

GSM Software Functions

Presentation

GSM/GPRS Module Series

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About the document

History

| Revision | Date | Author | Description |
|----------|------------|------------|----------------------------|
| 1.0 | 2012-12-20 | Ivan ZHANG | Initial |
| 1.1 | 2013-07-09 | Bob DENG | Updated the function list. |

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1 Introduction

This document describes the functionalities of Quectel GSM modules, which helps you to clearly know what kinds of functions each module supports and which document you can refer to when you want to make a deep understanding of each function.

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2 Detailed Function List

| Function | Description | Supported Modules | Reference Document |
|------------|--|--|--|
| SMS | Quectel modules provide SMS sending, receiving and deleting in PDU or TEXT mode. In Text mode, Quectel module supports up to 1064 byte super long SMS sending and reading. | M1x-series, M7x-series, M95,M80, M85 | Mxx_AT_Commands_Manual ^[1] GSM_ATC_Application_Note |
| Voice Call | Quectel modules support voice call originating, controlling and configuring parameters of the voice call. | M1x-series, M7x-series, M95,M80, M85 | Mxx_AT_Commands_Manual ^[1] GSM_ATC_Application_Note |
| Data Call | Quectel modules support CSD function. | M1x-series, M7x-series, M95,M80, M85 | Mxx_AT_Commands_Manual ^[1] GSM_ATC_Application_Note |
| USSD | Quectel modules support USSD function. | M1x-series, M7x-series, M95,M80, M85 | Mxx_AT_Commands_Manual ^[1] |
| PHB | Quectel modules support phone book function. | M1x-series, M7x-series, M95,M80, M85 | Mxx_AT_Commands_Manual ^[1] |
| RAM | Quectel modules free up some of RAM space for saving user's temporary files. ^[2] | M1x-series, M7x-series, M95,M80, M85 | GSM_FILE_AT_Commands_Manual |
| TCP/UDP | Quectel modules can establish TCP/UDP connection with remote server via TCP/UDP protocol. Quectel module can support transparent and non-transparent data transmission as either Server or Client. | M1x-series, M7x-series, M95,M80, M85 | Mxx_AT_Commands_Manual ^[1] GSM_TCPIP_Recommended_Process GSM_TCPIP_Application_Note |

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|-------------------|---|--|---|
| PPP | Quectel modules can set up PPP connection with Serer via PPP protocol. | M1x-series, M7x-series, M95,M80, M85 | Mxx_AT_Commands_Manual ^[1] GSM_ATC_Application_Note GSM_PPP_Application_Note |
| FTP | Quectel modules can establish connection with FTP server through FTP protocol. Therefore, user can upload or download files between server and module. FTP function supports uploading or downloading files, starting from the breakpoint location. | M1x-series, M7x-series, M95,M80, M85 | GSM_FILE_AT_Commands_Manual GSM_FTP_AT_Commands_Manual |
| SMTP | Quectel modules can send e-mail by using SMTP protocol. | M1x-series, M7x-series, M95,M80, M85 | GSM_FILE_AT_Commands_Manual GSM_SMTP_AT_Commands_Manual |
| HTTP | Quectel modules can access to the HTTP website via HTTP protocol. | M1x-series, M7x-series, M95,M80, M85 | GSM_HTTP_AT_Commands_Manual |
| NITZ | Quectel modules can easily synchronize the RTC with GSM network time by NITZ. ^[3] | M1x-series, M7x-series, M95,M80, M85 | Mxx_AT_Commands_Manual ^[1] |
| PING | Quectel modules can easily detect the network connectivity by PING. | M1x-series, M7x-series, M95,M80, M85 | Mxx_AT_Commands_Manual ^[1] |
| NTP | Quectel modules can get real time from time synchronization server via NTP. | M1x-series, M7x-series, M95,M80, M85 | Mxx_AT_Commands_Manual ^[1] |
| DTMF | Quectel modules support DTMF decoding and encoding functions. | M1x-series, M7x-series, M95,M80, M85 | Mxx_AT_Commands_Manual ^[1] GSM_DTMF_Application_Note |
| Jamming Detection | Quectel modules support Jamming Detection Function, which allow Quectel module to detect GSM jamming signals. When jamming is detected, Quectel module sends a notification to MCU, reporting the presence of active jamming of the GSM mobile communication network. | M1x-series, M7x-series, M95,M80, M85 | GSM_Jamming_Detection_Application_Note |
| QuecFOTA | Quectel modules support QuecFOTA. With this function, users can upgrade module's firmware via GPRS connection remotely. | M1x-series, M7x-series, M95,M80, M85 | GSM_QuecFOTA_Application_Note |
| CMUX | Quectel modules can support up to four logical channels, and each | M1x-series, | Mxx_AT_Commands_Manual ^[1] |

