



## Firmware for UC-8100 Series Release Notes

<b>Version: v3.3</b>	<b>Build: 200424_164309</b>
<b>Release Date: Jun 24, 2020</b>	

### Applicable Products

UC-8162-LX, UC-8132-LX, UC-8131-LX, UC-8112-LX

### Supported Operating Systems

Moxa Industrial Linux (Debian 9)

### New Features

N/A

### Enhancements

- Now includes header files of all Moxa's libraries and kernel.

### Bugs Fixed

- The Wi-Fi and cellular signal process initialization mechanism (signald) has been enhanced to fix an issue where the signal LED may not work under some circumstances.
- The power sequence of the mPCIe slot has been changed to fix a compatibility with the Sierra MC7354 on the UC-8100 Series V 2.0.0.
- Fixed an issue where the set to factory default function does not work if the Wi-Fi module is in use.

### Changes

- Kernel version updated from CIP Linux 4.4.154 to 4.4.190.
- OS updated from Debian 9:9.9 to 9:9.12. For details, visit <https://www.debian.org/News/2020/2020020802>.
- The signal representation in moxa-cellular-utils now shows a level indicator with the range 0 to 5 instead of the Reference Signal Received Power (RSRP) value.

### Notes

N/A



<b>Version: v3.2</b>	<b>Build: N/A</b>
<b>Release Date: Jan 20, 2020</b>	

### **Applicable Products**

UC-8112-LX, UC-8131-LX, UC-8132-LX, UC-8162-LX

### **Supported Operating Systems**

Debian 9.x

### **New Features**

N/A

### **Enhancements**

N/A

### **Bugs Fixed**

- Upgraded kernel version to CIP Linux 4.4.154 for security patch update.
- Fixed the incorrect UART port order issue in the UC-8100 Series V2.0.0.
- Fixed the network bridge control failure issue.
- Fixed an issue where a command to reopen the UART port may fail in some cases.

### **Changes**

- The default network interfaces in the computer are no longer set during the first boot up.

### **Notes**

This firmware is not compatible with UC-8100-ME-T series.



<b>Version: v3.1</b>	<b>Build: Build 18080312</b>
<b>Release Date: Aug 08, 2018</b>	

### **Applicable Products**

UC-8100 Series

### **Supported Operating Systems**

Debian 9.x

### **New Features**

N/A

### **Enhancements**

N/A

### **Bugs Fixed**

N/A

### **Changes**

- Updates uc8100-system packages.
- Adds new package "firmware-misc-nonfree" for WPER 172GN Wi-Fi module.
- Updates moxa-cellular-utils to 1.36.3.
- LED check in diagnostic function.

### **Notes**

N/A



<b>Version: v3.0</b>	<b>Build: Build 18062518</b>
<b>Release Date: N/A</b>	

### **Applicable Products**

UC-8100 Series

### **Supported Operating Systems**

N/A

### **New Features**

N/A

### **Enhancements**

N/A

### **Bugs Fixed**

- add fsck mechanism in bootloader

### **Changes**

- Upgraded root file system from debian8 to debian9.

For more package info, please refer to following link:

<https://www.debian.org/distrib/packages.en.html>

- Upgraded Linux kernel from 4.1.36 to 4.4.

For more detail info, please refer to following link:

<https://www.kernel.org/pub/linux/kernel/v4.x/>

- Updated uc8100-system packages.
- Add new platform packages: moxa-led-control, moxa-uart-control, moxa-push-button.
- Updated moxa-cellular-utils to 1.32.0, moxa-wifi-utils to 1.5.2.

### **Notes**

N/A



<b>Version: v2.1</b>	<b>Build: Build 17072510</b>
<b>Release Date: Jul 28, 2017</b>	

### **Applicable Products**

UC-8100 Series

### **Supported Operating Systems**

Debian 8.x

### **New Features**

N/A

### **Enhancements**

N/A

### **Bugs Fixed**

N/A

### **Changes**

- Updates bootloader to be compliant with new memory.

### **Notes**

N/A



<b>Version: v2.0</b>	<b>Build: Build 17062219</b>
<b>Release Date: Jul 24, 2017</b>	

## Applicable Products

UC-8100 Series

## Supported Operating Systems

Debian 8.x

## New Features

N/A

## Enhancements

N/A

## Bugs Fixed

### • Fixed CVE Issues:

- CVE-2016-4482
- CVE-2016-4486
- CVE-2016-4805
- CVE-2016-3138
- CVE-2016-2550
- CVE-2016-2847
- CVE-2016-3134
- CVE-2016-3156
- CVE-2016-0723
- CVE-2016-0821
- CVE-2016-5696
- CVE-2016-7117
- CVE-2016-6828

