

## Release Note. (CP4 3.5.0)

date : 2021.09.10

Released CP4\_3.5.0 version after testing CP4\_3.5.0.RC3.

## Release Note. (CP4 3.5.0.RC3)

date : 2021.08.06

**BASE VERSION** : CP4\_3.5.0.RC2

**H/W** : CP4, CP4S

### 1. Changes/New

- 1) Change LED operation specification when Video Mask is activate (Blue LED Off)

### 2. Fixed

- 1) Debug DRV file transmit
- 2) Debug Device installation angle OSD

## Release Note. (CP4 3.5.0.RC2)

date : 2021.07.27

**BASE VERSION** : CP4\_3.5.0.RC1

**H/W** : CP4, CP4S

### 1. Changes/New

- 1) Enhance G-SENSOR CALIBRATION logic and add [DMS option, Reset calibration data]
- 2) Change G-SENSOR, GYRO SENSOR representative value to average value
- 3) Write Serial/UUID information into log when Disk Error
- 4) Enhance UploadSnapshot API refresh rate (Increase fps)
- 5) Enhance system stability
- 6) Support EC25 Modem PPP mode

### 2. Fixed

- 1) Debug DRV extra data Network field 0(X) issue
- 2) Debug IOT mode serial error message issue
- 3) Debug GYRO value in the DRV
- 4) Debug wpa\_supplicant issue when there is no WIFI setting.
- 5) Disable other WIFI dongle for the CP4S-W model. (Not support WIFI dongle except internal WIFI dongle)

# Release Note. (CP4 3.5.0.RC1)

date : 2021.06.01

**BASE VERSION** : CP4\_3.4.1

**H/W** : CP4, CP4S

## 1. Changes/New

- 1) Add a function: When the device was off in the geofence zone, the device know it is in the geofence zone even before receiving GPS.
- 2) Add DRIVER\_ID\_DEVICE function
- 3) Improve system reliability
- 4) Add device information transfer function when accessing FOTA URL
- 5) Add Serial information logging function when Disk Error
- 6) Change the DRV\_FRAME\_INFO\_EX structure version
- 7) Deactivation of SD Write protect
- 8) External Device
  - ✓ ELA RFID Reader
  - ✓ Squarell OBDII
  - ✓ ACR1252U NFC Reader
  - ✓ Circle CIR315A
- 9) DRV ExtraData Enhancements
  - ✓ Change the DRV OBD data (Extra Info) record units
  - ✓ Add SOC thermometer capability
- 10) [SWA only] G-Sensor ACC filter function

## 2. Fixed

- 1) Improve system reliability
- 2) Debug G-Sensor SIMPLE MODE
- 3) Improve GYRO precision
- 4) Improve Recovery function
- 5) Improve Pulse Speed in DRV
- 6) Improve the FirstMDTTime logic
- 7) Improve recording start logic
- 8) Improve Overwrite logic
- 9) Improve UploadEvent logic
- 10) Debug a vertical lines in recorded images
- 11) Improve Event info log when Video loss
- 12) Debug a bit rate issue when record 2FPS
- 13) [SWA only] Improve LE910-NA-LTE modem operation
- 14) Debug Geofence Icon location when Playback
- 15) Improve Drv record
- 16) Debug TBW
- 17) Debug debug message after shutdown
- 18) Debug PFD\_RECOVER
- 19) Improve Network recovery
- 20) Improve Modem recognition

## Release Note. (CP4 3.4.1)

date : 2021.04.23

**BASE VERSION** : CP4\_3.4.0

**H/W** : CP4, CP4S

### 1. Changes/New

### 2. Fixed

- 1) Debug ALARM IN 4 issue
- 2) F/W upgrade issue when ACC OFF
- 3) Debug G-Sensor SIMPLE MODE

## Release Note. (CP4 3.4.0)

date : 2021.01.25

**Released CP4\_3.4.0 version after testing CP4\_3.4.0.RC4.**

**BASE VERSION** : CP4\_3.3.1

**H/W** : CP4, CP4S

### 1. Changes/New

- 1) UploadEvent support multi-events  
Before EventType[int64] has one event. After EventType[int64] has multi events.
- 2) Enhance Thread hang checking method
- 3) Enhance SD card checking logic when remove/re-insert
- 4) Create Engineering log partition and recreate Engineering log
- 5) Add new USB NFC reader (Circle CIR315A) for Japan driver license
- 6) WIFI driver(RTL8821CU/RTL8821AU/RTL8192CU) update

### 2. Fixed

- 1) [BUG FIX] SD Format log should be at the log file.

## Release Note. (CP4 3.3.1)

Released CP4\_3.3.1 version after testing CP4\_3.3.1.RC1.

## Release Note. (CP4 3.3.1.RC1)

date : 2021.01.12

**BASE VERSION : CP4\_3.3.0.**

**H/W : CP4, CP4S**

### **3. Changes/New**

#### **4. Fixed**

- 1) Optimize the Video decoder (CP4S Video Noise Improvement)

## Release Note. (CP4 3.3.0)

date : 2021.01.06

Released CP4\_3.3.0 version after testing/QA of CP4\_3.3.0.RC10.

**H/W : CP4, CP4S**

## Release Note. (CP4 3.3.0.RC10)

date : 2020.12.29

**BASE VERSION : CP4\_3.3.0.RC9**

**H/W : CP4, CP4S**

### **5. Changes/New**

#### **6. Fixed**

- 2) Improved stability of WiFi USB dongle RTL8821cu.
- 3) Found unknown reboot during OnOff Cycle Test (Debug tvd kernel thread dead)

## Release Note. (CP4 3.3.0.RC9)

date : 2020.12.24

### **1. Changes/New**

## 2. Fixed

- 1) Fixed F/W Name after F/W Upgrading in the system.log
- 2) Debug RTL WiFi driver

## 3. Etc.

- 1) Known issue: RTL8821cu/RTL8821au WiFi dongle is not stable.
- 2) 3.3.0.RC8 F/W wasn't released.

