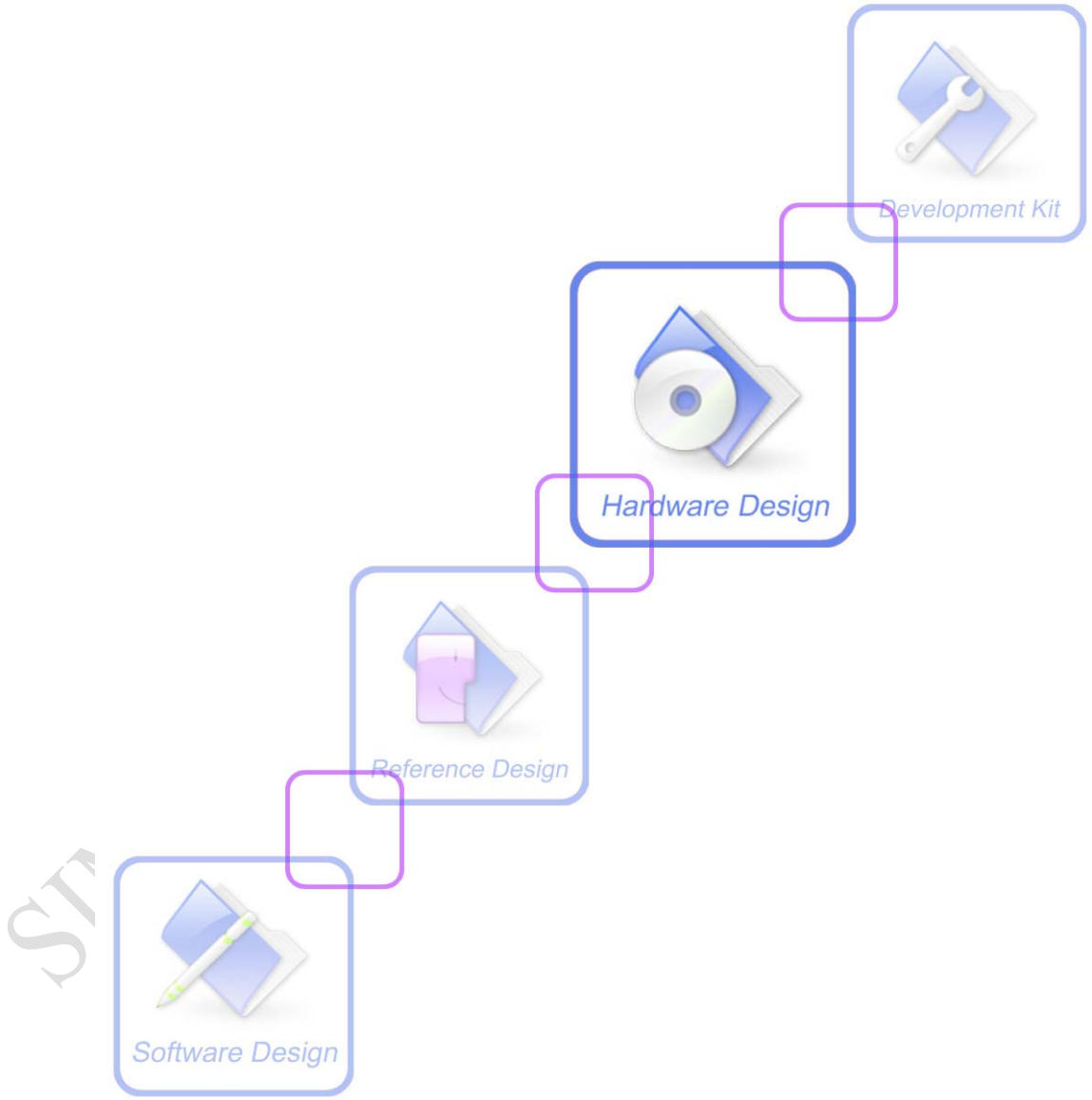
SIM900_SIM300_ATC_Comparison _V1.00



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Content

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Date	Version	Description of change	Author
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1 Introduction

This document describes the important points that should be taken into account in client's application design. As SIM900 can be integrated with a wide range of applications, the application notes are described in great detail.

This document can help you quickly understand SIM900 interface specifications, electrical and mechanical details. With the help of this document and other SIM900 application notes, user guide, you can use SIM900 module to design and set-up mobile applications quickly.

2 Difference

There are some important performances of SIM900 that are obviously different from SIM300 module. These differences are described and listed as in the following table.

Function	Description
URC after power on	A HEX string such as “00 49 49 49 49 FF FF FF FF” will be sent out through serial port at the baud rate of 115200 immediately after SIM900 is powered on. The string shall be ignored since it is used for synchronization with PC tool only. If fixed baud rate is set, “RDY” string will be sent out after power on and “Call Ready” string will be sent out after SIM card is initiated. “+CPIN: READY” or “+CPIN: SIM PIN” string will not be sent out by SIM900 module.
Combining AT commands	Semicolon shall be used as command delimiter only after an extended command, for example, “ATE1&W&F+ICF?;+CFUN?;&W” string can be executed successfully and “ATE1;&W;&F” string can not be executed.
Parameter setting and storage	The AT commands listed in the table of AT&W chapter should be stored to user profile with AT&W for use after restart. Most other AT commands in V.25, 07.05, 07.07, GPRS will store parameters automatically and can be used after module restarts. Please refer to the following table for details.
Auto-bauding	Only the strings “AT” or “At” (not “aT” or “at”) can be detected when auto-bauding is enabled. It is recommended that all AT commands shall be prefixed with “AT”. AT+IPR=0 setting to auto-bauding will take effect after module resets. However, if user wants to change DTE baud rate during module running, i.e from 115200 to 9600, DTR shall be used to urge auto-bauding progress. DTR shall be pulled up to invalid state at least 2 seconds by DTE and then pulled down to valid state. The step will urge auto-bauding progress and DCE will synchronize its baud rate after it receives string “AT” from the serial port.
SMS	With GSM code, 160 characters maximum can be sent through a SMS. With UCS2 code, 70 characters maximum can be sent through one SMS.
STK	STK AT commands of SIM900 are totally different from SIM300. And STK application note of SIM900 module shall be referred for details.

