**AC-825 History** –

Release Notes

This doc comes to summary the **main changes** upon each delivered release (of AC-825 and x805).

For detailed description please refer to the release notes of the specific release.

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| **#** | **Release name** | **Release date** | **Main changes** | **AC-825 FW** | **x805 FW** | **Remarks** |
|  | AC825v02\_04\_36  (PM-15UL support) | 03/08/2016 | 1. **Bugs** fix 2. Add support in **PM-15UL** for both **AC-825** and **x805** 3. New **BOOT** file (no actual changes, just boot’s name) 4. Improve **FW upgrade** process for **extension** 5. Add **ACK** on **input** change from **extension** (over OSDP) 6. Fix **RAM allocation**: FW App exceeded max RAM allocation (due to wrong linker icf file) | AC825v02.04.36.bin | x805v03.13.hex |  |
|  | AC825v02\_04\_37 (Reader disable tracing) | 09/08/2016 | 1. **Bugs** fix - A **dedicated** release for **reader disable** bug 2. Release **properties**:    1. Supports a **very** specific user setup (only 825 panels in NG server, no links, no TZ, no manual reader mode)    2. Detects change in reader mode    3. Sends NACK upon each change in reader mode (NACK will indicate the change reason)    4. if reader mode is changed, then FW configures it automatically (i.e.: as user configures it from NG)   [This is bad, but that's what Yoel asked. Better to set reader mode to the last correct mode (will support TZ, link, etc.)]   * 1. Must be compiled with **READER\_DISABLE\_WORKAROUND** preprocessor, in order to support the "READER DISABLE WORKAROUND" (FW internal issue) | AC825v02.04.37.bin | x805v03.13.hex | Was delivered to **tech support only** for a specific customer |
|  | AC825v02\_04\_40 (256 Car grouping) | 18/09/2016 | 1. **Bugs** fix    1. Change algorithm for calculating the **analog inputs** (such as: door monitor) 🡪 relevant to x805 only    2. Delete link    3. Etc. 2. Add **feature**    1. 256 groups for car parking 3. Reduce **RAM** 4. **Add logs** for some automation funcs | AC825v02.04.40.bin | x805v03.22.hex |  |
|  | AC825v02\_04\_41 (Fix bugs, card+pin) | 1/11/2016 | 1. **Bugs** fix    1. Card + pin    2. APB after reset | AC825v02.04.41.bin | x805v03.22.hex |  |
|  | AC825v02\_06\_00 (100K users) | 6/11/2016 | 1. Add **feature**    1. 100K users 2. Version name is changed from 02.04.xx to 02.06.xx in order to be aligned with protocol version document (skip version 02.05.xx) | AC825v02.06.00.bin | x805v03.22.hex |  |
|  | AC-825 v02.06.01 (Manual search) | 11/12/2016 | 1. **Bugs** fix    1. Bug #2452: 825 sent to NG card number instead of pin code 2. Add **feature**    1. Manual search | AC825v02.06.01.bin | x805v03.22.hex |  |
|  | AC-825 v02.06.02 (Fix bugs) | 26/12/2016 | 1. **Bugs** fix    1. Bug #2513: AC-825 panel cannot be found by NG (using UDP "FIND" command) | AC825v02.06.02.bin | x805v03.22.hex |  |
|  | AC-825 v02.06.03 (Fix bugs, APB) | 11/1/2017 | 1. **Bugs** fix    1. Bug #2502: AC-825 does not clear the door antipassback status for some users randomly once the time zone is change    2. Bug #2506: packet C9 from Panel to Server not correct    3. Bug #2521: Axtrax client doesn't recieve "Access Granted" events for 825 and x805 | AC825v02.06.03.hex | x805v03.22.hex |  |