# Release Note. (CP4 3.3.0.RC7)

date : 2020.12.17

**BASE VERSION : CP4\_3.3.0.RC5**

## 1. Changes/New

- 1) Changed "Modem F/W Upgrade" message in the system.log

## 2. Fixed

- 1) Enhanced WiFi communication
- 2) Debug message of "Modem F/W Upgrade" in the system.log
- 3) Debug disconnection error when continuously uploading files over WiFi
- 4) Debug message log encryption decrypt
- 5) Debut Black Screen when connect 2CH FHD camera (CP4)

## 3. Etc.

- 1) 3.3.0.RC6 F/W wasn't released.

# Release Note. (CP4 3.3.0.RC5)

date : 2020.11.30

**BASE VERSION : CP4\_3.3.0.RC4**

## 1. Changes/New

- 1) Add Modem reboot by Modem control status
- 2) Support TLS 1.3
- 3) Support 30FPS when video type PAL
- 4) Add LE910Cx PPP Mode
- 5) Add Ignition Filter
- 6) Support CP4S board
- 7) Changed CP4S record setting. (Removed CH2~CH4 FHD setting)

## 2. Fixed

- 1) Debug modem upgrade using SD card

- 2) Debug MICOM version writing
- 3) Debug UploadDRV system status Record ON/OFF
- 4) Debug LED operation
  - ✓ Record status LED
  - ✓ MODEM FW Upgrade LED
- 5) Debug USB dongle type 2
- 6) Debug CP4S-W shutdown delay

## Release Note. (CP4 3.3.0.RC4.T1)

date : 2020.11.18

**BASE VERSION : CP4\_3.3.0.RC4**

### 1. Changes/New

- 1) Record LED status change by recording status specially for the event record.
  - Set event record but there is no event, then Record LED off.
- 2) Add workaround for the "CP4-NA-LTE: Network Issues (v. 3.2.1 - AT&T)"
  - Modem reboot up to 3 times per case (Modem, SIM, register, Data connection)

### 2. Fixed

- 1) Debug online drv upload "System Status, Record On"

## Release Note. (CP4 3.3.0.RC4)

date : 2020.09.24

**BASE VERSION : CP4\_3.3.0.RC3**

### 1. Changes/New

- 1) Enhance GPS power on control (5.5 seconds to 2.5 seconds)

### 2. Fixed

- 1) Debug low quality image file size
- 2) Debug Audio Masking
- 3) Debug Geofence event beep
- 4) Debug when use MAX(20) Geofence area
- 5) Debug Geofence event
- 6) Debug FHD playback green line

## Release Note. (CP4 3.3.0.RC3)

**BASE VERSION : CP4\_3.3.0.RC2**

**H/W : CP4, CP4S**

**1. Changes/New**

- 1) Add Event AUDIO MASK function

**2. Fixed**

- 1) Debug event MASK\_CH
- 2) Debug wakeup on alarm
- 3) Debug live screen record icon
- 4) Debug playback

## **Release Note. (CP4 3.3.0.RC2)**

**BASE VERSION : CP4\_3.2.1**

**1. Changes/New**

- 1) Telit modem version checking new AT CMD  
⇒ It's not related to the function. The old AT CMD show a wrong modem version.
- 2) Add Geofence function
- 3) Add CONFIG UPLOAD log into the System.log  
⇒ Added more information into the System.log.
- 4) Changed Wake-up Interval OFF condition
- 5) Add Event MASK\_CH function
- 6) Delete CP4 Firmware Name PostFix  
⇒ It's related to the firmware information. We will remove NA or SP or EU or AP from the firmware name.  
So CP4\_2.1.0.NA firmware version will be the CP4\_3.3.0 after the firmware update.

**2. Fixed**

- 1) Quectel EC25 modem, delete preinstalled APN
- 2) Upgrade Quectel EC25 rebooting process

## **Release Note. (CP4 3. 2.1)**

**Released Official CP4\_3.2.1 version**

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**BASE VERSION : CP4\_3.2.1.RC1**

**H/W : CP4, CP4S**

**1. Changes/New**

**2. Fixed**

- 1) UploadDrv firstMdtTime "0" bug

## **Release Note. (CP4 3.2.0)**

**Released CP4\_3.2.0 version after testing CP4\_3.2.0.RC9.**

**BASE VERSION : CP4\_3.2.0.RC9**

**H/W : CP4, CP4S**

**3. Changes/New**

- 1) Improve Network termination process
- 2) Auto Format ON: Format only when a blank SD is inserted
- 3) Remove vendor from System log (IMEI INFO)

**4. Fixed**

- 1) LED operation bug (Network fail, shutdown)
- 2) SD unmounts time bug
- 3) Beep operation bug (wifi connected, V-loss, duration 0)
- 4) Network connection issue during ON/OFF test
- 5) DSM extra data bug
- 6) UploadDrv gdata 10hz bug
- 7) [CP4S] Video noise when CH2 SD Camera connected
- 8) FPS setting menu bug
- 9) [CP4S] APN setting bug

**3. NOTE**

- 1) When upgrade failed from 3.0.0 version (Hardware production before Apr. 2018), recover the unit from the Factory Menu



## Release Note. (CP4 3.2.0.RC4)

date : 2020.06.30

**BASE VERSION : CP4\_3.2.0.RC2**

**H/W : CP4, CP4S**

### **1. Changes/New**

- 1) Add the firmware update standby timeout
- 2) Run Auto Recovery when there is an abnormal shutdown
- 3) Remove Auto Recovery from the menu/setting
- 4) Add Modem BDID test logic

### **2. Fixed**

- 1) Aux warning that related with RF reader touch type
- 2) Gyro data writing
- 3) Overwrite 256GB SD

## Release Note. (CP4 3.2.0.RC2)

date : 2020.06.16

**BASE VERSION : CP4\_3.2.0.RC1**

**H/W : CP4, CP4S**

### **3. Changes/New**

- 1) Added number for CP4S in the setting.ini file
- 2) Add the extra data like ADAS/DSM on the DRV file and send it to the server
- 3) Add FCW distance ADAS
- 4) Add RoadScope8 ADAS device
- 5) Add IMSI information at the DSM4 phone number field
- 6) Enhance the Phone number check function
- 7) Remove ACC status log from NAND system.log (space issue)
- 8) Enhance Auto format / Auto recovery function
- 9) When the LE910 modem Dongle type is 1, use PPP instead of NCM.