The following table describes the details of AT command parameters setting and storage. It is highly recommended that AT command parameters used by customer should be set after module is powered on.

class	AT commands which parameters are not stored by flash or by SIM	AT commands which parameters are stored by AT&W	AT commands which parameters are stored automatically
V.25	A/ ATA ATD ATD><N> ATD><STR> ATDL ATH ATI ATL ATM +++ ATO ATP ATT ATZ AT&F AT&V AT+GCAP AT+GMI AT+GMM AT+GMR AT+GOI AT+GSM AT+HVOIC	ATE ATQ ATV ATX AT&C AT&D AT+IFC ATS0 ATS3 ATS4 ATS5 ATS7 ATS8 ATS10	AT+IPR AT+ICF
07.07	AT+CACM(SIM) AT+CAMM(SIM) AT+CAOC(SIM) AT+CCFC(SIM) AT+CCWA(SIM) AT+CGMI AT+CGMM AT+CGMR AT+CGSN AT+CHLD AT+CIMI AT+CLCC AT+COPS AT+CPAS AT+CPBF AT+CPBR AT+CPBW(SIM) AT+CPIN AT+CPWD(SIM) AT+CREG AT+CRSM AT+CSQ AT+FMI AT+FMM AT+FMR AT+VTS AT+CNUM(SIM) AT+CPOL(SIM) AT+COPN AT+CSIM AT+CALM AT+CMUT AT+CPUC(SIM) AT+CCWE(SIM) AT+CBC AT+CUSD	AT+FCLASS	AT+CBST AT+CEER AT+CSCS AT+CSTA AT+CLCK AT+CLIP AT+CLIR AT+CMEE AT+COLP AT+CPBS AT+CR AT+CRC AT+CRLP AT+VTD AT+CMUX AT+CFUN AT+CRSL AT+CLVL AT+CSSN
07.05	AT+CMGD AT+CMGL AT+CMGR AT+CMGS AT+CMGW(SIM) AT+CMSS AT+CPMS AT+CRES AT+CSAS AT+CSCA(SIM) AT+CSCB(SIM)	NONE	AT+CMGF AT+CNMI AT+CSDH AT+CSMP AT+CSMS
GPRS	AT+CGCLASS AT+CGSMS	NONE	AT+CGDCONT AT+CGQMIN AT+CGQREQ AT+CGEREP
STK	AT*PSSTKI	NONE	AT*PSSTK
TCPIP	ALL	NONE	NONE
SIMCOM	AT+CPOWD AT+SPIC AT+CALA AT+CADC AT+CDSCB AT+CLTS AT+CEXTHS AT+CEXTBUT	NONE	AT+SIDET AT+CMIC AT+CSNS

speci al AT com man ds	AT+CLDTMF AT+CDRIND AT+CSPN AT+CCVM(SIM) AT+CENG AT+SCLASS0 AT+CCID AT+CSDT AT+CMGDA AT+SIMTONE AT+CCPD AT+CGID AT+CMGHEX AT+AUTEST AT+CCODE AT+CPSPWD AT+EXUNSOL AT+CGMSCLASS AT+CDEVICE AT+CCALR AT+GSV		AT+CMOD AT+CFGRI AT+CBAND AT+CHF AT+CHFA AT+CSCLK AT+CMTE AT+MORING AT+CIURC

2.1 AT Commands According to V.25TER

2.1.1 AT<MEM><N>

SIM300	SIM900
ATD><MEM><N> **AT+CPBW=1,"10086",129,"TT"** **OK** **ATD>SM1;** **OK**	**AT+CPBW=1,"10086",129,"TT"** **OK** **ATD>SM1;** **ERROR**
Difference	**SIM900 does not support this AT command**

2.1.2 ATH[n]

SIM300	SIM900
ATH[n] **OK**	**ATH[n]** **OK**
Difference	**SIM900 module has enhanced function to support different parameter [n]. Different [n] parameters refer to disconnecting different kinds of call.**

2.1.3 ATI[n]

SIM300	SIM900
ATI **SIMCOM_Ltd** **SIMCOM_SIM300** **Revision: 1604B09SIM300M32_SPANSION** **OK**	**ATI** **SIM900 R11.0** **OK**

Difference	**SIM300 module returns product information. SIM900 module returns release number. Product information is returned by AT+GSV command for SIM900 module.**

2.1.4 ATS3

SIM300	SIM900
ATS3=<n> OK <n> 0-13-127 Command line termination character	**ATS3=<n> OK <n> 13 Command line termination character**
Difference	**SIM900 only supports default value 13.**

2.1.5 ATS4

SIM300	SIM900
ATS4=<n> OK <n> 0-10-127 response formatting character	**ATS4=<n> OK <n> 10 Command line termination character**
Difference	**SIM900 only supports default value 10.**

2.1.6 ATS6

SIM300	SIM900
ATS6? <n> OK	**ATS6? ERROR**
Difference	**No effect in GSM. SIM900 module does not support this command.**

