

EC2x-QuecOpen

Services Introduction

LTE Standard Module Series

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About the Document

History

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1 Introduction

This document lists the main services of EC2x-QuecOpen modules, and explains the service functions, startup mode, shutdown method as well as the impact after shutdown.

Some of the services are built-in ones whose shutdown will affect the operation of the entire module, so no shutdown mode is provided. Others are allowed to be turned on/off according to actual application demands. It is recommended to consult Quectel Technical Support Team when the service is intended to be turned on and/or off permanently.

In this document, EC2x-QuecOpen modules mainly include:

- EC21-QuecOpen
- EC25-QuecOpen
- EC20 R2.0-QuecOpen
- EC20 R2.1-QuecOpen

2 Services Introduction

2.1. Built-in Services

This chapter introduces built-in services of EC2x-QuecOpen modules. Shutdown of these services will affect the operation of the entire module, and thus no shutdown mode is provided.

2.1.1. reboot-daemon

Service Name	reboot-daemon
Description	Reboot daemon. Upon receiving the restart command, the system will be restarted.
Auto-boot	Yes
Shutdown Method	Null
Shutdown Impact	Null

2.1.2. qmi_ip_multiclient

Service Name	qmi_ip_multiclient
Description	The QMI broadcast messaging service cannot be turned off. The service loads <i>/etc/qmi_ip_cfg.xml</i> to initialize configurations such as server port, client number, etc.
Auto-boot	Yes
Shutdown Method	Null
Shutdown Impact	Null

2.1.3. Qmuxd

Service Name	Qmuxd
Description	The QMI-related services cannot be shut down. Qmuxd is a Linux user-space process to multiplex between potentially many Linux user-space programs wishing to interface with QMI, and one (or more) shared-memory based QMUX ports offered by the baseband processor. Qmuxd uses unix domain sockets to communicate with the client programs.
Auto-boot	Yes
Shutdown Method	Null
Shutdown Impact	Null

2.1.4. time_daemon

Service Name	time_daemon
Description	Service about time. It is used to synchronize system time with Modem.
Auto-boot	Yes
Shutdown Method	Null
Shutdown Impact	Null

2.1.5. qmi_shutdown_modem

Service Name	qmi_shutdown_modem
Description	Monitor the power key status and shutdown the modem.
Auto-boot	Yes
Shutdown Method	Null
Shutdown Impact	Null

2.1.6. eMBMs_TunnelingModule

Service Name	eMBMs_TunnelingModule
Description	eMBMS-related tunneling services.
Auto-boot	Yes
Shutdown Method	Null
Shutdown Impact	Null

2.1.7. wlan_services

Service Name	wlan_services
Description	Wi-Fi location related services.
Auto-boot	Yes
Shutdown Method	Null
Shutdown Impact	Null

2.1.8. mbimd

Service Name	mbimd
Description	Used to configure MBIM, in order to achieve calls, SMS, mobile Internet and other functions.
Auto-boot	Yes
Shutdown Method	Null
Shutdown Impact	Null

2.1.9. fs-scrub-daemon

Service Name	fs-scrub-daemon
Description	Flash transfer mechanism.
Auto-boot	Yes

Shutdown Method	Null
Shutdown Impact	Null

2.1.10. atfwd_daemon

Service	atfwd_daemon
Description	For AT commands forwarding between modem and Linux system.
Auto-boot	Yes
Shutdown Method	<ul style="list-style-type: none"> ● Kill PID ● Execute <code>/etc/init.d/start_atfwd_daemon stop</code>
Shutdown Impact	Some AT commands cannot be executed properly.

2.1.11. netmgrd

Service Name	netmgrd
Description	This is an important service for QMI and kernel module, for communicating with the modem (primarily WDS service) on the QMI control channel, and the service can be used to configure the kernel interface with regards to the IP address, gateway, MTU, etc.
Auto-boot	Yes
Shutdown Method	<ul style="list-style-type: none"> ● Kill PID ● Execute <code>/etc/init.d/netmgrd stop</code>
Shutdown Impact	All services that based on QMI will not function properly.