### **4. Fixed**

- 1) Overwrite after changing the record mode
- 2) NCM related connection fail
- 3) CH2 related camera noise

## Release Note. (CP4 3.2.0.RC1)

date : 2020.05.18



**BASE VERSION : CP4\_3.1.1**

**H/W : CP4, CP4S**

**1. Changes/New**

- 1) 4HD model resolution
  - ✓ All channels support FHD/HD/SD
- 2) Support Quectel EC25 modem
- 3) Added new device support
  - ✓ ADAS: MDAS-9, MDAS-5
  - ✓ DSM: MDSM-7
- 4) Add 2G/3G/4G connection Information
- 5) Changed Auto format function
- 6) Added Auto recovery function

## **Release Note. (CP4 3.1.1)**

date: 2020.05.15

**Released CP4\_3.1.1 version after testing CP4\_3.1.1.RC1.**

## **Release Note. (CP4 3.1.1.RC1)**

date: 2020.05.14

**BASE VERSION: CP4\_3.1.0**

**H/W: CP4**

**1. Fixed**

- A. Debug Model value reset after Modem information refresh

## **Release Note. (CP4 3.1.0.RC13)**

date: 2020.05.13

**BASE VERSION: CP4\_3.1.0.RC12**

**H/W: CP4**

**5. Fixed**

- 1) Debug TEMP PW CONTROL INFO log

**4. NOTE**

- 1) When upgrade failed from 3.0.0 version (Hardware production before Apr. 2018), recover the unit from the Factory Menu

## Release Note. (CP4 3.1.0.RC12)

date: 2020.05.11

**BASE VERSION: CP4\_3.1.0.RC11****H/W: CP4****1. Changes/New**

- 1) Add default setting per vendor

**2. Fixed**

- 1) Debug FOTA img file and remove\_fw
- 2) Debug TEMP SYSTEM WARNING

## Release Note. (CP4 3.1.0.RC11)

date: 2020.04.29

**BASE VERSION: CP4\_3.1.0.RC10****H/W: CP4****1. Changes/New**

- 1) Add the default setting per vendor
- 2) Restore NET\_FW\_RESTART, NET\_CONFIG\_RESTART function

**2. Fixed**

- 3) Debug PULSE 2HZ error
- 4) Enhance shutdown when Telit LTE modem 3G/2G fallback
- 5) Debug RECORD ON log serial text
- 6) Add exception when handing SMS
- 7) Enhance system stability
- 8) Debug when Wi-Fi Password is wrong.
- 9) Enhance Telit LTE Modem APN setting logic
- 10) Enhance NCM Reconnect function
- 11) Debug kernel memory allocation

## Release Note. (CP4 3.1.0.RC10)

date: 2020.04.24

**BASE VERSION: CP4\_3.1.0.RC9**

**H/W: CP4**

### 1. Changes/New

- 1) Add HW\_VERSION in the version.ini file.

### 2. Fixed

- 1) NCM communication failed => Enhanced Modem Reboot process
- 2) Modem initialize failed => Debug exceptions
- 3) Debug UploadSystemLog API
- 4) Debug FOTA Version check function
- 5) Debug BEEP Duration (server command)
- 6) Debug Telit LTE Modem APN setting logic

## Release Note. (CP4 3.1.0.RC9)

date: 2020.04.10

**BASE VERSION: CP4\_3.1.0.RC8**

**H/W: CP4**

### 1. Fixed

- 2) 2.x.x => 3.1.0.RC8 upgrade bug fix  
[3.1.0.RC7.NCM2 => 3.1.0.RC8 (no issue)]

## Release Note. (CP4 3.1.0.RC8)

date: 2020.04.08

**BASE VERSION: CP4\_3.1.0.RC7**

**H/W: CP4**

### 1. Changes/New

- 3) Add PFD\_RECOVER system log
- 4) Add NETWORK ERROR code information
- 5) Enhance Modem Shutdown function

- 6) Add Recording ratio information in the Frame Info
- 7) When Network error, add Modem Reboot by network condition.
- 8) When unit is at the out of service area, add NoService Log
- 9) Changed Driving Data sending timing

## 2. Fixed

- 10) Add F/W VERSION space in the system log
- 11) Debug OSD setting
  - ✓ Recording mode continuous or off => REMOVE EXCEPTION item enabled.
  - ✓ DRIVING record OVERWRITE OFF => AUTO REMOVE item enabled
- 12) Debug no Live screen on the monitor when all CH Camera OFF setting
- 13) Debug REMOVE EXCEPTION related event issue
- 14) Do not retry command except FOTA
- 15) Debug Command Complete issue (not send Command Complete after restart)
- 16) Debug ignored Health Check Interval when network error
- 17) Debug CURL host resolve delay while system shutdown
- 18) Debug RF Reader system warning related issue
- 19) Debug Touch type RF Reader card Aux warning issue
- 20) Debug FOTA record on the system log and LED operation issue

# Release Note. (CP4 3.1.0.RC7.NCM2)

date: 2020. 03.26

- Debug Network Retry
- Debug Command Complete
- Add Network error code information