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| | channel can be used for data transmission or AT command executing. | M7x-series, M95,M80, M85 | GSM_MUX_Application_Note |
| STK | Quectel modules support STK (SIM Card Application Toolkit). Users can easily develop STK related functions. | M1x-series, M7x-series, M95,M80, M85 | GSM_STK_AT_Commands_Manual |
| CMUX driver | Quectel modules provide the CMUX driver based on Android & WinCE platform. | M1x-series, M7x-series, M95,M80, M85 | GSM_MUX_Application_Note |
| Sleep mode | Quectel modules support Sleep mode. With this function, user can greatly reduce the standby power consumption of the module. | M1x-series, M7x-series, M95,M80, M85 | Mxx_AT_Commands_Manual ^[1] |
| Alarm | Quectel modules support Alarm mode, which makes the module automatically power on. | M1x-series, M7x-series, M95,M80, M85 | Mxx_AT_Commands_Manual ^[1] |
| RIL driver | Quectel modules provide the RIL (Radio Interface Layer) driver for Android & WinCE platform. | M1x-series, M7x-series, M95,M80, M85 | |
| UFS | Quectel modules provide users with Flash storage area to save the file permanently. | M1x-series, M80, M85 | GSM_FILE_AT_Commands_Manual |
| SD | Quectel modules provide SD card interface. With this function, user can read or write SD card. | M1x-series, M80, M85 | GSM_FILE_AT_Commands_Manual |
| MMS | Quectel modules support sending and receiving MMS. | M1x-series, M80 ^[4] , M85 | GSM_FILE_AT_Commands_Manual GSM_MMS_AT_Commands_Manual |
| POP3 | Quectel modules can receive e-mails via POP3. | M1x-series, M80, M85 | GSM_POP3_AT_Command_Set |
| TTS | Quectel module can convert Text to Speech. Meanwhile, speech can also be played to the remote device even when module is in a call. | M1x-series, M80, M85 | Mxx_AT_Commands_Manual ^[1] |
| Voice Recording | Quectel modules support voice recording. User can select which audio channel as input of the source sound. The recording file can be saved as files into module or SD card. | M1x-series, M80, M85 | GSM_Audio_Player_Application_Note |
| Audio player | Quectel module's audio player function supports playing multiple audio files in different formats such as AMR, WAV or PCM. The audio files being | M1x-series, M80 ^[5] , M85 | GSM_Audio_Player_Application_Note |

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| | played can be from UFS of module or input through UART port. Audio files can also be played to the local or remote device when module is in a call and DTMF can be taken effect meanwhile. | | |
| Dual UART | Quectel modules support dual UART ports. Users can send AT commands at the same time to the module via these two UART port. | M1x-series, M80, M85 | Mxx_AT_Commands_Manual ^[1] |
| PCM | Quectel modules support PCM (digital audio) function. With this function, user can receive / transmit digital audio. | M80 M85 | M80_Hardware_Design |
| eCall/ Era-Glonass | Quectel modules support eCall/Era-Glonass system. | M95 M85 | GSM_eCall_Application_Note |
| DSSS | Quectel modules support Dual-SIM-Single-Standby. | M95 M85 | M95_Dual_SIM_Application_Note |
| Temperature Detection | Quectel modules support Temperature Detection Function, which allows Quectel module to detect internal temperature and report results to customer's application. | M95 M85 | Mxx_AT_Commands_Manual ^[1] |

^[1] Mxx_AT_Commands_Manual ^[1] represents AT commands Manual for different module types.

^[2] When the module powers off or restarts, the RAM files will be lost.

^[3] This feature requires the support of network operators.

^[4] M72 and M95 support MMS sending.

^[5] M72 and M95 can play PCM audio data inputted from UART port.