|  | AC-825 v02.06.04 (Fix bugs, Wiznet and expansion WDG) | 12/2/2017 | 1. Add **feature**    1. **Last reset cause** (= reason) 2. **Bugs** fix    1. Bug #2534: **panel failed** when it has many action (watchdog due to Wiznet)    2. Bug #2538: **I2C communication** between 825 and expansion causes 825 to infinite Watchdog    3. Bug #2539: 825 cannot initialize and work without RJ-45 cable inserted from the beginning    4. x805 Bug #2538: **I2C communication** between 825 and expansion causes 825 to infinite Watchdog    5. x805 Bug #2540: Wrong indication are received from x805 over OSDP regards tamper and power 3. Fix problem in **log to NG** (loss of ACKs for 825’s events) 4. Fix problem in **receiving data over TCP** from NG (caused memory overrun) 5. Fasten the **init phase** (by setting forgive to APB only if reset was NOT due to WDG) | AC825v02.06.04.hex | x805v03.23.hex |  |
|  | AC-825 v02.06.05 (Bugs fix, detect PM-15 type) | 23/2/2017 | 1. Remove **feature**    1. **Last reset cause** (= reason) 🡪 Feature is removed since NG does not support it yet 2. **Bugs** fix    1. AC-825 Bug #2538: **I2C communication** between 825 and expansion causes 825 to infinite Watchdog       1. Move detection of PM-15 type (old/UL) to main loop (previously it was done in init phase)    2. Bug #2300: 'No Access Rights' to enrolled user (momentary access denied)       1. Bug is **NOT** fixed       2. Add log messages in order to detect problem when occurs    3. x805 Bug #2538: **I2C communication** between 825 and expansion causes 825 to infinite Watchdog       1. Leftovers from bug fix in previous release    4. Fix detection of PM-15 type (old/UL).   In previous release detection was performed for less than 2 seconds (which are required for PM-15 old. Hence extension could detect only PM-15UL type. | AC825v02.06.05.hex | x805v03.24.hex |  |
|  | AC-825 v02.06.06 (Bugs fix, clock and data) | 26/3/2017 | 1. Add **feature**    1. **Last reset cause** (= reason) 2. **Bugs** fix    1. Bug #2549: card passing on extansion and expansion with "**clock & data**" reader not displayed in the Event Log.   Clock and data feature does **not** work well when using readers:   * + 1. **AYC-6355** with release lower than 01.01     2. **AYC-6255** with release lower than 01.08 | AC825v02.06.06.hex | x805v03.24.hex |  |
|  | AC825v02.06.07 (Bugs fix, time drift + clock and data) | 24/4/2017 | 1. **Bugs** fix    1. Bug #2561: AC-825 **time drift**    2. Bug #2559: **Card+PIN** doesn't work on the User defined TimeZone    3. Bug #2565: AC825 is reset due watchdog (in related of communication)    4. Bug #2567: suddenly the events onlt with whole minutes | AC825v02.06.07.hex | x805v03.24.hex |  |
|  | AC825v02.06.08 (Bugs fix, missed events due to log+ Keypad of OSDP reader) | 16/5/2017 | 1. Bug # 2576: Server doesn't send back to 825 command (auto open, car parking) if passed less than 10 sec after last packet send 2. Keypad of OSDP reader did not function | AC825v02.06.08.hex | x805v03.24.hex |  |
|  | AC825v02.06.09 (Bugs fix, Changing port in NG causes losing communication with NG) | 9/7/2017 | 1. Bug # 2588: Changing port in NG causes 825 to lose IP communication with NG | AC825v02.06.09.hex | x805v03.24.hex |  |
|  | AC825v02.06.10 (Bugs fix, panel reset due to comm problem) | 9/7/2017 | 1. Bug #2591: Panel reset 75-90 sec after connection lost | AC825v02.06.10.hex | x805v03.24.hex |  |
|  | AC825v02.06.11 (Bugs fix, Unchecked in Event filter Reader doesn't let to open) | 17/8/2017 | 1. Bug #2610: Unchecked in Event filter Reader doesn't let to open | AC825v02.06.11.hex | x805v03.24.hex |  |
|  | AC825v02.06.12 (lost communication between 825 and NG) | 13/11/17 | lost communication between 825 and NG | AC825v02.06.12.hex | x805v03.24.hex |  |
|  | AC825v02.06.13 (Problem with interlock group delay) | 23/11/17 | Problem with interlock group delay. | AC825v02.06.13.hex | x805v03.24.hex |  |
