AP1 Release Note

S/W version	Modification
1.1.0 MCU3.02	1. F/W version changed: 1.1.0 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 MCU3.05	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 MCU3.05	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 MCU3.05	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 MCU3.05	[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)
1.1.5 MCU3.05	[RC1] 1. Updating DRV Data transmission scenario 1.1. DRV data will be deleted only when the device receive the CommandComplete response 1.2. If there are no CommandComplete then re-try to send DRV file 2. Increase DRV storing data volume size to Max. 48Hours when the server is offline 3. Additional DRV data 3.1. GPS SNR/ GPS Accuracy [RC2] 1. Modify the FW naming rule

1.1.6 Final MCU3.13	[RC1,MCU3.09] - 20220525 1. 2 Wire Concept 1.1. Ignition ON: If the voltage differ than 0.7V before 100ms or 1,000ms or 10,000ms 1.2. Ignition Off: If the G-sensor changes are smaller than 50mg before 10ms. for 60sec 2. Updated exception & network recovery logic 3. G-Sensor Calibration Logic Updates 4. RTC deviation issues are cleared 5. Prevent from bricking issues from sudden voltage drop [RC2,MCU3.09] - 20220531 1. DRV data will be transmitted even if there are no SD card on AP1 2. Network communication Error correction/ Enhancement of network communication recovery logic 3. Bug correction on MCU updates [RC3,MCU3.10] - 20220610 1. 3G Sunset issue patch 2. Support WSS [RC4,MCU3.10] - 20220614 1. Fix Bugs on RC3 [RC5,MCU3.10] - 20220617 1. Fix application crash issue [RC6,MCU3.11] - 20220621 1. Updates on Ignition On/Off Logic 1.1. Power ON AP1 1.1.1. Maintain B+ scenario on FW1.1.6.RC1. If the voltage differ than 0.7V before 100ms or 1,000ms or 10,000ms 1.2. Ignition ON/OFF 1.2.1. Primary: RPM, Speed data from OBD. Secondary: G-sensor data 1.2.2. Scenario * Ignition ON - When the RPM >0 or Speed>0 - If no OBD, when the G-sensor changes > 50mg before 10ms * Ignition Off - When the RPM=0 and Speed =0 - If no OBD, when the G-sensor changes < 50mg before 10ms. For 300sec 1.3. Power OFF 1.3.1. If the ignition OFF continues 10min then turn off unit. (Max. 15min when use G-sensor) [RC7,MCU3.12] - 20220621 1.1. Removed “give up” feature on C-CAN and add logic to protect from OBD data missing situation (Speed=0: 2sec, Speed>0: 5sec.) 1.2.The query speed changed from 10 to 5Hz. [RC8,MCU3.12] - 20220629 1.1. Bug fix for Ignition off timeout (G-sensor mode) 1.2. Fix application crash issue (ql_log_print) [RC9,MCU3.13] - 20220630 1.1. Fix High can-bus usage in "CAN No ACK Mode" 1.2. Support J1939 (Speed,RPM) * spn84 - Wheel-Based Vehicle Speed * spn1624 - Tachograph vehicle speed * spn190 - Engine Speed