# Release Note. (CP4 3.1.0.RC7)

date: 2020. 02.28

## 1. BASE VERSION: CP4\_3.1.0.RC6

## 2. H/W: CP4

## 3. Changes/New

- A. Enhance Modem shutdown process
- B. system.log backup from NAND
- C. backup system.log from NAND to BRTX4K USB drive
- D. Write DRIVERID change in to system.log
- E. Enhance booting speed

## 4. Fixed

- A. Sometimes run DISK check 2 times bug

- B. FOTA Download failed and retry again continuously
- C. not OVERWRITE during test DISK
- D. system.log text bug
- E. VIDEO\_STD mis-matched => Green screen at PC Viewer
- F. 1x2 split Live screen after changed Display order
- G. B+ OFF and then occur V-Loss
- H. OSD setting bug
  - i. Each event item RECORD CH setting bug
  - ii. REMOVE EXCEPTION setting bug
  - iii. OVERWRITE OFF setting bug
  - iv. TV OUT MODE setting, ONLY EVENT ON setting bug
  - v. GSENSOR\_LIVEOUT setting bug
  - vi. SEQUENCE DWELL TIME OFF => 1x2x1 setting enabled bug
  - vii. AUTO REMOVE setting bug
  - viii. Camera Off => changed another channel fps as 0 bug
- I. When remove RF Reader => no Aux warning bug
- J. Except event file setting => SD Error during Overwrite

#### 5. Remark

- A. When upgrade failed from 3.0.0 version (Hardware production before Apr. 2018), recover the unit from the Factory Menu
- B. A lot of changes. Do not release it to customer before finish the QC test.

## Release Note. (CP4 3.1.0.RC6)

date: 2020. 02.19

**BASE VERSION: CP4\_3.1.0.RC5**

**H/W: CP4**

#### 1. Changes/New

- A. board ID Management for CP4S (4HD model)
- B. Add system.log in the NAND
  - i. Change system.log writing in the NAND
  - ii. Remove VIDEO LOSS from system.log in the NAND or EMMC

#### 2. Fixed

- A. RC version reading bug
- B. RAMDISK image loading (Bad Data CRC occur bug)

## Release Note. (CP4 3.1.0.RC5)

date: 2020. 02.11

1. **BASE VERSION: CP4\_3.1.0.RC4**
2. **H/W: CP4**
3. **Changes/New**
  - 1) Remove system.log from the NAND
4. **Fixed**
  - 1) Debug system dead when change the settings.
  - 2) System dead during ON/OFF Aging Test
  - 3) Continuous restart after AUTO FORMAT failed
  - 4) Pulse Speed and RPM value as 0
  - 5) ALARM event => No ALARM OUT
  - 6) MDT file have events which didn't happen.
  - 7) G-sensor event Hz, setting bug
  - 8) G-sensor Pre-Set INDIVIDUAL MODE item setting bug

## Release Note. (CP4 3.1.0.RC4)

date: 2020. 01.31

1. **BASE VERSION: CP4\_3.1.0.RC3**
2. **H/W: CP4**
3. **Changes/New**
  - 1) VIDEO\_STANDARD mismatch => Channel 4 display black screen
  - 2) Autoformat On => Create SD partition when it has no partition
  - 3) Production Fusing method change
  - 4) Do not format a write protect switch on SD
  - 5) fusing status screen
  - 6) Detect a write protect switch on SD
  - 7) Optimize modem communication message
  - 8) Do not try CREG when the modem is LE910-SV V2 or LE910-SV1
  - 9) Send PhoneNumber, ICCID using DMS protocol
  - 10) Add SD S/N in the System log
  - 11) Power On/Off Sequence change by modem type
  - 12) External device name from D-TEG to DNMEA
  - 13) DDC-200 trigger working by GPS speed
  - 14) When SD is removed during recording, consider it as SD NONE
  - 15) Add system.log in the NAND
  - 16) When SD has 2nd partition, save system.log into the 2<sup>nd</sup> partition
  - 17) Improved error of G-Sensor Gyro
  - 18) Add IGNITION event in Event source menu
  - 19) Telit LE910CX-AP Single SKU SW Switching
4. **Fixed**
  - 1) Modification of bug that occasionally happens to kernel panic when using WI-FI
  - 2) Debug 2 NO PHONE NUMBER log in the system log

- 3) Debug POPUP when entering the main menu
- 4) Debug G-Sensor algorithm setting when checked Auto adjust G-sensor to vehicle speed.
- 5) Correcting Micom Communication Packet Error
- 6) SMS Modem Reboot bug
- 7) B+(ON) ACC(OFF) => SYSTEM ON/OFF bug
- 8) SMS parsing bug
- 9) Debug I-Frame twice per second
- 10) When there is no record setting, SD Slide Lock without SD then SD Error
- 11) Debug no writing Network Error log
- 12) Cannot input button at the Factory mode
- 13) SMS Sequence item exception
- 14) Liveout CH error
- 15) SMS Modem Reboot => System Reboot
- 16) USB KEYPAD entered menu screen without P/W
- 17) Liveout Priority error
- 18) SWITCH KIT => Menu => Full Menu
- 19) 1CH Video OFF => not record 2~4CH
- 20) **Debug FOTA**
- 21) Wakeup function when B+ disconnected

CP4\_3.1.0.RC3

## 1. BASE VERSION: CP4\_3.1.0.RC2

## 2. H/W: CP4

### 1. Changes/New

- 1) Super Cap. recharging test
- 2) Add Telit module signal monitoring function
- 3) Enhance communication register check logic
- 4) Enhance Snapshot (Event preview) image quality of D1 camera
- 5) Add border lines when 4/2 split screen
- 6) Support IPv6
- 7) [SWA] Add G-Sensor Calibration (DMSCMD\_GSENSORCALIBRATION) function just before shutdown after time delay or when speed is 0km.
- 8) [SWA] Add new 4 split-screen (1x2x1)
- 9) Add 4 SIGNAL menu for external(DSM) device events.