|  | AC825v02.06.14 (problem with tcp com due stack overflow) | 30/11/17 | problem with tcp com due stack overflow | AC825v02.06.14.hex | x805v03.24.hex |  |
|  | AC825v02\_06\_23 (f Bugs fix + KA comm problem + Leiman-Schlissel log) | 6/2/18 | Bugs fix + KA comm problem + Leiman-Schlissel log | AC825v02.06.23.hex | x805v03.25.hex |  |
|  | AC825v02\_06\_24 (PIN code not work) | 8/2/18 | PIN code not work due the removing encryption and forgot to erase line of encryption in PIN code. | AC825v02.06.24.hex | x805v03.25.hex |  |
|  | AC825v02\_06\_30 (Bugs fix, Comm problem LS + Add logs) | 21/2/18 | 1. **Bugs** fix 2. Add **feature**    1. Add log messages all over FW code (for better debug capability)    2. Add backup DB for cards and for time (already existed in v02.06.24, customized version for L&S)    3. Re-added encryption for cards DB (was removed temporarily in v02.06.24, customized version for L&S) | AC825v02.06.30.hex | x805v03.25.hex |  |
|  | AC825x02\_06\_50 (Bugs fix, Send logs mixed with status and events, pragma pack) | 27/2/18 | 1. **Bugs** fix | AC825v02.06.50.hex | x805v03.25.hex |  |
|  | AC825x02\_07\_00 (Bugs fix + IARv8.20) | 11/3/18 | 1. **Bugs** fix 2. Add **feature**    1. Move to IARv8.20 (instead of v5.50, which is very old) | AC825v02.07.00.hex | x805v03.25.hex |  |
|  | AC825x02\_07\_01 (Bugs fix, Wiegand interrupts simultaneously) | 20/3/18 | 1. **Bugs** fix (AC825)    1. [Bug #2104: Missing Access Events Reports, seems due to System Performance on RSDP Bus](https://rosslare.visualstudio.com/Embedded%20Git/_workitems/edit/2104) – missed card IDs upon reading cards in 4 readers simultaneously (readers are connected to x805 using Wiegand or Clock &Data) – **Bug is relevant to both AC-825 and x805**    2. Fix receive 4 duress code simultaneously (not in TFS)    3. Fix timers handling in interrupts (timers were inaccurate, due to occasions where main loop lasted for long time) (not in TFS)    4. Reduce RAM 2. **Bugs** fix (x805)    1. [Bug #2104: Missing Access Events Reports, seems due to System Performance on RSDP Bus](https://rosslare.visualstudio.com/Embedded%20Git/_workitems/edit/2104) – missed card IDs upon reading cards in 4 readers simultaneously (readers are connected to x805 using Wiegand or Clock &Data) – **Bug is relevant to both AC-825 and x805** | AC825v02.07.01.hex | x805v03.50.hex |  |
|  | AC825x02\_07\_06 (Configuration mode + Bugs fix, LS bug) | 1/5/18 | 1. Add **feature**    1. Configuration mode (for L&S bug) 2. **Bugs** fix    1. [Bug #1637: Access denied for authorized employees](https://rosslare.visualstudio.com/defaultcollection/QA/_workitems/edit/1637)    2. [Bug #1916: Logger: Problems with pulling logs from SD](https://rosslare.visualstudio.com/defaultcollection/QA/_workitems/edit/1916)    3. [Bug #2236: MDN32 of Rosslare's does NOT communicate](https://rosslare.visualstudio.com/defaultcollection/QA/_workitems/edit/2236) | AC825v02.07.06.hex | x805v03.50.hex |  |
|  | AC825x02\_07\_09 (Bugs fix, configuration mode bug) | 9/5/18 | 1. **Bugs** fix    1. [Bug #3206: Wrong OutputGroup packet freeze downloads for 825](https://rosslare.visualstudio.com/QA/_workitems/edit/3206)    2. [Bug #3172: Access Granted for unautorized on the reader User in Configuration mode](https://rosslare.visualstudio.com/QA/_workitems/edit/3172)    3. [Bug #3220: Configuration mode: AC825 malfunctions upon receiving 4 card IDs simultaneously](https://rosslare.visualstudio.com/QA/_workitems/edit/3220) | AC825v02.07.09.hex | x805v03.50.hex |  |