2.1.7 ATZ

SIM300	SIM900
ATZ[<value>]	**ATZ[<value>]**

OK **ERROR**	**OK** **ERROR**
Difference	**SIM900 module supports two <value>: ATZ0 and ATZ1. This will not affect user application.**

2.1.8 AT&W[<n>]

SIM300	**SIM900**
AT&W[<n>] **OK** **ERROR**	**AT&W[<n>]** **OK** **ERROR**
Difference	**SIM900 module supports two <n>: AT&W0 and AT&W1. This will not affect user application.**

2.1.9 AT +DR

SIM300	**SIM900**
AT +DR? **+DR: <value>** **OK**	**AT +DR?** **ERROR**
Difference	**SIM900 does not support this command.**

2.1.10 AT +DS

SIM300	**SIM900**
AT +DS? **+DR: <value>** **OK**	**AT +DS?** **ERROR**
Difference	**SIM900 does not support this command.**

2.1.11 AT +GCAP

SIM300	**SIM900**
AT+GCAP **+GCAP: +CGSM,+FCLASS,+DS**	**AT+GCAP** **+GCAP:+FCLASS,+CGSM**

OK	**OK**
Difference	**Parameter scope is different. SIM900 does not support DS.**

2.1.12 AT +ICF

SIM300	SIM900
AT+ICF=? **+ICF: (1-6),(0-4)** **OK**	**AT+ICF=?** **+ICF: (1-6),(0,1,3)** **OK**
Difference	**Parameter scope is different.**

2.1.13 AT +IFC

SIM300	SIM900
AT+IFC=? **+IFC: (0-3),(0-2)** **OK**	**AT+IFC=?** **+IFC: (0-2),(0-2)** **OK**
Difference	**Parameter scope is different.**

2.1.14 AT +IPR

SIM300	SIM900
AT+IPR=? **+IPR:(),(0,300,1200,2400,4800,9600,14400,19200,28800,38400,57600,115200)** **OK**	**AT+IPR=?** **+IPR:(),(0,1200,2400,4800,9600,19200,38400,57600,115200)** **OK**
Difference	**Parameter scope is different.**

2.2 AT COMMANDS ACCORDING TO GSM07.07

2.2.1 AT+CBST

SIM300	SIM900
AT+CBST=? +CBST: (0-7,12,14,34,36,38,39,43,65,66,68,70,71,75),(0,2),(0,1) OK	AT+CBST=? +CBST: (0,7,71),(0),(1) OK
Difference	Parameter scope is different.

2.2.2 AT+CCFC

SIM300	SIM900
AT+CCFC=? +CCFC: (0,1,2,3,4,5) OK AT+CCFC=0,2 +CCFC: 0,7 OK	AT+CCFC=? +CCFC: (0-5) OK AT+CCFC=X,2 +CCFC: 0,7 OK
Difference	The response is different.

2.2.4 AT+CSCS

SIM300	SIM900
AT+CSCS=? +CSCS:("GSM","HEX","IRA","PCCP","PCDN","UCS2","8859-1") OK	AT+CSCS=? +CSCS: ("IRA","GSM","UCS2","HEX","PCCP","PCDN","8859-1")
Difference	Parameter sequence is different.

2.2.5 AT+CLCK

SIM300	SIM900
AT+CLCK=? +CLCK:("SC","AO","OI","OX","AI","IR","AB","AG","AC","FD","BN","PF","PN","PU","PP","PC","PS") OK	AT+CLCK=? +CLCK:("AO","OI","OX","AI","IR","AB","AG","AC","FD","SC","PN","PU","PP") OK
Difference	Parameter type is different.

2.2.6 AT+COLP

SIM300	SIM900
AT+CPBW=1,"10086",129,"TT" OK ATD10086; +COLP: "10086",129,"",,"TT" OK	AT+CPBW=1,"10086",129,"TT" OK ATD10086; +COLP: "10086",129,"",0 OK
Difference	Alpha ID is not supported for SIM900 module.

2.2.7 AT+COPS

SIM300	SIM900
AT+COPS=? +COPS:(2,"CHINA MOBILE","CMCC","46000"),(3,"CHINA UNICOM GSM","CU-GSM","46001"),,(0-4),(0-2) OK	AT+COPS=? +COPS:(2,"China Mobile","CMCC",46000"),(3,"CHN Unicom","CU-GSM",46001"),,(0,1,4),(0,2) OK
Difference	Parameter scope is different.

2.2.8 AT+CPBS

SIM300	SIM900
AT+CPBS=?	AT+CPBS=?

+CPBS:("MC","RC","DC","LD","LA","ME","SM","FD","ON","BN","SD","VM") OK	+CPBS:("MC","RC","DC","LD","LA","SM","FD","ON","BN","SD","VM","EN") OK
Difference	Parameter type is different.

2.2.10 AT+CPWD

SIM300	SIM900
AT+CPWD=? +CPWD:("SC",8),("AO",4),("OI",4),("OX",4),("AI",4),("IR",4),("AB",4),("AG",4),("AC",4),("FD",8),("BN",8),("PS",8),("P2",8) OK	AT+CPWD=? +CPWD:("AO",4),("OI",4),("OX",4),("AI",4),("IR",4),("AB",4),("P2",8),("SC",8) OK
Difference	Parameter scope is different.

2.2.11 AT+CRLP

SIM300	SIM900
AT+CRLP=? +CRLP: (0-61),(0-61),(39-255),(1-255),(0-1),(3-255) OK	AT+CRLP=? +CRLP: (0-61),(0-61),(44-255),(1-255),(0),(7) OK
Difference	Parameter scope is different.