### 2. Fixed

- 1) [DMS5] When OSD menu is on, it cannot send G-Sensor event preview image to server.
- 2) SD Slide switch lock => APP not Restart
- 3) Cannot detect SD error when SD Slide switch lock
- 4) Network Thread Hang
- 5) FW Upgrade log
- 6) When SD Slide Switch lock on quickly, NO SD
- 7) SD Slide switch unlock, but make event file and drv file in RAM
- 8) M2 button error
- 9) [DMS5] uploadmdt2, Send Last Mark 0byte date
- 10) Debug retry issue when entered the Network Health Check mode
- 11) Add retry when find an error during NCM data communication





12) Change PDU mode to TEXT mode for Verizon SMS

CP4\_3.1.0.RC2

**BASE VERSION: CP4\_3.1.0.RC1**

**H/W: CP4**

**1. Changes/New**

- 1) Setting file from other model is not applied.
- 2) Ignition OFF/ON event is added on DMS5 Upload event.
- 3) SWA Only: GPS speed below 1Km/H is classified as 0Km/H
- 4) SWA Only: LED operation specification is changed upon request.
- 5) Exception code is applied when APN/USERNAME/POSSWORD is incorrect in NCM/QMI
- 6) Ethernet is supported.
- 7) SMS function is supported.
- 8) ServiceUrl command is applied. [DMS5]
- 9) HTTPS is supported.
- 10) Exception code for bad disk storage is reinforced.
- 11) Files on RTC initialization are excluded from First MDT time to DMS5.

**2. Fixed**

- 1) All recordings are not available when FHD cameras are connected to CH2.
- 2) Failure on HE910-EUD FOTA
- 3) WAKEUP is activated for about 30 seconds earlier than set up.
- 4) Modem upgrade is failed on LE910Cx Series
- 5) Same version is upgraded on LE910-SV V2 FOTA
- 6) NO DONGLE log is recorded on device without model.

CP4\_3.1.0.RC1

**1. BASE VERSION: CP4\_3.0.0**

**2. H/W: CP4**

**3. Changes/New**

- 1) Support CDC-NCM driver supports
  - ✓ Model: LE910-SV1, LE910-SV V2, LE910-NA, LE910-NA V2, LE910-EU, LE910-EU V2
- 2) Support LE910C4-AP
- 3) Support FULL OSD / MENU
  - ✓ FULL MENU: when use a USB KEYPAD
  - ✓ Current (SIMPLE) MENU: when use the SWITCH KIT
- 4) Support DDC-200 (SWA DSM device)
- 5) Add DMS5 server URL format check

**4. Fixed**

- 1) US Cellular communication error
  - ✓ Try CREG

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- ✓ CREG fail => Try CREG
- ✓ CREG fail => Try CGREG

- 2) When use a USB stick(BRTX4K) for engineering log: Can see the password from device info setting.ini file

## Release Note. (CP4 3.0.0)

date: 2019.08.02

**Released CP4\_3.0.0 version after testing CP4\_3.0.0.RC7.**

### **[CP4] CP4\_3.0.0.RC7**

- 5. BASE VERSION: CP4\_3.0.0.RC6**
- 6. H/W:** CP4 Mainboard
- 7. Changes/New**  
\*\* None \*\*
- 8. Fixed**
  - 1) Write Protect or less than 16GB SD => App Restart continuously
  - 2) SUPER CAP. debug message

### **[CP4] CP4\_3.0.0.RC6**

- 1. BASE VERSION: CP4\_3.0.0.RC5**
- 2. H/W:** CP4 Mainboard
- 3. Changes/New**
  - 1) Added detailed SD error status to server
  - 2) Changed the minimum SD card capacity specification from 4GB to 16GB  
Support the SD card (16GB, 32GB, 64GB)
- 4. Fixed**
  - 1) Fixed Alarm4 normal open issue
  - 2) Fixed DRID delete issue (when update the firmware from 2.X to 3.X)
  - 3) Fixed (sometimes doesn't end normally during Shutdown process)
  - 4) Enhanced SD recognition methods
  - 5) Enhanced USB memory stick recognition methods
  - 6) Enhanced Monitor sync (some monitor has sync issue, flickering)
  - 7) Fixed \$GLGSV sentence parsing

### **[CP4] CP4\_3.0.0.RC5**

1. BASE VERSION: CP4\_3.0.0.RC4

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2. H/W: CP4 Mainboard
3. Changes/New
  - 1) Enhance DMS5 process shut down
  - 2) Add forced time setting in U-Boot
  - 3) G-Sensor / Gyro sensor bandwidth value change
4. Fixed
  - 1) When Telit module initialize failed, no modem reboot.
  - 2) Wrong Health information when there is no SD or SD error
  - 3) No Event to Server when record mode is OFF
  - 4) SD Slide switch UNLOCK to LOCK=> reboot (it should be restart)
  - 5) External device setting is OFF, but still use the external device settings
  - 6) Overwrite issue after changed the record mode setting.
  - 7) Unknown shutdown during ON/OFF test

## [CP4] CP4\_3.0.0.RC4

### 1. BASE VERSION: CP4\_3.0.0.RC3

### 2. H/W: CP4 Mainboard

### 3. Changes/New

- 1) vendor setting from the factory
- 2) Save debug message into 2<sup>nd</sup> partition of the SD card. (Have to make a special SD card using [the SDInitializer](#))
- 3) Telit module communication initialize logic change
- 4) AT command CGSN timeout value from 1 second to 5 seconds
- 5) UploadMdt2 API: File max transfer time from 2minutes to 1hour
- 6) UploadMdt2 API: Add FPS settings
- 7) Add "Disable Menu" function
- 8) PANIC event button specification change
  - ✓ LIVE screen: press panic button (short key)
  - ✓ Other menu or pop-up: press panic more than 1 seconds (long key)
- 9) SD Slide Switch UNLOCK -> LOCK: allow firmware upgrade and setting upload
- 10) WDT logic specification change
  - ✓ CPU WDT function delete
  - ✓ MICOM WDT function add
  - ✓ FW WDT maintain
- 11) modem searching retry from 4 to 40 times
- 12) LED operation specification changed during FW upgrade
- 13) If the automatically remove data is ON, overwrite the exception event file.
- 14) WDT refresh during firmware upgrade.
- 15) Add DMSCMD\_SERVERNOTITXT, DMSCOMD\_SERVERNOTIWAV

