOTA test/* AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ Open the HTTP get session to Download file to AP file	+CSQ: 28,99	
access technology 7 User-specified LTE MI A GB access technology 9 User-specified LTE NB S1 access technology AT+CPSI? Inquiring UE system information CK AT+CGATT? +CGATT: 1 OK AT+CNACT=1,"CMNET" OK AT+CNACT: 1,"100.96.12.159" OK AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ OK ATHING ACCESS technology 9 User-specified LTE NB S1 access technology 1 Inquiring UE system information Data Service's status Wait until get the "1" state Set the correct APN and Open wireless connection OK */FOTA test/* OPen the HTTP get session to Download file to AP file	OK	
+COPS: 0,0, "CHINA MOBILE CMCC",0 OK OK 9 User-specified LTE MI A GB access technology 9 User-specified LTE NB S1 access technology Inquiring UE system information CK AT+CPSI: GSM,Online, 460-00,0x1816,21817,81 EGSM 900,-50,0,53-163 OK AT+CGATT? Data Service's status Wait until get the "1" state CGATT: 1 OK AT+CNACT=1, "CMNET" OK AT+CNACT=1, "CMNET" Set the correct APN and Open wireless connection OK +APP PDP: ACTIVE AT+CNACT? Get local IP CNACT: 1, "100.96.12.159" OK */FOTA test/* AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ OPen the HTTP get session to Download file to AP file	AT+COPS?	•
OK 9 User-specified LTE NB SI access technology AT+CPSI? Inquiring UE system information CK 100,-50,0,53-163 OK 200,-50,0,53-163 OK 3T+CGATT? Data Service's status Wait until get the "1" state	+COPS: 0,0,"CHINA MOBILE CMCC",0	7 User-specified LTE M1 A
information +CPSI: GSM,Online,460-00,0x1816,21817,81 EGSM 900,-50,0,53-163 OK AT+CGATT? Data Service's status Wait until get the "1" state +CGATT: 1 OK AT+CNACT=1,"CMNET" Set the correct APN and Open wireless connection OK +APP PDP: ACTIVE AT+CNACT: 1,"100.96.12.159" OK */FOTA test/* AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ Download file to AP file	OK	9 User-specified LTE NB
900,-50,0,53-163 OK AT+CGATT? Data Service's status Wait until get the "1" state +CGATT: 1 OK AT+CNACT=1,"CMNET" Set the correct APN and Open wireless connection OK +APP PDP: ACTIVE AT+CNACT? Get local IP CNACT: 1,"100.96.12.159" OK */FOTA test/* AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ Download file to AP file	AT+CPSI?	, •
AT+CGATT? +CGATT: 1 OK AT+CNACT=1,"CMNET" OK AT+CNACT=1,"CMNET" OK +APP PDP: ACTIVE AT+CNACT? +CNACT: 1,"100.96.12.159" OK */FOTA test/* AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ Data Service's status Wait until get the "1" state Set the correct APN and Open wireless connection Open wireless connection Open the HTTP get session to Download file to AP file	, , , , , , , , , , , , , , , , , , , ,	
Wait until get the "1" state +CGATT: 1 OK AT+CNACT=1,"CMNET" OK Set the correct APN and Open wireless connection Open wireless connection OF AT+CNACT: AT+CNACT: CMNET" Get local IP CNACT: 1,"100.96.12.159" OK */FOTA test/* AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ Open the HTTP get session to Download file to AP file	OK	
+CGATT: 1 OK AT+CNACT=1,"CMNET" OK Set the correct APN and Open wireless connection OK +APP PDP: ACTIVE AT+CNACT? Get local IP +CNACT: 1,"100.96.12.159" OK */FOTA test/* AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ Download file to AP file	AT+CGATT?	
AT+CNACT=1,"CMNET" Set the correct APN and Open wireless connection OK +APP PDP: ACTIVE AT+CNACT? Get local IP +CNACT: 1,"100.96.12.159" OK */FOTA test/* AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ Open the HTTP get session to Download file to AP file	+CGATT: 1	wait drillinger the 1 state
Open wireless connection OK +APP PDP: ACTIVE AT+CNACT? +CNACT: 1,"100.96.12.159" OK */FOTA test/* AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ To Download file to AP file	OK	
OK +APP PDP: ACTIVE AT+CNACT? +CNACT: 1,"100.96.12.159" OK */FOTA test/* AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ Open the HTTP get session to Download file to AP file	AT+CNACT=1,"CMNET"	Set the correct APN and
AT+CNACT? +CNACT: 1,"100.96.12.159" OK */FOTA test/* AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ To Download file to AP file	OK	Open wireless connection
+CNACT: 1,"100.96.12.159" OK */FOTA test/* AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ Open the HTTP get session to Download file to AP file	+APP PDP: ACTIVE	
<pre>OK */FOTA test/* AT+HTTPTOFS="http://117.131.85.139:6002/myweb/</pre> Open the HTTP get session to Download file to AP file	AT+CNACT?	Get local IP
/FOTA test/ AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ To Download file to AP file	+CNACT: 1,"100.96.12.159"	
AT+HTTPTOFS="http://117.131.85.139:6002/myweb/ To Download file to AP file	OK	
to Download file to AP file	*/FOTA test/*	
l to Download file to AD file	AT+HTTPTOFS="http://117.131.85.139:6002/myweb/	Open the HTTP get session
image/SIM7000G B01-B02.zip","/fota/update.zip"	image/SIM7000G B01-B02.zip"."/fota/update.zip"	to Download file to AP file



