

Telit Modem Commands

Important: Run commands as root. Telit AT commands must remain uppercase. ModemManager must be running.

1. Modem information

COMMAND

```
mmcli -m a
```

PURPOSE

Displays the Telit modem model, firmware, IMEI, signal quality, registration, operator, active SIM slot, bearer APN, ports, bands, and connection state.

EXAMPLE OUTPUT

```
root@kona-enterprise-02F890:/etc/NetworkManager# mmcli -m a
```

```
-----
General |                path: /org/freedesktop/ModemManager1/Modem/3
        |                device id: 38af490b9a69c92252d06f5dc57155ebcc4c37ad
-----
Hardware |                manufacturer: Telit
        |                model: LE910C1-WWxD
        |                firmware revision: 25.30.446 1 [Jun 07 2021 06:00:00]
        |                carrier config: default
        |                h/w revision: 1.20
        |                supported: gsm-umts, lte
        |                current: gsm-umts, lte
        |                equipment id: 357273221078126
-----
System   |                device: /sys/devices/platform/ocp/47400000.target-module/47401c00.usb/musb-
hdrc.1/usb2/2-1
        |                drivers: option, qmi_wwan
        |                plugin: telit
        |                primary port: cdc-wdm0
        |                ports: cdc-wdm0 (qmi), ttyUSB0 (ignored), ttyUSB1 (at),
        |                       ttyUSB2 (at), wwan0 (net)
-----
Numbers  |                own: 14038271679
-----
Status   |                lock: sim-puk2
        |                unlock retries: sim-pin (3), sim-puk (10), sim-pin2 (0), sim-puk2 (10)
        |                state: connected
        |                power state: on
        |                signal quality: 36% (cached)
-----
Modes    |                supported: allowed: 2g; preferred: none
        |                       allowed: 3g; preferred: none
        |                       allowed: 4g; preferred: none
        |                       allowed: 2g, 3g; preferred: 3g
        |                       allowed: 2g, 3g; preferred: 2g
        |                       allowed: 2g, 4g; preferred: 4g
        |                       allowed: 2g, 4g; preferred: 2g
        |                       allowed: 3g, 4g; preferred: 4g
        |                       allowed: 3g, 4g; preferred: 3g
        |                       allowed: 2g, 3g, 4g; preferred: 4g
        |                       allowed: 2g, 3g, 4g; preferred: 3g
        |                       allowed: 2g, 3g, 4g; preferred: 2g
        |                current: allowed: 2g, 3g, 4g; preferred: 4g
-----
Bands    |                supported: egsm, dcs, pcs, g850, utran-1, utran-4, utran-6, utran-5,
        |                       utran-8, utran-2, eutran-1, eutran-2, eutran-3, eutran-4, eutran-5,
        |                       eutran-7, eutran-8, eutran-9, eutran-12, eutran-13, eutran-14,
```

	eutan-18, eutan-19, eutan-20, eutan-25, eutan-26, eutan-28, eutan-19 current: eutan-4, eutan-5, eutan-2, eutan-1, eutan-2, eutan-3, eutan-4, eutan-5, eutan-7, eutan-8, eutan-9, eutan-12, eutan-13, eutan-14, eutan-18, eutan-19, eutan-20, eutan-25, eutan-26, eutan-28
IP	supported: ipv4, ipv6, ipv4v6
3GPP	imei: 357273221078126 enabled locks: fixed-dialing operator id: 302610 operator name: Bell registration: home
3GPP EPS	ue mode of operation: csps-2 initial bearer path: /org/freedesktop/ModemManager1/Bearer/0 initial bearer apn: inet.bell.ca initial bearer ip type: ipv4v6
SIM	primary sim path: /org/freedesktop/ModemManager1/SIM/1 sim slot paths: slot 1: /org/freedesktop/ModemManager1/SIM/1 (active) slot 2: none
Bearer	paths: /org/freedesktop/ModemManager1/Bearer/1
root@kona-enterprise-02F890:/etc/NetworkManager#	

2. SIM card status

COMMAND
mmcli -m a --command='AT+CPIN?'
PURPOSE
Checks whether the SIM is ready or requires a PIN or PUK. Telit AT commands must remain uppercase.
EXAMPLE OUTPUT
response: '+CPIN: READY'

3. Read SIM ICCID

COMMAND
mmcli -m a --command='AT+ICCID'
PURPOSE
Reads the ICCID (Integrated Circuit Card Identifier) of the installed SIM card.
EXAMPLE OUTPUT
response: '+ICCID: 8914800000XXXXXXXXXX'

4. Read APN profiles

COMMAND
mmcli -m a --command='AT+CGDCONT?'