### 4. Fixed

#### Debugged CP4 3.0.0 RC3














## CP4 3.0.0 RC3 Release Note

### 1. BASE VERSION: CP4\_3.0.0.RC2

### 2. H/W: CP4 Mainboard

### 3. Changes/New

- 1) Remaining capacity of super capacitor is displayed on live screen.  
<Status and Icons>

B+ Status	ICON	Capacity	%	Remark
Charging		Below 2.3V	-	
		Above 2.3V	20%	
		Above 3.3V	40%	
		Above 4.0V	60%	
		Above 4.6V	80%	Start recording in SD / Key input available
		Above 5.0V	94%	
Discharging		Above 4.6V	80%	
		Above 4.0V	60%	
		Above 3.3V	40%	
		Above 2.3V	20%	
		Below 2.3V	-	


- 2) Changed Default setting.ini
- 3) ADAS & DSM is integrated for Alarm function.
- 4) System shutdown and rebooting message on monitor are changed.
- 5) Operating specification related to configuration file (setting.ini) is changed.  
Basic operation: setting.ini on NAND is parsed.  
3 cases to update or create setting.ini
  - i. setting.ini is copied from SD.
    - In case there is no setting.ini on NAND.  
setting.ini on SD is copied to NAND
    - In case there is setting.ini on NAND  
Comparing setting.ini on SD and NAND  
If two files are different, setting.ini on SD is copied to NAND
  - ii. setting.ini is uploaded via DMS5 API.
    - setting.ini is copied to NAND when finishing download from server.
    - setting.ini on SD is deleted if it is.
    - setting.ini on NAND is applied after rebooting.
  - iii. factory default is copied when NAND doesn't have setting.ini.
- 6) Auto switching between 3G/LTE and WIFI
  - i. Previous implementation  
4 connection modes are available (OFF, LAN, 3G/LTE, WIFI)
  - ii. New implementation  
3 connection modes are available (OFF, LAN, 3G/LTE/WIFI)  
(If the setting on previous version is WIFI, it will be changed to 3G/LTE/WIFI.)  
(Both WIFI and 3G/LTE setting are available at the same time)

- iii. Operation Procedure
  - Wi-Fi is searched primarily after boot-up.
  - Wi-Fi operates if connection is established in 10 seconds.
  - If Wi-Fi connection fails, it tries to search 3G connection.
  - A device keeps searching SSID on background while using 3G.
  - Once SSID is linked, it turns into Wi-Fi mode.
  - When Wi-Fi link is disconnected for 5 seconds, it turns into 3G mode.
- 7) Audio only recording function via PANIC button
  - i. Only for SWA Vender
  - ii. When you push PANIC button, audio is recorded for 2 minutes in current MDT file.
  - iii. This function works only on recording mode including continuous recording.
- 8) Add new D-TEG GPS FILTER
  - ✓ Remove bad GPS values by using SNR, DOP, Altitude, Speed and fix information.
- 9) F/W and FOTA are available for Telit Modem
  - i. Telit modem F/W upgrade is available via SD and FOTA.
  - ii. Supported Modem List
    - HE910-EUD, HE910-NAD
    - LE910-EU1 (Europe), LE910-EU1 V2 (Europe)
    - LE910-NA1 (AT&T), LE910-NA1 V2 (AT&T)
    - LE910-SV1 (Verizon), LE910-SV V2 (Verizon)
    - LE910-JN1 (Japan), LE910C1-NS (Sprint)Tested Modem List
    - LE910-NA1 (AT&T), LE910-SV V2 (Verizon)
- 10) US cellular is supported for AT&T Telit LE910-NA1 Modem  
For SIM ID begins 890158, the device recognizes as US cellular and works 4G only.
- 11) Automatic F/W recovery function is deleted.  
Recovery function is supported via FACTORY MODE.
- 12) F/W upgrade procedure on FOTA is changed.  
Previous: Copying F/W into program folder in SD and rebooting for upgrade  
New: Stop recording and DMS5 service then upgrading and rebooting.
- 13) Device log generating process is changed on System.log, Error.log.  
Error logs are saved on system log as well. (duplicated on error.log)  
System logs begin with boot up and end with shutdown.  
On abnormal shutdown, SHUTDOWN\_FLAG log is saved after next boot-up.  
SD's UUID is saved on MOUNT log.  
RTC battery low log is added.  
Re-boot log is added.
- 14) SD format function is changed. (MANUAL/AUTO)
  - i. SD Format Methods
    - Network remote format
    - Manual format via M1 key
    - Manual format via setup menu
    - Auto format
  - ii. Auto Format Activation Scenarios
    - Failure on SD Mount: Device restarts instantly and formats SD.
    - Invalid SD label and folders: Device restarts instantly and formats SD.
    - Writing error on SD
      - First error: restarts without format
      - Error in 1 hour from first error: restarts and formatting
      - When it fails to format, it does not try to format unless device restarts.
- 15) PANIC event is available on menu and popup screen.

PANIC event is activated when pressing the button more than 1 second.