#HTTPTOFS: 200,2298902 #HTTPTOFS: 200,2298902 AT+CFOTA=1 OK #APP PDP: DEACTIVE RDY #CFUN: 1 #CFOTA: "Start to update" #CFOTA: "Updating",0	
#HTTPTOFS: 200,2298902 #HTTPTOFS: 200,2298902 AT+CFOTA=1 OK #APP PDP: DEACTIVE RDY #CFUN: 1 #CFOTA: "Updating",0	delta firmware,
#HTTPTOFS: 200,2298902 #HTTPTOFS: 200,2298902 AT+CFOTA=1 OK #APP PDP: DEACTIVE RDY #CFUN: 1 #CFOTA: "Start to update" #CFOTA: "Updating",0	act with SIMCom
#HTTPTOFS: 200,2298902 //Under NB-takes about 2 200indicates Set the flag update, and module auto MAPP PDP: DEACTIVE RDY #CFUN: 1 #CPIN: READY #CFOTA: "Start to update" #CFOTA: "Updating",0	
AT+CFOTA=1 OK **APP PDP: DEACTIVE RDY +CFUN: 1 +CPIN: READY +CFOTA: "Updating",0	-IOT network, it
AT+CFOTA=1 OK +APP PDP: DEACTIVE RDY +CFUN: 1 +CPIN: READY +CFOTA: "Start to update" +CFOTA: "Updating",0	
AT+CFOTA=1 OK +APP PDP: DEACTIVE RDY +CFUN: 1 +CPIN: READY +CFOTA: "Start to update" +CFOTA: "Updating",0	
Update, and module auto The module FOTA upgradi which will minutes HCFUN: 1 +CFUN: 1 +CFOTA: "Start to update" +CFOTA: "Updating", 0	s OK
OK +APP PDP: DEACTIVE RDY +CFUN: 1 +CPIN: READY +CFOTA: "Start to update" +CFOTA: "Updating",0	g bit for FOTA
HAPP PDP: DEACTIVE RDY +CFUN: 1 +CPIN: READY +CFOTA: "Start to update" +CFOTA: "Updating",0	reset
#APP PDP: DEACTIVE RDY #CFUN: 1 #CPIN: READY #CFOTA: "Start to update" #CFOTA: "Updating",0 SMS Ready #CFOTA: "Updating",0	omatically
FOTA upgrading which will minutes FOTA upgrading which will minutes	le enters into
### HOP which will minutes ### CFUN: 1 ### CPIN: READY #### CFOTA: "Start to update" ###################################	
### HEADY ###################################	
+CFUN: 1 +CPIN: READY +CFOTA: "Start to update" +CFOTA: "Updating",0 SMS Ready +CFOTA: "Updating",0	1400 0010.4.
+CPIN: READY +CFOTA: "Start to update" +CFOTA: "Updating",0 SMS Ready +CFOTA: "Updating",0	
+CFOTA: "Start to update" +CFOTA: "Updating",0 SMS Ready +CFOTA: "Updating",0	
+CFOTA: "Start to update" +CFOTA: "Updating",0 SMS Ready +CFOTA: "Updating",0	
+CFOTA: "Start to update" +CFOTA: "Updating",0 SMS Ready +CFOTA: "Updating",0	
+CFOTA: "Updating",0 SMS Ready +CFOTA: "Updating",0	
+CFOTA: "Updating",0 SMS Ready +CFOTA: "Updating",0	
SMS Ready +CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0	
SMS Ready +CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0	
+CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0	
+CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0	
+CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0	
+CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0	
+CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Update successfully, please wait for reset"	
+CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Update successfully, please wait for reset"	
+CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Update successfully, please wait for reset"	
+CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Update successfully, please wait for reset"	
+CFOTA: "Updating",0 +CFOTA: "Updating",0 +CFOTA: "Update successfully, please wait for reset"	
+CFOTA: "Updating",0 +CFOTA: "Update successfully, please wait for reset"	
+CFOTA: "Updating",0 +CFOTA: "Update successfully, please wait for reset"	
+CFOTA: "Update successfully, please wait for reset"	
+CFOTA: "Update successfully, please wait for reset"	
BDV	
BDV	
RDY	
KIJI -	



