AP1 Release Note

S/W version	Modification
0.1.6	1. [SERVER] Add NET_DASKEY in InitializeRequest
0.1.7 0.1.8	1. [SERVER] Fix PowerType in InitializeRequest. (PowerType is filled with 0x01) 2. [SERVER] Length of FirmwareURL in DownloadFirmware, DownloadMCUFirmware. 64 changed to 256 3. [SERVER] Fix ErrorMessage's key issue in certain cases 4. [PROCESS] Fix process crash issue due to memory leak Note: - Both version are the same. This is for testing fw updates.
0.1.9	1. [NETWORK] Modified to access AT&T network using APN of SW
0.1.10	1. [SERVER] Error code definition and applied. (Refer to the document of the shared folder) 2. [SERVER] If there are multiple responses to a single request, keep the key the same 3. [SERVER] Add Chunk property in MessageHeader 4. [SERVER] Fixed an issue where the I-frame count property in MMVPlayHeader did not match
0.1.11	1. [SERVER] Rollback MessageHeader from v0.1.10 and added Chunk Property to MMVPlayerHeader 2. [SERVER] The maximum duration of Manual Backup has been changed to 2 minutes
0.1.12	1. [CALIBRATION] Changed to reboot after response in case of UploadSetting, RebootDevice, UploadFW
0.1.13	1. [CALIBRATION] Changed to reboot after response in case of DefaultSetting
0.1.14	1. [FACTORY] Add Function Test (USIM/SD Card) 2. [SERVER] Improves GPS accuracy
0.1.15	1. [NETWORK] Add reconnect logic when IP address is lost 2. [CONFIGURATION] Change preset

0.1.16	1. [DEVICE] Triggered GPS power from Bootloader, not Application
	2. [NETWORK] WI-FI scenario applied
	  2.1. Wi-Fi toggle when the center button is pressed for more than 5 seconds
	  2.2. Wi-Fi disconnect when the speed is over 0 during Wi-Fi connection
	  2.3. Wi-Fi disconnect if there is no client connection for 5 minutes during Wi-Fi connection
	  2.4. WIFI password changed to last 8 digits of IMIE
	  2.5. When WI-Fi is on, the left LED is flashing orange
	3. [SERVER] Add Vin number to Initialize Packet
	  3.1. There is no interface to input VIN number yet
	4. [SERVER] Add WiFi status to LiveTrack
	5. [SERVER] Reboot only if there is a difference from the previous setting value
	  5.1 DAS-KEY is applied to the next boot without rebooting
	6. [DEVICE] When ACC is off, the left LED is turned on with RED Color
	7. [DEVICE] Changed panic button to operate regardless of pressed time. Previously, the panic button should have been released before 300ms
	8. [SYSTEM] Fixed some application crash
	9. [SERVER] Fixed ignition on/off event issue
	10. [FACTORY] Apply each default values based on model of serialnumber in one production image

0.1.17	1. [DEVICE] Added A-GPS feature for demonstration 2. [SERVER] Add VIN# in InitializeRequest

0.1.18(QC ver) 0.1.19	1. [CALIBRATION] Add Protocol
	  1.1. Add UploadRequest and UploadResponse for uploading of DRV, MMV, Log data
	  1.2. Add DeviceID in Message of SessionAccept
	2. [SETTING] Add Property
	  2.1. The Base64 Encryption is applied to ENCRYPTION_NO property in RECORD section
	  2.2. Add FVSA_BEEP property in EVENT section
	  2.3. Add REMOTE_WIFI_SSID and REMOTE_WIFI_PASS property in CONNECTIVITY section
	  2.4. Add WIFI_AP_SELECTED for Select Wi-Fi SSID and Password (Default : 1)
	3. [SERVER] OTA (Kernel-Update)
	  3.1 No protocol changes. If the kernel package is included in the f/w pkg, it is updated together
	4. [NETWORK] Wi-Fi Function
	  4.1. Add Station Mode (ENABLE_HOTSPOT=1)
	  4.2. 9 Additional SSIDs
	    4.2.1. As for WIFI_SSID1, the default value is AP1_XXXX, and the password is 8 digits after IMEI. The rest of SSID2 to SSID10 are all empty
	5. [NETWORK] Connection Type
	  5.1. In Mode NET_3G_ENABLE=1 and HOTSPOT_ENABLE=1, Try to connect to Router for 3min. If failed to connect Router, It will try to connect to 4G. It loops.
	    5.1.1. The 3minute condition applies only at first boot
	6. [SYSTEM] Factory reset using button combinations
	  6.1. Panic + Function 3Sec -> Function + Volume 3Sec -> Panic + Volume 3Sec, Factory default the system and reboot.
	7. [SYSTEM] System Log
	  7.1. Log format change and enhancement
	