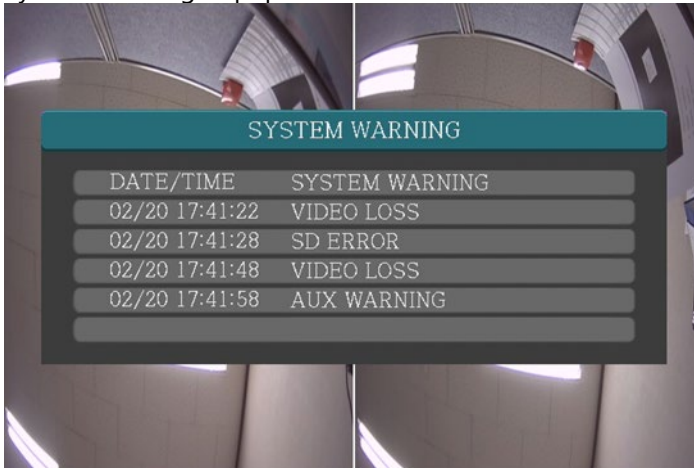
- 16) Parking mode activation condition changed  
Previous: Value of G-Sensor X, Y, Z is below 50mg for 5 minutes  
New: 5 minutes after ACC OFF
- 17) Operation Specification changes on BUZZER/AUDIO OUT  
Only one of both can be set up.  
For AUDIO OUT, sound similar to BUZZER is played.
- 18) LED Signal Specification changes

Operating Status	ALARM LED	REC LED	NET LED
Power On	Steady	Steady	Steady
APPLICATION START	Steady	Blinking	OFF
SD Formatting	OFF	Fast Blinking	-
SYSTEM WARNING	Blinking	-	-
Record Error	Steady	OFF	-
SD FULL	Steady	OFF	-
No Record Setting	-	OFF	-
Event Recording	-	Fast Blinking	-
Recording but not triggering status	-	Steady	-
Initializing dongle or modem	-	-	Fast Blinking
Network Ready	-	-	Steady
Network in Progress	-	-	Steady
Device Setup Failure	-	-	Blinking
Network Failure with Server	-	-	Blinking
TaskOff	Steady	Steady	OFF
About to Shutdown	Steady	Steady	OFF
CPU OFF	OFF	OFF	OFF

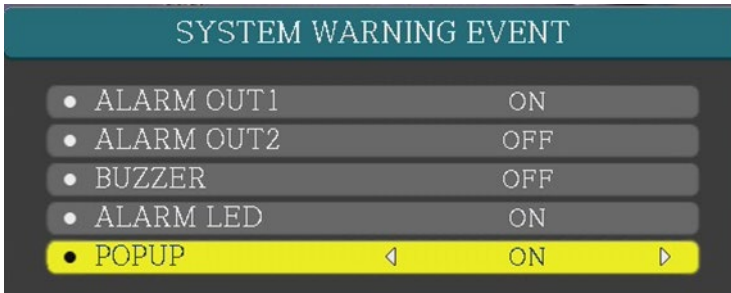
- 19) APPLICATION Restart function added
- 20) Maximum recognizable speed changed to 500 Km/H
- 21) Boot-up logo and shutdown message are available to set up.
- 22) Stream Encryption function is added.
- 23) Additional articles are added on information window.
- 24) Current speed is available on Live and Playback screen.
- 25) CarPulse speed can be saved at 2Hz or 0.1Km/H unit on DRV file.
- 26) Operation Specification is changed on System Warning
  - i. A function to pop up a window to display time and event of system warning
  - ii. 5 warning events are displayed. (First one deleted when 6th comes.)
  - iii. Upper is older on list.
  - iv. System Warning icon() is added.
    - The icon is displayed on top left corner of live screen.
    - The icon is synchronized with Alarm LED.
  - v. Duration can be set up for pop-up window
    - OFF, 5SEC, 10SEC, 30SEC, 1MIN, 5MIN, 10MIN, 30MIN, 1HOUR, INFINITE
    - Pop-up window is displayed for set up duration.



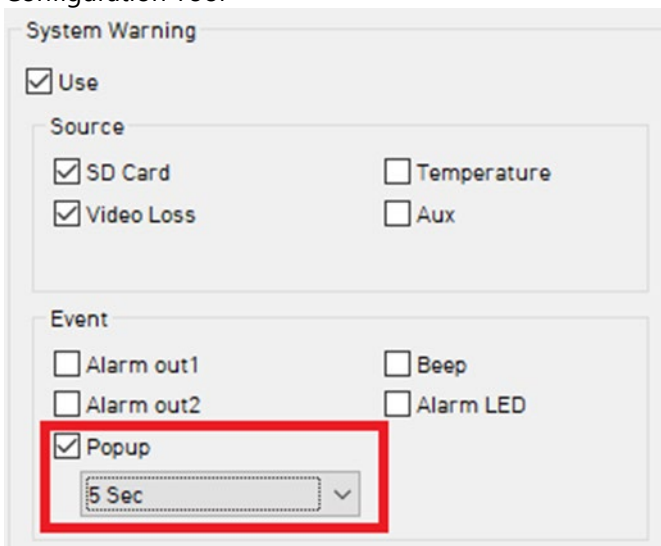
- Duration is initialized when another event is occurred within the duration.
- The list is initialized after the duration.
- vi. Pop-up window and warning list are initialized when pressing ESC button.
- vii. Pop-up window is not removed even the warning event is recovered.
- viii. Warning is displayed again when the event is occurred again from recovery.
- ix. System warning pop-up windows is only available on Live screen.
  - It is not available on Playback, Menu, another pop-up window on Live.
  - In the above condition, pop-up window is not displayed and event is not recorded, neither.
- x. System Warning Popup Windows