|  | AC825x02\_07\_10 (Bugs fix, AC825 creates FALSE events) | 10/5/18 | 1. **Bugs** fix    1. [Bug #3224: AC825 creates FALSE events (no card was introduced to reader)](https://rosslare.visualstudio.com/QA/_workitems/edit/3224) | AC825v02.07.10.hex | x805v03.50.hex |  |
|  | AC825x02\_07\_13 (Bugs fix, configuration mode bugs) | 15/5/18 | 1. **Bugs** fix    1. [Bug #3250: Configuration mode: AC825 sends events with card number (ID) = 0](https://rosslare.visualstudio.com/QA/_workitems/edit/3250)    2. [Bug #3251: Configuration mode: Very long delay till AC825 sends event upon receiving 4 card IDs simultaneously](https://rosslare.visualstudio.com/QA/_workitems/edit/3251)    3. [Bug #3252: Configuration mode: AC825 sends events with Facility code = 0](https://rosslare.visualstudio.com/QA/_workitems/edit/3252) | AC825v02.07.13.hex | x805v03.50.hex |  |
|  | AC825x02\_07\_14 (Bugs fix, OSDP reset PD) | 15/5/18 | 1. **Bugs** fix    1. [Task #2895: OSDP: Do not reset PD number upon sending a high priority msg](https://rosslare.visualstudio.com/Embedded/_workitems/edit/2895) | AC825v02.07.14.hex | x805v03.50.hex |  |
|  | AC825x02\_07\_15 (Bugs fix, timeout of NG response for query) | 15/5/18 | 1. **Bugs** fix    1. Change timeout of NG response for query (from 2 sec to 1 sec) | AC825v02.07.15.hex | x805v03.50.hex |  |
|  | AC825x02\_07\_16 (Bugs fix, facility code = 0 ) | 22/5/18 | 1. **Bugs** fix    1. [Configuration mode: AC825 sends events with Facility code = 0](https://rosslare.visualstudio.com/defaultcollection/QA/_workitems/edit/3252)    2. [Bug #3220: Configuration mode: AC825 malfunctions upon receiving 4 card IDs simultaneously](https://rosslare.visualstudio.com/defaultcollection/QA/_workitems/edit/3220)    3. Fix Tx msg num upon sending a query during configuration mode | AC825v02.07.16.hex | x805v03.50.hex |  |
|  | AC825x02\_07\_19 (Bugs fix, car parking + unauthorized user granted + Wiegand 64 bits reset) | 31/5/18 | 1. **Bugs** fix    1. [Bug #3356: Panel reset after reaching full area (Car parking)](https://rosslare.visualstudio.com/Embedded/_workitems/edit/3356)    2. [Bug #2735: Wiegand 64 bits cause 825 to Restart](https://rosslare.visualstudio.com/Embedded/_workitems/edit/2735)    3. [Bug #3172: Access Granted for unautorized on the reader User in Configuration mode](https://rosslare.visualstudio.com/defaultcollection/QA/_workitems/edit/3172) | AC825v02.07.19.hex | x805v03.50.hex |  |
|  | AC825x02\_07\_21 (Bugs fix, Wiegand 38 bits) | 25/7/18 | 1. **Bugs** fix    1. [Bug #4197: AxTrax stop to show presented cards after reader configuration to 38 bit](https://rosslare.visualstudio.com/Embedded/_workitems/edit/4197) | AC825v02.07.21.hex | x805v03.50.hex |  |
|  | AC825x02\_07\_22 (Bugs fix, log upon reset + Automation changes) | 30/7/18 | 1. **Bugs** fix    1. [v27.5: Add log upon reset + Automation changes for log severity (= log level)](https://rosslare.visualstudio.com/Embedded/_workitems/edit/4700) | AC825v02.07.22.hex | x805v03.50.hex |  |
|  | AC825x02\_08\_00 (Bugs fix+ Optimize config downloads time) | 3/9/18 | 1. **Bugs** fix    1. [Bug #5129: when 2 readers format assigned to reader you cannot get user mane on secondary format - FIBA BANK](https://rosslare.visualstudio.com/defaultcollection/QA/_workitems/edit/5129) 2. Add **feature**    1. [AC-825: Optimize download time of Configuration pkts](https://rosslare.visualstudio.com/Embedded/_workitems/edit/4672) 3. Remove **feature**    1. Backup DB for configuration (removed for purpose of above feature: Optimize download time of Configuration pkts) | AC825v02.08.00.hex | x805v03.50.hex |  |