	* NOTE:
	1. For ENCRYPTION_NO and changed SETTING.ini, refer to Setting of movon1 device
	(Config setting will be rejected because the ENCRYPTION_NO of the current server setting value is not encrypted)
	2. Please refer to the link below for base64 encryption
	https://www.base64encode.org/
	3. The [ADASCAMERA - ADASANGLE_VERTICAL_VANISHING_LINE] included in setting.ini was deprecated

Version	Description

0.1.20-1	1. Make the default Encryption Number "Null"
	  1.1. Remove the validation of the encryption number
	  1.2. Default encryption number is a "null"
	2. LED and audible chime changes
	  2.1. When pressing the button for WiFi mode, the red LED start blinking when the finger is still pressing.
	  2.2. Turn on the RED LED as soon as possible on boot.
	  2.3. Network LED changes:
	    2.3.1. Off when no sim inserted or sim not activated
	    2.3.2. Blinking fast when connected to network but not the server
	    2.3.3. Solid when connected to network and server
	    2.3.4. Blinking slow when no network connection
	    2.3.5. After bootup, LED can be blinking fast until network connection is established.
	    2.3.6. Record error blinking middle Green led (sd error, no sd, write failure, etc)
	  2.4. If high temp reached, blinking slow RED led and network LED OFF
	3. ADAS Mode on/off
	  3.1. When ADAS mode is DISABLED, then all settings related to ADAS events, measurements, and vanishing lines are ignored by AP1.
	4. Support 100HZ G-Sensor on UploadEvent
	  4.1. The event uploads 100hz gsensor/gyro data as an option.
	5. G-Sensor Impact (Ecall) settings
	  5.1. Add GSENSOR_T_ECALL_X, GSENSOR_T_ECALL_Y, GSENSOR_T_ECALL_Z and trigger Ecall Event when it exceeds the set value

0.1.20-2	6. Additional UploadEvent Support
	  6.1. FVSA
	  6.2. FPW
	  6.3. Ignition On (This event is sent after Session Initialize)
	  6.4. Ignition Off
	  6.5. Ecall
	  6.6. LDW (backlogged)
	  6.7. AlarmIn (backlogged)
	7. Fix MMV Chunk Issue
	8. Cut-off scenario change
	  8.1 before : When there is no Acc, it shuts down after 10 minute
	     after : When there is no Acc, it shuts down after 10 minute
	           When there is no Acc and the voltage between 11 and 11.8V (Sleep Voltage), it shuts down after 5 minute.
	           When there is no Acc and the voltage is less than 10V, it shuts down after 1 minute.
	           When more than 20Volt is detected, 12V is added to the sleep voltage.
	9. Add LDW Feature
	10. Remove requirement for ENCRYPTION_NO property
	  - 1000 to 9999 Unlimited, including null values.
	11. Remove dependencies on vanishing lines
	  - If ADAS_DISABLE is not 1, calibration maintains the same restrictions as before.
	  - If the vanish line received from the server is an invalid value, ADAS function will be off, and the error code is transmitted.
	   (error code : 1014 (DMS_Error_Vanish_Invalid_But_Apply_Setting))
	   However, if the settings except vanish line are correct, the settings are applied.
	12. AGPS Token has been added to the setting.ini
	
	* NOTE:
	AGPS Token has expired.