PURPOSE

Displays the PDP context profiles stored by the Telit modem. Verizon may return several carrier APN profiles.

EXAMPLE OUTPUT

```
response: '+CGDCONT: 1,"IPV4V6","ims","",0,0,0,0
+CGDCONT: 2,"IPV4V6","vzwadmin","",0,0,0,0
+CGDCONT: 3,"IPV4V6","vzwinternet","",0,0,0,0
+CGDCONT: 4,"IPV4V6","vzwapp","",0,0,0,0
+CGDCONT: 5,"IPV4V6","",0,0,0,1
+CGDCONT: 6,"IPV4V6","vzwclass6","",0,0,0,0
+CGDCONT: 7,"IPV4V6","vzwclass7","",0,0,0,0'
```

APN Auto-Populate Carrier Requirement

Enable APN auto-populate only for Verizon and AT&T SIM cards (FWAUTOSIM=1).

For every other carrier, APN auto-populate must be disabled (FWAUTOSIM=0) and FW SWITCH must be set to 40. This allows a blank APN to be populated as the first APN and used when attaching to the network.

After changing FWAUTOSIM or FW SWITCH, power-cycle the gateway. Verify the settings only after the gateway and modem are available again.

5. Enable APN auto populate (Verizon and AT&T only)

COMMAND

```
mmcli -m a --command='AT#FWAUTOSIM=1'
```

PURPOSE

Enables Telit automatic carrier APN population. Use this setting only with Verizon or AT&T SIM cards.

Required: Power-cycle the gateway after running this command.

EXAMPLE OUTPUT

```
response: ''
```

6. Disable APN auto populate and set FW SWITCH to 40 (all other carriers)

COMMAND

```
mmcli -m a --command='AT#FWAUTOSIM=0'
mmcli -m a --command='AT#FW SWITCH=40'
```

PURPOSE

Disables Telit automatic carrier APN population and sets FW SWITCH to 40. For carriers other than Verizon and AT&T, this allows a blank APN to be populated as the first APN and used when attaching to the network.

Required: Power-cycle the gateway after running these commands.

EXAMPLE OUTPUT

```
response: ''
```

7. Check APN auto populate and FWSWITCH

COMMAND

```
mmcli -m a --command='AT#FWAUTOSIM?'  
mmcli -m a --command='AT#FWSWITCH?'
```

PURPOSE

Reads the current Telit automatic SIM/APN population setting and FWSWITCH value. Verizon and AT&T use FWAUTOSIM=1. All other carriers use FWAUTOSIM=0 with FWSWITCH=40.

Check these values after the required power cycle.

EXAMPLE OUTPUT

```
Verizon / AT&T: response: '#FWAUTOSIM: 1'  
All other carriers: response: '#FWAUTOSIM: 0'  
response: '#FWSWITCH: 40,0,0'
```

8. NetworkManager APN connection files

COMMAND

```
cat /etc/NetworkManager/system-connections/sim1.nmconnection && cat  
/etc/NetworkManager/system-connections/sim2.nmconnection
```

PURPOSE

Displays the NetworkManager connection files where the configured APN values for SIM 1 and SIM 2 are stored. The APN appears under the [gsm] section.