2.2.14 AT+CMUX

SIM300	SIM900
AT+CMUX=? +CMUX: (0-1),(0),(5),(127),(10),(3),(30),(10),(2) OK	AT+CMUX=? +CMUX: (0),(0),(1-8),(1-32768),(1-255),(0-100),(2-255),(1-255) OK
Difference	Parameter scope is different. “F9 F9 F9 F9” can not be used for synchronization. For SIM900 module, illegal MUX frame will be

	discarded automatically.

2.2.15 AT+CFUN

SIM300	SIM900
AT+CFUN=1,1 **OK**	**AT+CFUN=1,1** **RDY** **OK**
Difference	**For SIM900, AT+CFUN=1,1 will reset module and OK will be returned after reset. For SIM300, AT+CFUN=1,1 will not reset module.**

2.2.16 AT+CSIM

SIM300	SIM900
AT+CSIM=<length>,<Command> **+CSIM: < length >,< response >** **OK**	**AT+CSIM=<length>,<Command>** **+CSIM: < length >,< response >** **OK**
Difference	**For SIM900, AT+CSIM can only support the following commands for SIM operation:** **176 0xB0 READ BINARY** **178 0xB2 READ RECORD** **192 0xC0 GET RESPONSE** **214 0xD6 UPDATE BINARY** **220 0xDC UPDATE RECORD** **242 0xF2 STATUS**

2.2.17 AT+CRSL

SIM300	SIM900
AT+CRSL=? **+CRSL: (0-100)** **OK**	**AT+CRSL=?** **+CRSL: (1-100)** **OK**
Difference	**Parameter scope is different. The Audio SLR value of SIM900 will be a little different from SIM300.**

2.2.18 AT+CLVL

SIM300	SIM900
AT+CLVL=? +CLVL: (0-100) OK	AT+CLVL=? +CLVL: (0-100) OK
Difference	The Audio SLR value of SIM900 will be a little different from SIM300.

2.2.19 AT+CBC

SIM300	SIM900
AT+CBC=? +CBC: (0-2),(1-100),(voltage) OK	AT+CBC=? +CBC: (0-2),(1-100),(voltage) OK
Difference	SIM900 module does not have charge function.

2.2.20 AT+CCUG

SIM300	SIM900
AT+CCUG=? OK	
Difference	SIM900 does not support this command.

2.2.21 AT+CKPD

SIM300	SIM900
AT+CKPD=? OK	
Difference	SIM900 does not support this command.

2.3 AT Commands According to GSM07.05

2.3.1 AT+CMGD

SIM300	SIM900
AT+CMGD=? +CMGD: (1-25) OK	AT+CMGD=? +CMGD: (1-25),(0-4) OK
Difference	**SIM900 module has enhanced function to support a second parameter <delflag>. It can be used to delete some kind of SMS, for example, all read messages.**

2.3.2 AT+CMGS

SIM300	SIM900
AT+CMGF=1 OK AT+CSCS="GSM" OK AT+CSMP=17,255,0,241 OK AT+CMGS="13621682959" >123456789012345678901234567890123456 789012345678901234567890123456789012 345678901234567890123456789012345678 901234567890123456789012345678901234 56789012345678901234567890A +CMGS: 91 OK	AT+CMGF=1 OK AT+CSCS="GSM" OK AT+CSMP=17,255,0,241 OK AT+CMGS="13621682959" >123456789012345678901234567890123456789 012345678901234567890123456789012345678 901234567890123456789012345678901234567 890123456789012345678901234567890123456 789 0A ERROR
Difference	**SIM900 supports sending SMS of 160 bytes maximum for GSM code and 70 characters maximum for UCS2 code.**

2.3.3 AT+CMGW

SIM300	SIM900

AT+CMGF=1 OK AT+CSCS="GSM" OK AT+CSMP=17,255,0,241 OK AT+CMGW="13621682959" >123456789012345678901234567890123456 789012345678901234567890123456789012 345678901234567890123456789012345678 901234567890123456789012345678901234 567890123456789012345678901234567890 1234567890A +CMGW: 6 OK	AT+CMGF=1 OK AT+CSCS="GSM" OK AT+CSMP=17,255,0,241 OK AT+CMGW="13621682959" >123456789012345678901234567890123456789 012345678901234567890123456789012345678 901234567890123456789012345678901234567 890123456789012345678901234567890123456 789 0A ERROR
Difference	**SIM900 supports storing SMS of 160 bytes maximum for GSM code and 70 characters maximum for UCS2 code.**

2.3.4 AT+CMGC

SIM300	SIM900
at+cmgc=? OK	Not support this command
Difference	**SIM900 does not support this command.**

2.3.5 AT+CRES

SIM300	SIM900
AT+CRES=? +CRES: (0) OK	AT+CRES=? +CRES: (0,1) OK
Difference	**Parameter scope is different. This will not affect user application.**

2.3.6 AT+CSAS

SIM300	SIM900

AT+CSAS=? +CSAS: (0) OK	AT+CSES=? +CRES: (0,1) OK
Difference	Parameter scope is different. This will not affect user application.

2.4 AT commands for SIM Application Toolkit

2.4.1 AT*PSSTKI

SIM300	SIM900
Not have this command	AT*PSSTKI=? *PSSTKI: (0,1) OK AT*PSSTKI? *PSSTKI: 0 OK AT*PSSTKI=1 OK
Difference	SIM900 supports AT*PSSTKI command to enable or disable STK application.