+CFUN: 1	
+CPIN: READY	
SMS Ready	
AT+CFOTA?	Inquire the update result by command CFOTA.
+CFOTA: 6	6 means updated and succeeded; 7 means updated but failed.
OK	
AT+GMR	Inquire the firmware version by AT+GMR
Revision:1529B02SIM7000G	
OK	

Note: For the detail, please refer to "SIM7000 Series_FOTA_Application Note_V1.00".

5.2.9, MQTTS to AWS server Under NB-IOT

Grammar	Description
AT	AT SYNC, especially for Auto
	baud rate
OK	
AT+IPR?	By default, SIM7000 series
	port set with Auto baud rate
+IPR: 0	
OK	
AT+CFUN=1	Full functionality (Default)
OK	
AT+CPIN?	Check SIM card status
+CPIN: READY	
OK	
AT+CNMP=38	Set to CAT-M+NB-IoT
OK	
AT+CMNB=2	Fix to NB-IOT



OK	
AT+CBANDCFG?	Check Band configuration
+CBANDCFG: "CAT-M",20	
+CBANDCFG: "NB-IOT",8,20	
ОК	
AT+CNBS=1	Set SNR level 0 band scan, to short the time for NB-IOT
OK	band scan
AT+CSQ	Query Signal Quality
+CSQ: 19,99	
ОК	
AT+COPS?	0 User-specified GSM access technology
+COPS: 0,0,"CHINA MOBILE CMCC",9	7 User-specified LTE M1 A GB access technology
ОК	9 User-specified LTE NB S1 access technology
AT+CPSI?	Inquiring UE system information
+CPSI: LTE NB-IOT, Online, 460-00, 0x5B57, 27593498, 435, EUTRAN-BAND8, 3738, 0, 0, -5, -83, -78, 11	
ОК	
AT+CGATT?	Data Service's status Wait until get the "1" state
+CGATT: 1	G
ОК	
AT+CNACTCFG?	IP Protocol Type Configuration
+CNACTCFG: "IPV4"	Default value is IPV4
ок	
AT+CNACT=1	Open the wireless connection
OK	AT+CNACT= <mode>[,<apn>]</apn></mode>
+APP PDP: ACTIVE	
AT+CNACT?	Get local IP



3.445.0 (3.45) 110 (3.44) (3.4	1
+CNACT: 1,"100.81.245.27"	
OK	
AT+CFSINIT	Get Flash Data Buffer
ОК	
AT+CFSWFILE=3,root.pem,0,1758,10000	Download the CA root file
A1+C1 3W1 ILL=3,100t.pei11,0,1730,10000	into module flash
DOMAIN OAD	into module nasn
DOWNLOAD	
文件大小: 1220	
波特率 115200bps	
需要时间:大约 0 秒	
请稍候	
发送完毕!	
OK	
AT+CFSWFILE=3,client.pem,0,1220,10000	Download the client.pem file
A1+01 0W1 ILL=3,6116111.pe111,0,1220,10000	into module flash
DOMAN OAD	into module nasn
DOWNLOAD	
文件大小: 1220	
波特率 115200bps	
需要时间:大约 0 秒	
请稍候	
发送完毕!	
ОК	
AT+CFSWFILE=3,client.key,0,1675,10000	Download the client.key file
A11010111122-0,01101111100,101000	into module flash
DOWNLOAD	into module hash
DOWNLOAD	
文件士 4、1000	
文件大小: 1220	
波特率 115200bps	
需要时间:大约 0 秒	
请稍候	
发送完毕!	
OK	
AT+CFSTERM	Free the Flash Buffer
	Allocated by CFSINIT
ОК	,
AT+CACID=0	Device identification
OK	
OK	0.11
AT+CSSLCFG="sslversion",1,3	Set the protocol type of SSL