EXAMPLE OUTPUT

```
root@kona-photon-01FB2C:/etc/NetworkManager/system-connections# cat sim1.nmconnection  
[connection]  
id=sim1  
uuid=b4e220a1-ab90-4a58-ad47-4651c7014903  
type=gsm  
autoconnect=false  
interface-name=cdc-wdm0  
timestamp=1743797742  
[gsm]  
apn=vzwinternet  
[ipv4]  
method=auto  
route-metric=20  
[ipv6]  
addr-gen-mode=stable-privacy  
method=auto  
[proxy]  
root@kona-photon-01FB2C:/etc/NetworkManager/system-connections#  
root@kona-photon-01FB2C:/etc/NetworkManager/system-connections# cat sim2.nmconnection  
[connection]  
id=sim2  
uuid=4c0566eb-343a-416d-aac9-74ae5ad33e1e  
type=gsm  
autoconnect=false  
interface-name=cdc-wdm0  
[gsm]  
apn=vzwinternet  
[ipv4]  
method=auto  
route-metric=20  
[ipv6]  
addr-gen-mode=stable-privacy
```

```
method=auto
[proxy]
root@kona-photon-01FB2C:/etc/NetworkManager/system-connections#
```

9. Apply a manually configured APN

COMMAND

```
nmcli con reload
```

PURPOSE

After manually setting or changing the APN in /etc/NetworkManager/system-connections, run this command to reload the NetworkManager connection profiles and apply the change.

EXAMPLE OUTPUT

```
root@kona-photon-01FB2C:~# nmcli con reload
```

10. Connection Manager details

COMMAND

```
cat /tmp/ConnectionManager.txt
```

PURPOSE

Displays the Connection Manager report containing modem, SIM slot, home network, RF, active APN profile, IP address, DNS, and call statistics information.

EXAMPLE OUTPUT

```
root@kona-micro-0328F0:~# cat /tmp/ConnectionManager.txt
```

DEVICE INFORMATION

```
Manufacturer      : Telit
Model Id          : LE910C1-WWxD
Firmware Revisions : 25.30.408 1 [Nov 14 2023 07:00:00]
Boot Revisions    :
PRI Revisions     :
PRL Version       :
PRL Preference    :
IMSI              : 234502110542201
ESN Number        :
IMEI Number       : 357273224272353
MEID Number       :
Hardware Revision : 1.20
Device State      : DEVICE CONNECTED
```

SIM SLOT PRESENCE STATUS

```
SIM Slot 0        : READY
SIM Slot 1        : ABSENT
```

HOME NETWORK

```
Home Network      : teal
Roaming Status    : allowed
Data Capabilities : gsm-umts, lte
Session State     : home
Data Bearer       : lte
Dormancy Status   :
LU Reject Cause   :
```

RF INFORMATION

```
Radio Interface   : lte
```

```

Active Band Class      : 102
Active Channel         : 900
Cell ID               : 03409F28
Signal Strength       : -68.00 dBm
ECIO                  : 7dB
IO                    :
SINR                  : -0.40 dB
RSRQ                  : -17.00 dB

ACTIVE PROFILE PARAMETERS
PDP Type              : 3
Authentication        :
Profile Name          : sim1
APN Name              : teal
User Name             :
IP Address            : 10.27.155.215
Primary DNS           : 8.8.8.8
Secondary DNS         : 8.8.4.4

CALL STATISTICS
Call Status           : CONNECTED
Bytes Transferred     : 2435
Bytes Received        : 84
Current TX Rate       : 81.16
Current RX Rate       : 2.80
MAX TX Rate           :
MAX RX Rate           :

```

11. Check CM logs

COMMAND

```
tail -f /var/log/debug | grep -w CM
```

PURPOSE

Displays Connection Manager (CM) log entries from /var/log/debug in real time.

EXAMPLE OUTPUT

```

root@kona-photon-01FB2C:~# tail -f /var/log/debug | grep -w CM
Apr  4 19:26:01 kona-photon-01FB2C [CM]: Connection info version '1.1.1'
Apr  4 19:26:07 kona-photon-01FB2C [CM]: 'connection-info' exiting...
Apr  4 19:26:07 kona-photon-01FB2C [CM]: pid_file is /var/run/connection-info.pid
Apr  4 19:26:07 kona-photon-01FB2C [CM]: Removing PID file '/var/run/connection-info.pid' and releasing lock
Apr  4 19:27:01 kona-photon-01FB2C [CM]: Connection info version '1.1.1'
Apr  4 19:27:07 kona-photon-01FB2C [CM]: 'connection-info' exiting...

```