2.4.2 AT*PSSTK

SIM300	SIM900
AT+STGC=<cmdId> AT+STCR=<cmdId>,<result>[,<data>] AT+STCR=21,<result> AT+STCR=22,<result>[,<dcs>,<text>] AT+STCR=23,<result>[,<dcs>,<text>] AT+STCR=20,<result> AT+STCR=25,<result> AT+STCR=24,<result>[,<itemId>] AT+STCR=10,<result>	AT*PSSTKI AT*PSSTK="COMMAND REJECTED",<CommandNumber>,<Cause> AT*PSSTK="NOTIFICATION",<CommandNumber>,<IconDisplay> AT*PSSTK="SETUP CALL",<CommandNumber>,<IconDisplay> AT*PSSTK="DISPLAY TEXT",<CommandNumber>,<IconDisplay>

AT+STCR=28,<result> AT+STCR=13,<result> AT+STCR=15,<result> AT+STCR=40,<result> AT+STCR=05,<result> AT+STPD=<length>,<data> AT+STEV=<event>,<language> AT+STMS=<item>[,help] AT+STRT=<duration> AT+STTONE=<mode>,<tone> AT+HSTK	AT*PSSTK="GET INKEY",<Alphabet>,<yes?no>,<CommandNumber>,<IconDisplay>,<HelpRequest> AT*PSSTK="GET INPUT",<CommandNumber>,<Alphabet>,<text>,<IconDisplay>,<HelpRequest> AT*PSSTK="PLAY TONE",<CommandNumber>,<IconDisplay> AT*PSSTK="SELECT ITEM",<CommandNumber>,<ItemIdentifier>,<IconDisplay>,<HelpRequest> AT*PSSTK="SETUP MENU",<CommandNumber>,<IconDisplay> AT*PSSTK="REMOVE MENU",<CommandNumber> AT*PSSTK="MENU SELECTION",<ItemIdentifier>,<HelpRequest> AT*PSSTK="ALL CALLS DISCONNECTED" AT*PSSTK="USER ACTIVITY" AT*PSSTK="IDLE SCREEN AVAILABLE" AT*PSSTK="SETUP CALL TERMINATED" AT*PSSTK="GET ITEM LIST",<numberofitem> AT*PSSTK="LANGUAGE NOTIFICATION",<NumberOfLanguages>,<PreferedLanguages> AT*PSSTK="SETUP IDLE MODE TEXT",<CommandNumber>,<IconDisplay>
Difference	SIM900's command is different from SIM300.

2.5 AT Commands Special for SIMCOM

2.5.1 AT+ECHO

SIM300	SIM900
AT+ECHO? +ECHO(NORMAL_AUDIO): 0,0,0 +ECHO(AUX_AUDIO): 0,0,0 OK	AT+ECHO? +ECHO: Main Mic: ecL=64,ecFE_SpeechDelay=8c v_esUL_Gmin=50c2,v_esUL_TauR=4008,v_esUL_TauR=7fde esDL_Gmin=148,esDL_TauR=4000,esDL_TauD=7fbe a_SelEsX=e,28,3f,0 a_SelEsY=1000,f82,f11,0 AUX Mic: ecL=100,ecFE_SpeechDelay=0 v_esUL_Gmin=148,v_esUL_TauR=4000,v_esUL_TauR=7fbe esDL_Gmin=148,esDL_TauR=4000,esDL_TauD=7fbe a_SelEsX=3f,0,0,0 a_SelEsY=1000,0,0,0 OK
Difference	SIM900 does not support this command.

2.5.2 AT+SIDET

SIM300	SIM900
AT+SIDET=? +SIDET: (0-32767) OK AT+SIDET? +SIDET(NORMAL_AUDIO): 4096 OK	AT+SIDET=? +SIDET: (0,1),(0-16) OK AT+SIDET? +SIDET: Main Speaker=1, Aux Speaker=5 OK
Difference	Parameter scope is different.

2.5.3 AT+CMIC

SIM300	SIM900
AT+CMIC=? +CMIC: (0,1),(0-15) OK AT+CMIC? +CMIC: 2,2 OK	AT+CMIC=? +CMIC: (0,1),(0-15) OK AT+CMIC? +CMIC: 11,15 OK
Difference	The Audio RLR result of SIM900 will be a little different from SIM300 regarding to same CMIC setting.

2.5.4 AT+CALA

SIM300	SIM900
AT+CALARM=? +CALARM: (0,1),"DATE,TIME",(0-3),(0-2) OK	AT+CALA=? +CALA: ("yy/mm/dd,hh:mm:ss","hh:mm:ss"),(1-5),(0-7) OK
Difference	The commands are different.

2.5.5 AT+CADC

SIM300	SIM900
AT+CADC=? +CADC:(0,1),(0-2400) OK	AT+CADC=? +CADC: (0,1),(0-2800) OK
Difference	Parameter scope is different.

2.5.6 AT+CDSCB

SIM300	SIM900
AT+CDSCB OK	AT+CDSCB OK
Difference	In SIM900, AT+CDSCB command does not have function. Instead, AT+CSCB=0 command has the same function as AT+CDSCB in SIM300.

2.5.7 AT+CFGRI

SIM300	SIM900
AT+CFGRI? +CFGRI: 1 OK	AT+CFGRI? +CFGRI: 1 OK
Difference	In SIM900, when there is both an incoming call and SMS, RI will be kept low level until call is answered or rejected. In SIM300, RI will be kept low level for a while and then be pulled to high level.