0.1.21	1. Fix Vanish line issue. (when setting using Calibration Application)
1.1.0	1. F/W version changed: 1.1.0/3.2 (PKG/MCU) 2. Enhanced speed automatic selection logic (SPEED SOURCE : AUTOMATIC) - Transmits valid Speed value automatically from GPS and OBD. 3. Apply the initial mass production settings requested by SmartWitness.

1.1.1	1. Fixed bug related to RecordType Pre and Post of "EventNotification"
	2. Enhanced SD card status detection and recovery
	3. Add FVSA sensitivity. Add as "FVSA_SENSITIVITY" value in Setting.ini, total 5 steps
	  step 1 : 2sec
	  step 2 : 3sec
	  step 3 : 4sec (Default)
	  step 4 : 5sec
	  step 5 : 6sec

1.1.2	1. Fix. Related to IGNITION_ON option and EVENT_NOTIFICATION
	2. Fix. Invalid GPS heading & Altitude values in snapshot header
	3. Keep GPS Heading value as the last valid value
	4. Enhanced MCU Firmware Update
	  4.1 All ARTERY and ST Micro binaries are included in the firmware file (zip)
	  4.2 Automatically find suitable binary and update firmware
	  * This function operates at MCU3.5 or higher & AP 1.1.2 or higher. Previous versions of AP1 will be updated to ARTERY F/W
	5. Removed websocket ping & pong timeout option
	  5.1 Websocket send ping to the server once every 5 minutes, and if it doesn't get a pong within 10 seconds, Websocket closes the connection
	    When the server is busy due to MMV processing, a Session Close occurred because AP1 could not receive a pong within 10 seconds
	6. When another UploadRequest occurs while sending UploadResponse, Error Message is sent for the request.
	7. Change LED Scenario
	  7.1 When AP1 Application starts operation, all LEDs are turned off until application initialization is completed, but change to maintain RED LED until booting is complete
	8. Added FCW_BEEP & LDW_BEEP
	9. Added silence mode (FCW_WARN_SOUND 0 : silence)
	10. Improved MMV Upload function

1.1.3	1. Adjust Resolution Frame and Bit Rate
	  1.1. Video Quality : 720P Super / 720P High / 720P Standard / 480P Super / 480P High / 480P Standard
	  1.2. 1 / 5 / 10 / 15 / 20 / 25 / 30
	2. Boot Time Reduction
	  2.1. Reduced Kernel Boot Time
	3. SD Card Errors In LiveTrack
	4. AP/MCU/OS Bundle Update
	5. ManualBackupJPG Support
	  5.1. It contains only I-Frames, everything else is the same as ManualBackup.
	6. Firmware Naming Convention
	  6.1. 1.1.3.RC1.img / 1.1.3.RC3.img / 1.1.3.img
	7. Deactivate ADAS if speed source is GPS
	8. Add natural language to replace "beep" for events
	9. HMW (Headway Monitoring Warning)
	10. Switch Modem Mode to Data-Only Mode

1.1.4	[RC1 - RC3]
	1. Support cam at 1080P 15 FPS
	2. Fix SSID Changes each time WIFI started on AP1 in FW1.1.3
	3. Add SMS Protocol (v1.0)
	4. Aditional ADAS Events
	   4.1. FCW2, Rapid Deceleration, Rapid Lane Change, Frequent Lane Change
	5. Support AP1 Command Queue
	6. Manual Backup Sub-sampling
	   6.1. All, 1/2, 1/3, 1/4, 1/5, 1/6, 1/7, 1/8, 1/9, 1/10, 1/20, 1/30, 1/40, 1/50, 1/60 FPS
	7. DRV HZ Spec
	   7.1. 1, 4, 5, 10, 20, 100Hz
	   7.2. Partial Update: We add feature HZ selection for DRV file. We will update G-Sensor only HZ Adjustment function from next firmware.
	
	[RC5]
	1. Fix SMS protocol
	   1.1. When there is no Phone Number, the reply goes to the Sender number
	2. Add sound option for additional ADAS event items
	3. Add Advanced Log (refer to the protocol document)
	4. Add Partial Update (refer to the protocol document)