- xi. Available on Event Menu



- xii. Configuration Tool



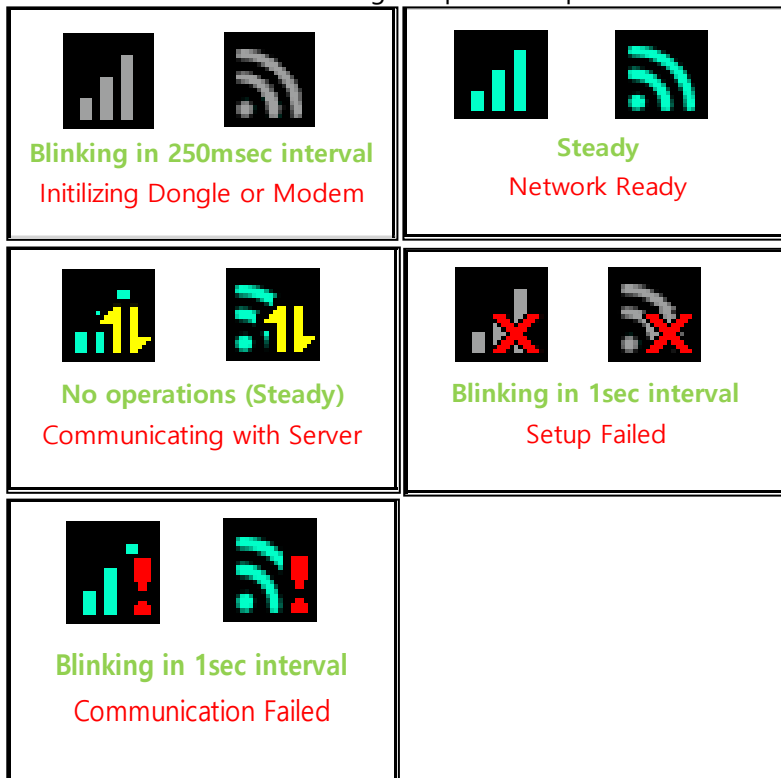
- 27) Display order function is added.
- 28) Setting for Date Format and Speed Unit is added.
- 29) Maximum number of MDT file on continuous recording is increased from 1,000 to 2,000.
- 30) USB Keypad and Keyboard are integrated.

- 31) Screen sequence mode is added.
- 32) 2 Split display mode is added.
  - i. 1x2 display layout is added.
  - ii. 1x2(1) for CH1&2 / 1x2(2) CH3,4
  - iii. The video is stretched to be full screen in 1x2 layout.
  - iv. Related functions: Default Screen, Liveout, Display Order, Liveout Priority, Sequence
- 33) 5GHz Wi-Fi dongle is now supported.
- 34) Recording operation specification according to the status of super capacitor
  - i. B+ is ON
    - Below 4.5V  
Every frames except p-frame is in-queued (including meta data)  
If the total size of data in queue exceeds 90MB, following data is de-queued
    - Above 4.5V  
Every frame is in-queued.  
Normal operation for de-que and recording
  - ii. B+ is OFF
    - As soon as B+ is off, all cameras are turned off. (post recording is unavailable.)  
No more data is in-queued  
Modem is turned off and internal model(USB3) is H/W shut down.  
When recording is over, shutdown process starts.
      - Above 4.4V: normal de-que and writing
      - Below 4.4V: Immediate shutdown
- 35) External device integration
  - i. Two external devices are supported.
  - ii. Integrated with System Warning function
  - iii. Integration with DL550A (DINALOG's Driver Monitoring System)
  - iv. Integration with ROADSCOPE7 (PLK's ADAS)
  - v. Touch, Insertion mode is available on RF/NFC reader.
  - vi. Integration with ACR122 NFC reader
  - vii. Integration with ACR1251 NFC reader
- 36) Changes on DMS5
  - i. H/W information including modem is now sent to DMS5 server.
  - ii. A function to remove setting.ini file after copying to NAND via Network Config Upload
  - iii. Device is not rebooting after Network DriverID Upload
- 37) Changes on Device Menu
  - i. Authentication Process
    - Password is not required to enter device menu.
    - Password is required in playback and format menu
    - Password is required in password change menu.
  - ii. SD format menu is added.
- 38) Deletion on Device Setting
  - i. Power Off Decision Duration is deleted and set to 700ms.
  - ii. Temperature setting is deleted and default setting is applied.
    - TEMP\_PW\_CTRL\_ENABLE: Always ON
    - TEMP\_CTRL\_1: 79 (79 Celsius)
    - TEMP\_CTRL\_2: 74 (74 Celsius)
    - TEMP\_CTRL\_3: 89 (89 Celsius)
    - TEMP\_PW\_CTEL\_DURATION: 5 (5 Seconds)
  - iii. Parking mode related setting 'GSMR\_PARKING\_DETECT\_DURATION' is deleted and default value is applied to 5 minutes.
  - iv. Menu and functions related to signal input are deleted.

- v. 'AUDIO\_OUT\_RECORD\_ERROR\_REPEAT' and 'BUZZER\_RECORD\_ERROR\_REPEAT' are deleted and System Warning function replaces it.
- vi. Video Loss Event setting and functions are deleted.
- vii. DRIVERID\_SOURCE setting and functions are deleted.
- viii. CONFIG\_STORE\_ENABLE, CONFIG\_SD\_DELETE, CONFIG\_NAND\_RESET settings are deleted.
- ix. NET\_3G\_AUTH, NET\_3G\_SMSC, BET\_3G\_ATWS46 settings are deleted.
- x. MANUAL TIME SETTING function is deleted.
- xi. GPSTIMESYNVAL setting is deleted.
- xii. VIDEO\_PROTECT (Tamper Function) is deleted and always activated as a default.
- xiii. SD\_EJECT\_LOCK\_ENABLE setting is deleted and always activated.

#### 4. Fixed

- 1) Network Status Icon and LED signal operation updated



### CP4 3.0.0 RC2 Release Note

1. **BASE VERSION: CP4\_3.0.0.RC1**
2. **H/W: CP4 Mainboard**
3. **Changes/New**



- 1) Add Vendor ID from the factory.
- 2) Add syslog writing function
- 3) Add SD Card Power Save mode
- 4) Add SIM Number in the system.log
- 5) Add Auto APN function

**4. Fixed**

- 1) Debug ELM327 GPS check issue.
- 2) Debug M1 button issue
- 3) Debug Alarm In 4 issue