2.1.12. QCMAP_ConnectionManager

Service	QCMAP_ConnectionManager
Description	<p>AP functions (LAN-WAN management, single-channel dialing, Wi-Fi, etc.) manager.</p> <p>The service loads <code>/etc/mobileap_cfg.xml</code> file to initialize needed configurations.</p>
Auto-boot	Yes
Shutdown Method	Kill PID

Shutdown Impact	Dialing failure, and the AP will has failure in communication with the modem.
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2.1.13. QTI

Service	QTI
Description	<p>Provides data connectivity to tethered laptops/PCs by supporting the following standard USB tethering technologies:</p> <ul style="list-style-type: none"> ● Remote Network Driver Interface Specification (RNDIS) ● Standard Ethernet Control Model (ECM) ● RmNet tethering <p>Additionally, the QTI Tethering Interface supports Ethernet tethering.</p>
Auto-boot	Yes
Shutdown Method	<ul style="list-style-type: none"> ● Kill PID ● Execute <code>/etc/init.d/start_qti_le stop</code>
Shutdown Impact	RNDIS and ECM error

2.2. Other Services

This chapter introduces services that can be turned on/off according to specific application demands. If any service is intended to be turned on/off permanently, it is recommended to consult Quectel Technical Support Team in advance.

2.2.1. quectel-gps-handle

Service Name	quectel-gps-handle
Description	Data forwarding service, used to forward device smd7 data to the corresponding port, such as UART or NMEA port.
Auto-boot	Yes
Shutdown Method	<ul style="list-style-type: none"> ● Kill PID ● Execute <code>/etc/init.d/quectel-gps-handle stop</code>
Shutdown Impact	Unable to perform normal data forwarding service, affecting UART or NMEA data forwarding.

2.2.2. qllog

Service Name	qllog
Description	System log process, supporting log hierarchy. The default configuration file is <i>/data/qllog.json</i> which can be used to configure the log format, type and policy.
Auto-boot	Yes
Shutdown Method	Execute <i>/etc/init.d/start_qllog stop</i> .
Shutdown Impact	Unable to log system operation.

2.2.3. Quectel_remote_efs_service

Service Name	Quectel_remote_efs_service
Description	The service uses AT command to operate files in standard modules, and it is not necessary to use it in QuecOpen modules.
Auto-boot	Yes
Shutdown Method	<ul style="list-style-type: none"> ● Kill PID ● Execute <i>/etc/init.d/start_quectel_remotefs_daemon stop</i>
Shutdown Impact	Unable to use AT commands to operate files.

2.2.4. quectel_pcm_daemon

Service Name	quectel_pcm_daemon
Description	Audio initialization.
Auto-boot	Yes
Shutdown Method	<ul style="list-style-type: none"> ● Kill PID ● Execute <i>/etc/init.d/aaa_quectel_pcm_daemon stop</i>
Shutdown Impact	The audio will not work.

2.2.5. quectel_tts_service

Service Name	quectel_tts_service
Description	Support text-to-speech service and maintain sound card status.

Auto-boot	Yes
Shutdown Method	Execute <code>/etc/init.d/start_quectel_tts_service_daemon stop</code>
Shutdown Impact	After shutdown, the system will not be able to provide TTS service, and the sound output may also be affected.

2.2.6. dnsmasq

Service Name	dnsmasq
Description	DNS resolution proxy and DHCP services
Auto-boot	Yes
Shutdown Method	Execute <code>/etc/init.d/dnsmasq stop</code>
Shutdown Impact	After shutdown, domain DNS resolution will fail and DHCP service will stop working.

2.2.7. quectel_psm_aware

Service Name	quectel_psm_aware
Description	Power saving mode service
Auto-boot	Yes
Shutdown Method	Execute <code>/etc/init.d/quectel_psm_aware stop</code>
Shutdown Impact	Power saving mode does not work.

2.2.8. lighttpd

Service Name	lighttpd
Description	A process that provides a web service in a module to provide a lightweight web service. The service loads <code>/etc/lighttpd.conf</code> to initialize the bound IP, port, and the <code>doc_root</code> path.
Auto-boot	Yes
Shutdown Method	Execute <code>/etc/init.d/lighttpd stop</code>
Shutdown Impact	The web service does not work.