2.5.8 AT+CLDTMF

SIM300	SIM900
	AT+CLDTMF=? +CLDTMF: (0-1000),(0-9,A,B,C,D,*,#) OK
Difference	SIM300 does not support the test command.

2.5.9 AT+CBAND

SIM300	SIM900
AT+CBAND=? +CBAND: (PGSM_MODE,DCS_MODE,PCS_MODE,EGSM_DCS_MODE,GSM850_PCS_MODE)	AT+CBAND=? +CBAND: (PGSM_MODE,DCS_MODE,PCS_MODE,EGSM_DCS_MODE,GSM850_PCS_MODE,ALL_BAND)

OK AT+CBAND? +CBAND: "EGSM_DCS_MODE" OK	OK AT+CBAND? +CBAND: EGSM_DCS_MODE,ALL_BAND OK
Difference	For SIM900, module will be locked to specified bands except "ALL_BAND". If "ALL_BAND" is set, module will search band automatically. For SIM300, module will not be locked to specified bands.

2.5.10 AT+CSCLK

SIM300	SIM900
AT+CSCLK=? +CSCLK: (0,1) OK	AT+CSCLK=? +CSCLK: (0,1,2) OK
Difference	Parameter scope is different. SIM900 supports enhanced function.

2.5.11 AT+CENG

SIM300	SIM900
AT+CENG=? +CENG: (0-2),(0-1) OK	AT+CENG=? +CENG: (0-2),(0-1) OK
Difference	SIM900 will return more parameters: TA of service cell and LACs of neighbour cell.

2.5.12 AT+CSDT

SIM300	SIM900

AT+CSDT=? +CSDT: (0-1) OK	AT+CSDT=? ERROR
Difference	SIM900 does not support this command.

2.5.13 AT+SIMTONE

SIM300	SIM900
AT+ SIMTONE =? +SIMTONE: (0-1), (0-50000), (0-1000), (0-1000), (0-15300000) OK	AT+ SIMTONE =? +SIMTONE: (0,1), (20-20000), (0-5000), (0-5000), (0-500000) OK
Difference	Parameter scope is different.

2.5.14 AT+CGMSCLASS

SIM300	SIM900
AT+CGMSCLASS=? MULTISLOT CLASS: 1-10 OK	AT+CGMSCLASS=? MULTISLOT CLASS: (4,8,9,10) OK
Difference	Parameter scope is different.

2.5.15 AT+CPSPWD

SIM300	SIM900
AT+CPSPWD=<oldpwd>,<newpwd>	
Difference	SIM900 does not support it.

2.5.16 AT+EXUNSOL

SIM300	SIM900

AT+EXUNSOL=? **+EXUNSOL:** **("SQ","FN","MW","UR","BC","BM","SM","CC")** **OK**	**AT+EXUNSOL=?** **+EXUNSOL: SQ** **OK**
Difference	**Only “SQ” is supported currently in SIM900.**

2.6 AT Commands for GPRS Support

2.6.1 AT+CGDCONT

SIM300	SIM900
AT+CGDCONT=? +CGDCONT: (1-10),"IP",,,(0,1),(0,1) OK	AT+CGDCONT=? +CGDCONT: (1-3),"IP",,,(0),(0) OK
Difference	Parameter type and scope are different. In sim900, CID 3 context is locked and defined by system. It can not be changed by user.

2.6.2 AT+CGQMIN

SIM300	SIM900
AT+CGQMIN=? +CGQMIN: "IP",(0-3),(0-4),(0-5),(0-9),(0-18,31) OK AT+CGQMIN? +CGQMIN: 1,0,0,0,0,0 OK	AT+CGQMIN=? +CGQMIN: "IP",(0-3),(0-3),(0-5),(0-9),(0-18,31) OK AT+CGQMIN? +CGQMIN: 3,0,0,0,0,0 OK
Difference	Parameter type and scope are different.

2.6.3 AT+CGQREQ

SIM300	SIM900
AT+CGQREQ=? +CGQREQ: "IP",(0-3),(0-4),(0-5),(0-9),(0-18,31) OK	AT+CGQREQ=? +CGQREQ: "IP",(0-3),(0-3),(0-5),(0-9),(0-18,31) OK

AT+CGQREQ? +CGQMIN: 1,0,0,0,0,0 OK	AT+CGQREQ? +CGQREQ: 1,0,0,0,0,0 +CGQREQ: 2,0,0,0,0,0 +CGQREQ: 3,0,0,3,0,0 OK
Difference	**Parameter type and scope are different.**

2.6.4 AT+CGACT

SIM300	SIM900
AT+CGACT=? +CGACT: (0-1) OK AT+CGACT? +CGACT: 1,0 OK AT+CGACT=0,1 OK NO CARRIER	AT+CGACT=? +CGACT: (0,1) OK AT+CGACT? +CGACT: 1,0 +CGACT: 2,0 +CGACT: 3,0 OK AT+CGACT=0,1 OK
Difference	**Parameter type, scope and format are different.**

2.6.5 AT+CGDATA

SIM300	SIM900
AT+CGDATA=? +CGDATA: "PPP" OK	AT+CGDATA=? +CGDATA: ("PPP") OK
Difference	**In SIM300, CGDATA command is not used. In SIM900, CGDATA command is used for certification test, such as GCF, PTCRB.**

2.6.6 AT+CGPADDR

SIM300	SIM900
AT+CGPADDR=1 +CGPADDR: 1,"010.079.030.161" OK	AT+CGPADDR=1 +CGPADDR: 1, "10.78.90.61" OK
Difference	IP address format is different.