|  | AC825x02\_08\_01 (Bugs fix, Clock and Data) | 20/9/18 | 1. **Bugs** fix    1. [Bug 3514: Card ID in Clock&Date format displayed wrong](https://rosslare.visualstudio.com/QA/_workitems/edit/3514)    2. [Bug 3362: AC825: Panel reset upon card id from Clock &Data reader while it's configured to Wiegand 26 bits in NG](https://rosslare.visualstudio.com/defaultcollection/Embedded/_workitems/edit/3362) | AC825v02.08.01.hex | x805v03.50.hex |  |
|  | AC825x02\_08\_02 (Dual auth + Bugs fix, Reader disable) | 25/10/18 | 1. **Bugs** fix    1. [Bug 5214: AC-825 Reader mode changed](https://rosslare.visualstudio.com/Embedded/_workitems/edit/5214) (in both **AC-825** and **x805**) 2. Add **feature**    1. [Task 5906: v27.6: User Dual Authentication withOUT Configuration mode](https://rosslare.visualstudio.com/Embedded/_workitems/edit/5906)    2. [Task 5917: v27.6: LED indication (control) upon door open](https://rosslare.visualstudio.com/Embedded/_workitems/edit/5917)    3. [Task 2528: v27.6: Configure log severity of AC-825 from NG](https://rosslare.visualstudio.com/Embedded/_workitems/edit/2528) 🡺 Not integrated yet with NG | AC825v02.08.02.hex | x805v03.51.hex |  |
|  | AC825x02\_08\_03 (Dual auth with Configuration mode) | 1/11/18 | 1. **Bugs** fix    1. – 2. Extra **Features/Changes**    1. [PBI 5905: v27.6: User Dual Authentication](https://rosslare.visualstudio.com/Embedded/_workitems/edit/5905)  * + 1. [Task 5906: v27.6: User Dual Authentication withOUT Configuration mode](https://rosslare.visualstudio.com/Embedded/_workitems/edit/5906) -- bug fix     2. [Task 5907: v27.6: User Dual Authentication with Configuration mode](https://rosslare.visualstudio.com/Embedded/_workitems/edit/5907) – NEW     3. Add support in **Card+PIN** during Configuration mode (acts just as Dual Authentication)   1. Add support in **Card+Card** during Configuration mode   2. [Task 5917: v27.6: LED indication (control) upon door open](https://rosslare.visualstudio.com/Embedded/_workitems/edit/5917) -- Add support in Normally Close | AC825v02.08.03.hex | x805v03.51.hex |  |
|  | AC825x02\_08\_04 (Bugs fix, Dual auth) | 11/11/18 | 1. **Bugs** fix    1. [Bug 6243: User Dual Authentication: Redundant Intermediate event afterward 2nd attempt to access.](https://rosslare.visualstudio.com/QA/_workitems/edit/6243)    2. [Bug 6244: [User Dual Authentication]: Reader in single mode, User on dual Force mode ==> Credential discarded.](https://rosslare.visualstudio.com/QA/_workitems/edit/6244)    3. Fix internal (non QA) bug of duress code during Configuration mode    4. [Task 5917: v27.6: LED indication (control) upon door open](https://rosslare.visualstudio.com/Embedded/_workitems/edit/5917)   **Fix**: Open output permanently via NG: LED will turn on for 30 seconds, and then turn off (rather than remain on permanently) | AC825v02.08.04.hex | x805v03.51.hex |  |
|  | AC825x02\_08\_05 (Bugs fix + add logs all over) | 18/11/18 | 1. **Bugs** fix 2. **Add** feature    1. [Task 5865: v27.6: Review log messages in AC-825 and determine logs' level and destination for each one](https://rosslare.visualstudio.com/Embedded/_workitems/edit/5865) (Logs in AC-825) [Logs all over code (AC-825)]    2. [Task 2527: v27.6: Insert (code+test) log messages all over FW in x805](https://rosslare.visualstudio.com/Embedded/_workitems/edit/2527) [Logs all over code (x805)] | AC825v02.08.05.hex | x805v03.52.hex |  |