2.2.9. pdc_daemon

Service Name	pdc_daemon
Description	Device configuration status monitoring process
Auto-boot	Yes
Shutdown Method	Execute <i>/etc/init.d/start_pdc stop</i>
Shutdown Impact	Device status update cannot be found.

2.2.10. ql_forward

Service Name	ql_forward
Description	Quectel AT+QFWDxxx commands service.
Auto-boot	Yes
Shutdown Method	Execute <i>/etc/init.d/start_ql_forward_le stop</i>
Shutdown Impact	AT+QFWDxxx commands cannot be executed.

2.2.11. ql_manager_server

Service Name	ql_manager_server
Description	Wi-Fi equipment, SGMII equipment and data network management service.
Auto-boot	Yes
Shutdown Method	Execute <i>/etc/init.d/start_ql_manager_server_le stop</i>
Shutdown Impact	Wi-Fi, SGMII and data network management do not work.

2.2.12. adbd

Service Name	adbd
Description	Android Debug Bridge service. ADB tools can be used to operate the AP system like a shell.
Auto-boot	Yes

Shutdown Method	Execute <i>/etc/init.d/adbd stop</i>
Shutdown Impact	ADB tools cannot connect to the device.

2.2.13. tftp_server

Service Name	tftp_server
Description	Transfer files based on a simple protocol TFTP.
Auto-boot	Yes
Shutdown Method	Execute <i>/etc/init.d/tftp_server stop</i>
Shutdown Impact	Files cannot be transferred through TFTP.

2.2.14. ipacm_perf

Service Name	ipacm_perf
Description	Monitor Netlink for RmNet and QMI messages.
Auto-boot	Yes
Shutdown Method	Execute <i>/etc/init.d/start_ipacm_perf_le stop</i>
Shutdown Impact	RmNet status and QMI WDS indication registration will show errors.

2.2.15. quectel_monitor_daemon

Service Name	quectel_monitor_daemon
Description	Monitor modem status to see if there is a restart operation.
Auto-boot	Yes
Shutdown Method	Execute <i>/etc/init.d/quectel-monitor-daemon stop</i>
Shutdown Impact	Unable to monitor modem status or reset the modem.

2.2.16. quectel-thermal

Service Name	quectel-thermal
Description	High and low temperature treatment service.
Auto-boot	Yes
Shutdown Method	Execute <i>/etc/init.d/quectel-thermal stop</i>
Shutdown Impact	High and low temperature monitoring failure and protection measures failure.

2.2.17. quectel_daemon

Service Name	quectel_daemon
Description	Receive QMI messages including audio, network, voice and USB from modem and do corresponding processing.
Auto-boot	Yes
Shutdown Method	Execute <i>/etc/init.d/quectel-daemon stop</i>
Shutdown Impact	Audio, network, USB and other functions cannot work properly.

2.2.18. Ipacmdiag

Service Name	ipacmdiag
Description	Implementation of ipacm diag log mechanism
Auto-boot	Yes
Shutdown Method	Execute <i>/etc/init.d/start_ipacmdiag_le stop</i>
Shutdown Impact	ipacm diag log cannot be captured.

3 Appendix A Reference

Table 1: Terms and Abbreviations

Abbreviation	Description
ADB	Android Debug Bridge
AP	Application Processor
DHCP	Dynamic Host Configuration Protocol
DNS	Domain Name System
ECM	Ethernet Control Model
eMBMS	Evolved Multimedia Broadcast Multicast Services
IP	Internet Protocol
LAN-WAN	Local Area Network-Wide Area Network
MBIM	Mobile Broadband Interface Model
MTU	Maximum Transmission Unit
NMEA	National Marine Electronics Association
PID	Process ID
QMI	Qualcomm Message Interface
QMUX	QMI Multiplexing Protocol
QTI	Qualcomm Technologies
RmNet	Remote Wireless Wide Area Network
RNDIS	Remote Network Driver Interface Specification
SGMII	Serial Gigabit Media Independent Interface
SMS	Short Message Service

TFTP	Trivial File Transfer Protocol
TTS	Text to Speech
UART	Universal Asynchronous Receiver/Transmitter
USB	Universal Serial Bus
WDS	Wireless Data Service
Wi-Fi	Wireless Fidelity