2.6.7 AT+CGCLASS

SIM300	SIM900
AT+CGCLASS=? +CGCLASS: ("A","B","CG","CC")" OK AT+CGCLASS="CC" OK	AT+CGCLASS=? +CGCLASS: ("B","CC") OK
Difference	Parameter scope is different.

2.6.8 AT+CGEREP

SIM300	SIM900
AT+CGEREP=? +CGEREP: (0-1) OK	AT+CGEREP=? +CGEREP: (0-2),(0-1) OK
Difference	Parameter scope is different.

2.6.9 AT+CGREG

SIM300	SIM900
AT+CGREG=1 OK	AT+CGREG=1 OK AT+CGREG=2 OK AT+CGREG? +CGREG: 2,1,"1816","F251"

	OK
Difference	**Parameter scope is different. SIM900 has enhanced function.**

2.6.10 AT+CGSMS

SIM300	**SIM900**
AT+CGSMS? **+CGSMS: 3** **OK**	**AT+CGSMS?** **+CGSMS: 1** **OK**
Difference	**Default setting is different.**

2.6.11 AT+ CGCOUNT

SIM300	**SIM900**
AT+CGCOUNT=? **+CGCOUNT: (0-4),(1-10),(1-65535)** **OK**	
Difference	**SIM900 does not support it.**

2.7 AT Commands for TCPIP Application Toolkit

2.7.1 AT+CIPSTART

SIM300	SIM900
AT+CIPMUX=1 AT+CIPSTART=? +CIPSTART: (0-9),("TCP","UDP"),"(0,255).(0,255).(0,255).(0,255)",(0,65535) +CIPSTART: (0-9),("TCP","UDP"),("DOMAIN NAME"),(0,65535) OK	AT+CIPMUX=1 AT+CIPSTART=? +CIPSTART: (0-7),("TCP","UDP"),"(0,255).(0,255).(0,255).(0,255)",(0,65535) +CIPSTART: (0-7),("TCP","UDP"),("DOMAIN NAME"),(0,65535) OK
AT+CIPSTART="TCP","116.228.221.51",7019 OK AT+CIPSTART="TCP","www.baidu.com","80" OK	AT+CIPSTART="TCP","116.228.221.51",7019 OK AT+CIPSTART="TCP","www.baidu.com","80" OK
Difference	Parameter scope is different and SIM900 does not need to use AT+CDNSORIP=1 to set domain type. SIM900 can recognize IP address and domain name automatically.

2.7.2 AT+CIPSEND

SIM300	SIM900
AT+CIPMUX=0 AT+CIPSEND=? +CIPSEND= <length> OK AT+CIPMUX=1 AT+CIPSEND=? +CIPSEND=(0-9), <length> OK	AT+CIPMUX=0 AT+CIPSEND=? +CIPSEND: <length> OK AT+CIPMUX=1 AT+CIPSEND=? +CIPSEND: (0-7), <length> OK

Not have read command	**AT+CIPMUX=0** **AT+CIPSEND?** **+CIPSEND:1380** **OK** **AT+CIPMUX=1** **AT+CIPSEND?** **+CIPSEND: 0,0** **+CIPSEND: 1,0** **+CIPSEND: 2,0** **+CIPSEND: 3,0** **+CIPSEND: 4,0** **+CIPSEND: 5,0** **+CIPSEND: 6,0** **+CIPSEND: 7,0** **OK**
Difference	**Response is different and SIM900 supports read command.**

2.7.3 AT+CIPCLOSE

SIM300	**SIM900**
Not have write command	**AT+CIPMUX=0** **AT+CIPCLOSE=0** **OK** **AT+CIPMUX=1** **AT+CIPCLOSE=1** **OK** **AT+CIPCLOSE=6,0** **OK** **AT+CIPCLOSE=6,1** **OK**

Difference	Parameter type is different and SIM900 supports write command.

2.7.4 AT+CLPORT

SIM300	SIM900
AT+CLPORT? TCP: 2020 UDP: 3030 OK	AT+CLPORT? TCP: 0 UDP: 0 OK
Difference	**Parameter initial value is different.**

2.7.5 AT+CIPSTATUS

SIM300	SIM900
AT+CIPMUX=1 AT+CIPSTATUS +CIPSTATUS: 0,"","", +CIPSTATUS: 1,"","", +CIPSTATUS: 2,"","", +CIPSTATUS: 3,"","", +CIPSTATUS: 4,"","", +CIPSTATUS: 5,"","", +CIPSTATUS: 6,"","", +CIPSTATUS: 7,"","", +CIPSTATUS: 8,"","", +CIPSTATUS: 9,"","", OK	AT+CIPMUX=1 AT+CIPSTATUS OK STATE: IP INITIAL C: 0,,"","","","INITIAL" C: 1,,"","","","INITIAL" C: 2,,"","","","INITIAL" C: 3,,"","","","INITIAL" C: 4,,"","","","INITIAL" C: 5,,"","","","INITIAL" C: 6,,"","","","INITIAL" C: 7,,"","","","INITIAL"
Difference	**Execution command response is different.**

2.7.6 AT+CDNSCFG

SIM300	SIM900
AT+CDNSCFG=? OK	AT+CDNSCFG=? +CDNSCFG: ("Primary DNS"),("Secondary DNS") OK
Difference	**Test command response is different.**

2.7.7 AT+CDNSGIP

SIM300	SIM900
AT+CDNSCFG? PrimaryDns:211.136.112.50 SecondaryDns:211.136.20.203 OK AT+CDNSGIP="www.baidu.com" OK ERROR	AT+CDNSCFG? PrimaryDns:211.136.112.50 SecondaryDns:211.136.20.203 OK AT+CDNSGIP="www.baidu.com" OK +CDNSGIP: 0,14
Difference	Performance of SIM900 is better than SIM300