## Changes

- Upgrades root file system from Debian 7 to Debian 8. See <https://www.debian.org/distrib/packages.en.html>
- Upgrades Linux kernel from 3.2 to 4.1.36. See <https://www.kernel.org/pub/linux/kernel/v4.x/>
- Updates moxa-cellualr-utils, uc8100-system, uc8100-sysconfig, uc8100-syskernel packages.
- Updates moxa-cellular-utils to v1.19.0.
- Set some nouser and nogroup files to right attribute.
- Modified watchdog driver to fix 'ioctl could disable wdt in nowayout mode' issue.
- Moved mx\_led\_control tool from /bin folder to /sbin folder.
- Modified USB host driver to support "usb port control" feature by bootloader setting.
- Fixed the omap-sham warning message.
- Supports SD card write protect by bootloader setting.

## Notes

N/A



<b>Version: v1.7</b>	<b>Build: Build 17011120</b>
<b>Release Date: N/A</b>	

**Applicable Products**

UC-8100 Series

**Supported Operating Systems**

N/A

**New Features**

N/A

**Enhancements**

N/A

**Bugs Fixed**

- Fixed MC7354 "switch\_carrier" Issue.

**Changes**

N/A

**Notes**

N/A



<b>Version: v1.6</b>	<b>Build: Build 15110421</b>
<b>Release Date: N/A</b>	

### **Applicable Products**

UC-8100 Series

### **Supported Operating Systems**

N/A

### **New Features**

- Adds Yuga cellular module (Enable China LTE).
- Adds ftp-related driver (Enable ftp function).
- Adds a check sierra modules mtu size function.

### **Enhancements**

- Upgrade package
  - Update uc8100-cellular-utils to version 1.6.0
  - Update uc8100-diag to version 1.2.0
  - Update uc8100-system to version 1.6.0

### **Bugs Fixed**

- Fix chs\_signal led bugs
- Fix PPPoE Connection Error of MC73xx

### **Changes**

- Remove TPM tool related-functions in following files
  - mx\_diag
- modified default domain name
- disable supports\_autosuspend function for qmi\_wwan driver
- Clear bash shell history command.

### **Notes**

N/A





<b>Version: v1.5</b>	<b>Build: Build 15090108</b>
<b>Release Date: N/A</b>	

## Applicable Products

UC-8100 Series

## Supported Operating Systems

N/A

## New Features

- Add bluetooth related kernel drivers.

## Enhancements

- Upgrade package
  - Update openssl to version 1.0.1e-2+deb7u17
  - Update libqmi to version 1.12.6
  - Update cellular-utils to version 1.5.0
  - Update libssl to version 1.0.1e-2+deb7u17
  - Update apache2 to version 2.2.22-13+deb7u6
  - Update apache2-mpm-prefork to version 2.2.22-13+deb7u6
  - Update apache2-utils to version 2.2.22-13+deb7u6
  - Update apache2.2-bin to version 2.2.22-13+deb7u6
  - Update apache2.2-common to version 2.2.22-13+deb7u6
  - Update dpkg to version 1.16.16
  - Update file to version 5.11-2+deb7u8
  - Update mysql-common to version 5.5.44-0+deb7u1
  - Update libexpat1:armhf to version 2.1.0-1+deb7u2
  - Update libldap-2.4-2:armhf to version 2.4.31-2
  - Update libmagic1:armhf to version 5.11-2+deb7u8
  - Update libmysqlclient18:armhf to version 5.5.44-0+deb7u1
  - Update libsqlite3-0:armhf to version 3.7.13-1+deb7u2
  - Update libtasn1-3:armhf to version 2.13-2+deb7u2
  - Update libxml2:armhf to version 2.8.0+dfsg1-7+wheezy4
  - Update mysql-common to version 5.5.44-0+deb7u1
  - Update ntpdate to version 1:4.2.6.p5+dfsg-2+deb7u4
  - Update ppp to version 2.4.5-5.1+deb7u2
  - Update tzdata to version 2015e-0+deb7u1
  - Update wpasupplicant to version 1.0-3+deb7u2

## Bugs Fixed

- Fix USB driver
  - fix IRQ race during initialization
  - fix tty-device error handling at probe
  - fix potential use after free
  - fix race in generic write
- Fix RS232-UART driver
  - fix UART data failed issue when disabling hardware flow control.

## Changes

- Bootloader version: 1.3.0S03.
- Enables GobiSerial module: Makes GPS function more stable, automatically enables or disables



GPS, when the module device node is opened or closed.

- Removes TPM tool related-packages: libtpm-unseal1, tpm-tools, ousers, libopencryptoki0, opencryptoki, and libtspi1
- Removes TPM tool related-functions in following files: expand2fs and mx\_uc8100.
- Upgrades RAM from 256 MB to 512 MB.