	with an identifier of 1.
OK	3 indicate TLS1.2
AT+CSSLCFG="convert",2,"root.pem"	Configure the type of
	certificate to be converted,
OK	and 2 is a root certificate.
	Configure the name of the
	certificate to be converted,
	and the name after the
	conversion is consistent with
	the existing certificate name.
AT+CSSLCFG=convert,1,client.pem,client.key	Configure the type of
•	certificate to be converted,
OK	and 1 is client certificate.
	Configure the certificate
	name that needs to be
	converted, and the client
	certificate needs to enter the
	certificate file and the private
	key file.
	The name after conversion is
	identical to the name of the
	certificate,that is
AT CMCONE and converted wheat 4	"client.pem".
AT+SMCONF=url,a3vyo55owhy462.iot.eu-west-1.	Set up server URL
amazonaws.com,8883	
OK	
OK AT SMCONE aliential simoner	Cat MOTT Days an atom
OK AT+SMCONF=clientid,simcom	Set MQTT Parameter
AT+SMCONF=clientid,simcom	Set MQTT Parameter
AT+SMCONF=clientid,simcom OK	
AT+SMCONF=clientid,simcom	Set ca certificate and cert
AT+SMCONF=clientid,simcom OK AT+SMSSL=2,root.pem,client.pem	
AT+SMCONF=clientid,simcom OK AT+SMSSL=2,root.pem,client.pem OK	Set ca certificate and cert
AT+SMCONF=clientid,simcom OK AT+SMSSL=2,root.pem,client.pem	Set ca certificate and cert
AT+SMCONF=clientid,simcom OK AT+SMSSL=2,root.pem,client.pem OK AT+SMCONN	Set ca certificate and cert
AT+SMCONF=clientid,simcom OK AT+SMSSL=2,root.pem,client.pem OK	Set ca certificate and cert certificate name
AT+SMCONF=clientid,simcom OK AT+SMSSL=2,root.pem,client.pem OK AT+SMCONN	Set ca certificate and cert certificate name Subscription packet/ Send packet/
AT+SMCONF=clientid,simcom OK AT+SMSSL=2,root.pem,client.pem OK AT+SMCONN	Set ca certificate and cert certificate name Subscription packet/ Send packet/ Get data on server/
AT+SMCONF=clientid,simcom OK AT+SMSSL=2,root.pem,client.pem OK AT+SMCONN OK .	Set ca certificate and cert certificate name Subscription packet/ Send packet/ Get data on server/ Unsubscription packet etc
AT+SMCONF=clientid,simcom OK AT+SMSSL=2,root.pem,client.pem OK AT+SMCONN	Set ca certificate and cert certificate name Subscription packet/ Send packet/ Get data on server/
AT+SMCONF=clientid,simcom OK AT+SMSSL=2,root.pem,client.pem OK AT+SMCONN OK AT+SMDISC	Set ca certificate and cert certificate name Subscription packet/ Send packet/ Get data on server/ Unsubscription packet etc
AT+SMCONF=clientid,simcom OK AT+SMSSL=2,root.pem,client.pem OK AT+SMCONN OK	Set ca certificate and cert certificate name Subscription packet/ Send packet/ Get data on server/ Unsubscription packet etc
AT+SMCONF=clientid,simcom OK AT+SMSSL=2,root.pem,client.pem OK AT+SMCONN OK AT+SMDISC	Set ca certificate and cert certificate name Subscription packet/ Send packet/ Get data on server/ Unsubscription packet etc



OK	
+APP PDP: DEACTIVE	

Note: For the detail, please refer to "SIM7000 Series_MQTT_Application Note_V1.01".



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