2.7.8 AT+CDNSORIP

SIM300	SIM900
AT+CDNSORIP=? +CDNSORIP: (0-IP ADDR,1-DOMAIN NAME) OK AT+CDNSORIP? +CDNSORIP: 0 OK	Not have this command
Difference	SIM900 does not support this command

2.7.9 AT+CIPATS

SIM300	SIM900
AT+CIPATS=? +CIPATS:(0-NOT AUTO SEND,1-AUTO SEND) OK	AT+CIPATS=? +CIPATS: (0-NOT AUTO SEND,1-AUTO SEND),(1-100) OK
AT+CIPATS? +CIPATS: 0 OK	AT+CIPATS? +CIPATS: 0,0 OK

Difference	**Parameter type is different.**

2.7.10 AT+CIPSERVER

SIM300	**SIM900**
Not have test command	**AT+CIPSERVER=?** **+CIPSERVER: (0-CLOSE SERVER,1-OPEN SERVER),(1,65535)** **OK**
Not support write command	**AT+CIPSERVER=1,"2020"** **OK** **AT+CIPSERVER=0 (close server)**
AT+CIPSERVER **OK** **SERVER OK**	**Not have execution command**
Difference	**Parameter type and scope are different; performance of SIM900 is better than SIM300.**

2.7.11 AT+CIPCSGP

SIM300	**SIM900**
AT+CIPCSGP=? **+CIPCSGP: 0-CSD,DIAL NUMBER,USER NAME,PASSWORD,RATE(0,3)** **+CIPCSGP: 1-GPRS,APN,USER NAME,PASSWORD** **OK**	**AT+CIPCSGP=?** **+CIPCSGP: (0-CSD,DIAL NUMBER,USER NAME,PASSWORD,RATE(0-3)),(1-GPRS,APN,USER NAME,PASSWORD)** **OK**
AT+CIPCSGP? **+CIPCSGP: 1** **OK**	**AT+CIPCSGP?** **+CIPCSGP: 1,"CMNET","",""** **OK**
Difference	**Performance of SIM900 is better than SIM300.**

2.7.12 AT+CIPCCON

SIM300	SIM900
AT+CIPCCON=? +CIPCCON: (1-CLIENT,2-SERVER) OK AT+CIPCCON? +CIPCCON: 1 OK	Not support this command
Difference	SIM900 does not support this command.

2.7.13 AT+CIPFLP

SIM300	SIM900
AT+CIPFLP=? +CIPFLP: (0,1) OK AT+CIPFLP? +CIPFLP: 1 OK	Not support this command
Difference	SIM900 does not support this command.

2.7.14 AT+CIPDPDP

SIM300	SIM900
AT+CIPDPDP=? +CIPDPDP:(0-NOT SET DET PDP,1-SET DET PDP) OK AT+CIPDPDP? +CIPDPDP: 1, 10, 3 OK	Not support this command
Difference	SIM900 does not support this command.

2.7.15 AT+CIPCCFG

SIM300	SIM900
AT+CIPCCFG=? +CIPCCFG: (NmRetry:3-8),(WaitTm:2-10),(SendSz:256-1024),(esc:0,1) OK	AT+CIPCCFG=? +CIPCCFG: (NmRetry:3-8),(WaitTm:2-10),(SendSz:1-1460),(esc:0,1) OK
Difference	Parameter scope is different.

2.7.16 AT+CIPSHOWTP

SIM300	SIM900
RECV FROM:116.228.221.51:7019 +IPD4TCP:nnnn	RECV FROM:116.228.221.51:7019 +IPD,4,TCP:nnnn
Difference	Response is different.

2.7.17 AT+CIPQSEND

SIM300	SIM900
Not support this command	AT+CIPQSEND=? +CIPQSEND: (0,1) OK
	AT+CIPQSEND? +CIPQSEND: 1 OK
	AT+CIPQSEND=1 OK
Difference	SIM900 adds this command.

2.7.18 AT+CIPACK

SIM300	SIM900

Not support this command	**AT+CIPACK=?** **OK**
	AT+CIPMUX=0 **AT+CIPACK** **+CIPACK: 20,20, 0** **OK**
	AT+CIPMUX=1 **AT+CIPACK=0** **+CIPACK: 43, 43, 0** **OK**
Difference	**SIM900 adds this command.**

2.7.19 AT+CIPMUX

SIM300	**SIM900**
AT+CIPMUX=0 **AT+CIPSEND=?** **+CIPSEND= <length>** **OK** **AT+CIPMUX=1** **AT+CIPSEND=?** **+CIPSEND=(0-9), <length>** **OK**	**AT+CIPMUX=0** **AT+CIPSEND=?** **+CIPSEND: <length>** **OK** **AT+CIPMUX=1** **AT+CIPSEND=?** **+CIPSEND: (0-7), <length>** **OK**
Not have read command	**AT+CIPMUX=0** **AT+CIPSEND?** **+CIPSEND:1380** **OK** **AT+CIPMUX=1** **at+cipsend?** **+CIPSEND: 0,0** **+CIPSEND: 1,0** **+CIPSEND: 2,0**

	+CIPSEND: 3,0 **+CIPSEND: 4,0** **+CIPSEND: 5,0** **+CIPSEND: 6,0** **+CIPSEND: 7,0** **OK**
Difference	**Response is different and only SIM900 supports AT+CIPSEND?**

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