**Notes**

N/A



<b>Version: v1.4</b>	<b>Build: Build 15032016</b>
<b>Release Date: N/A</b>	

## Applicable Products

UC-8100 Series

## Supported Operating Systems

N/A

## New Features

- Adds GRE related drivers.
- Adds the Sierra 3G/4G driver for IPv6.
- Adds the mangle driver.
- Adds the overlaysfs driver.

## Enhancements

- Enhance cellular connection utility: Dial up/connect to cellular network, Soft-reset (restart) module, Hard-reset module, Check carrier, Choose carrier, Reset module to factory default, Send AT command, Set PIN code, SIM card status, and Enable/ Disable PIN of SIM card
- Support UART baudrate 921600.
- Patch Linux 3.2.66 wifi related files.
- Enhances watchdog function: Disable "NOWAYOUT" in default, enable "MAGIC CLOSE" in default, and provides configurable option on the module parameters "NOWAYOUT" and "TIMER\_MARGIN".
- Enhances SD card compatibility with bootloader.

## Bugs Fixed

- Security issues in OpenSSL, ntpdate, bash, glibc.
- RS-232 data loss issue.
- Network driver issue
- Serial Number length to 12 byte in bootloader.

## Changes

- Adds Black Gobi-related driver in default settings.
- All LEDs except power LED turn off when the system halts.
- Adds /etc/modprobe.d/watchdog.conf.
- Initializes the GPIO PIN for UART earlier to avoid "setinterface" fail in rc.local.
- Bootloader version: 1.2.0S02.
- Blinks the LED after stopping 8100 services.
- Switch the SD/USB LED control behavior to the user space, so as to enable specifying the number of LEDs in diagnostic function.
- Changes the LED behavior when LED device fails.
- Upgrades Debian version to 7.8.
- Work around solution for USB babble error.
- Disables micro SD "card detect" function.
- Builds watchdog driver into the kernel module.
- Turns off "Acquire::GzipIndexes" in the APT setting.

## Notes

N/A



<b>Version: v1.3</b>	<b>Build: Build 14112810</b>
<b>Release Date: N/A</b>	

### **Applicable Products**

UC-8100 Series

### **Supported Operating Systems**

N/A

### **New Features**

- Installs crda version 1.1.2-1.
- Installs firmware-ralink version 0.43~bpo70.
- Installs rfwkill version 0.4-1.
- Enables conntack kernel option.
- Enables LXC kernel option.

### **Enhancements**

- Upgrades to Debian 7.7.
- Enhances the Wi-Fi connection utility.
- Adds signal and status function for cellular connections.
- Enables Spread Spectrum for CORE/PER/DDR.
- Adds Eth PHY analog off and power down function.
- Allows hardware assisted rts/cts modes to be disabled.
- Enhances stability of the SD driver.

### **Bugs Fixed**

- System files issue.
- Security issue in OpenSSL.
- Security issue in bash.
- Sierra Wireless MC9090 issue.

### **Changes**

- Update bootloader version to V1.1.
- Renames Wi-Fi utility from wifi.sh to wifi\_mgmt.
- Use QMI instead of ppp to dial up Sierra Wireless MC73x4.
- Modifies SDRAM configuration to fit size and timing.
- Modifies GPIO\_0\_19 pin setting for EMI.
- Modifies MLO file check method in SD boot process.
- Use Wi-Fi open source driver instead of Ralink official driver.
- Disables USB PIO mode and enables USB DMA mode.

### **Notes**

N/A



<b>Version: v1.2</b>	<b>Build: Build 14080718</b>
<b>Release Date: N/A</b>	

**Applicable Products**

UC-8100 Series

**Supported Operating Systems**

N/A

**New Features**

N/A

**Enhancements**

N/A

**Bugs Fixed**

- Backup zip file corrupted.

**Changes**

N/A

**Notes**

N/A



<b>Version: v1.1</b>	<b>Build: Build 14072210</b>
<b>Release Date: N/A</b>	

### **Applicable Products**

UC-8100 Series

### **Supported Operating Systems**

N/A

### **New Features**

N/A

### **Enhancements**

- Upgrades the package for OpenSSL.

### **Bugs Fixed**

- Network driver issue.

### **Changes**

- Removes the getty process.
- Disables GPS function for MC8090, MC9090.

### **Notes**

N/A



<b>Version: v1.0</b>	<b>Build: Build 14051515</b>
<b>Release Date: N/A</b>	

**Applicable Products**

UC-8100 Series

**Supported Operating Systems**

N/A

**New Features**

- First release.

**Enhancements**

N/A

**Bugs Fixed**

N/A

**Changes**

N/A

**Notes**

N/A