|  | AC825x02\_08\_07 (Bugs fix, Configuration mode+Dual auth) | 25/11/18 | 1. **Bugs** fix    1. [Bug 4164: No Wiegand coming on D-805 till reset](https://rosslare.visualstudio.com/Embedded/_workitems/edit/4164) (Configuration mode)    2. [Bug 5879: AC-825 reset on rush hours FIBA BANK](https://rosslare.visualstudio.com/Embedded/_workitems/edit/5879) (Configuration mode)    3. [Bug 6110: No wiegand on D-805 (Arcadia central Kolkata)](https://rosslare.visualstudio.com/Embedded/_workitems/edit/6110) (Configuration mode)    4. [Bug 6109: readers doesn’t respond to the cards at main panel](https://rosslare.visualstudio.com/Embedded/_workitems/edit/6109) (Configuration mode)    5. [Bug 4259: some readers ports not working after update to 27.5.6.6](https://rosslare.visualstudio.com/Embedded/_workitems/edit/4259) (Configuration mode)    6. [Bug 2571: D-805 does not response to PIN](https://rosslare.visualstudio.com/Embedded/_workitems/edit/2571) (Configuration mode) | AC825v02.08.07.hex | x805v03.52.hex |  |
|  | AC825x02\_08\_08 (Bugs fix, Dual auth) | 9/12/18 | 1. **Bugs** fix    1. [Bug 6500: [Dual Authentication] No DA function on 825 with 2r/d configuration](https://rosslare.visualstudio.com/Embedded/_workitems/edit/6500)    2. [Bug 6422: [Dual Authentication] Access Denied - General error](https://rosslare.visualstudio.com/Embedded/_workitems/edit/6422) | AC825v02.08.08.hex | x805v03.52.hex |  |
|  | AC825x02\_07\_31 (Bugs fix, SD problem) | 20/12/18 | 1. **Bugs** fix    1. [Bug 6289: uSD card Fails on AC-825](https://rosslare.visualstudio.com/Embedded/_workitems/edit/6289) + [PBI 6305: AC-825: SD card is Unreliable](https://rosslare.visualstudio.com/Embedded/_workitems/edit/6355)       1. **Eliminate readings and writings to SD**       2. Add **refresh mechanism for pages**       3. **Re-arrange data saved on panel**       4. **Allow panel working even when no SD exists**       5. Upon failure in Read/Write operations - **Log and save events for Read/Write errors** (specifying error ID and pages' address, as well as SD card's S/N). These events/logs will be sent to NG       6. Upon failure in Read/Write operations - Update number of failures - this will be a trigger to perform format, upon crossing threshold       7. Upon failure in SD card or no SD card exists - Store events in RAM, and send to NG withOUT saving them in SD, as done in "normal" case) -- done in ClientHandler()    2. Embedded internal:       1. Save in SD card the FW version which runs. That is in order to identify DB scheme in case of problems in SD (DB scheme is known according to FW version)       2. Reduce SDIO timeout (upon SD cards does not respond): From 500mSec to 20mSec       3. Modify SDIO frequency to 24MHz (from 6MHz)       4. Reduce RAM (remove RAM logs) | AC825v02.07.31.hex | x805v03.50.hex |  |
|  | AC825x02\_08\_10 (Bugs fix, SD problem) | 17/1/19 | 1. **Bugs** fix    1. [Bug 6289: uSD card Fails on AC-825](https://rosslare.visualstudio.com/Embedded/_workitems/edit/6289) + [PBI 6305: AC-825: SD card is Unreliable](https://rosslare.visualstudio.com/Embedded/_workitems/edit/6355)       1. **Eliminate readings and writings to SD**       2. Add **refresh mechanism for pages**       3. **Re-arrange data saved on panel**       4. **Allow panel working even when no SD exists**       5. Upon **failure in Read/Write operations** - **Log and save events for Read/Write errors** (specifying error ID and pages' address, as well as SD card's S/N). These events/logs will be sent to NG, and update number of failures - this will be a trigger to perform format, upon crossing threshold       6. Upon **failure in SD card or no SD card exists** - Store events in RAM, and send to NG withOUT saving them in SD, as done in "normal" case) -- done in ClientHandler()       7. Upon **offline mode** - Supportfailure in SD card or no SD card exists – do **not** format the SD card (as there’ is no NG to re-download configuration…), and Write events to EEPROM (**1024** events are available)       8. **SD card driver** - Set timeout for reply from SD card (upon SDIO operation by MCU) to 200mSec       9. **SD card’s brand** - Detect SD card’s brand (= manufacturer), and issue a FATAL log upon a non- SanDisk firm       10. **Sending events to NG** - Upon send event and receive an Ack from NG regards an event: mark the source of the event (while sending), and handle it correctly (while receiving Ack), and Add a protection for event buffer in SD, where the pointer of sent events is bigger than the pointer of actual events (this is an un-reasonable situation, as cannot send more events than saved on SD)    2. **Embedded internal**:       1. Save in SD card the FW version, which runs. That is in order to identify DB scheme in case of problems in SD (DB scheme is known according to FW version)       2. Set timeout for reply from SD card (upon SDIO operation by MCU) to 200mSec       3. Modify SDIO frequency to 24MHz (from 6MHz)       4. Reduce RAM (remove RAM logs)    3. [Bug 5867: Secured mode doesn't change by link "Exit Secured Mode"](https://rosslare.visualstudio.com/Embedded/_workitems/edit/5867)    4. [Bug 6326: [Dual Authentication] Access one card twice to the reader no "session timeout" message .](https://rosslare.visualstudio.com/Embedded/_workitems/edit/6326)    5. [Bug 6315: [Dual Authentication] Dual authentication + Anti Passbacks is not good.](https://rosslare.visualstudio.com/Embedded/_workitems/edit/6315)    6. [Bug 6760: [FW update to x805] Outputs are opened in x805 after FW update](file:///D:\Work\Access%20Control\Releases%20and%20versions\AC-825%20+%20x805\AC-825\AC825v02_08_10%20(Bugs%20fix,%20SD%20problem)\Docs\AC825%20HISTORY%20release%20notes%20(v02.08.09).docx) 2. **Extra Features/Changes**    1. [PBI 5928: v27.6: Set/Get log severity of AC-825 via NG](https://rosslare.visualstudio.com/Embedded/_workitems/edit/5928)    2. [Task 6651: v27.6: Allow sending logs to Event file in NG](https://rosslare.visualstudio.com/Embedded/_workitems/edit/6651)    3. [Task 6714: AC-825: SD card is Unreliable: Save logs in RAM in case of disconnection](https://rosslare.visualstudio.com/Embedded/_workitems/edit/6714)    4. Add **logs** in AC-825 (for better debugging)    5. Fix **EEPROM driver for writing** | AC825v02.08.10.hex | x805v03.52.hex |  |
|  | AC825x02\_08\_11 (Bugs fix, SD problem+Interlock) | 24/1/19 | 1. **Bugs** fix    1. [Bug 6289: uSD card Fails on AC-825](https://rosslare.visualstudio.com/Embedded/_workitems/edit/6289) + [PBI 6305: AC-825: SD card is Unreliable](https://rosslare.visualstudio.com/Embedded/_workitems/edit/6355)       1. Verify that **SD manufacturer is SanDisk**       2. Issue a FATAL log message if not SanDisk       3. Was missed in merge of previous release    2. **Refresh mechanism for pages**       1. Fix refresh mechanism to perform retries for read/write operations (just as done in any other SD read/write operations in the app)       2. See *RefreshSd*()    3. **Embedded internal**:       1. Set **timeout for reply from SD** card (upon SDIO operation by MCU) to 200mSec (rather than 500mSec. 100mSec was tested and found as too short)       2. Align with ver **02.7.40**    4. [Bug 6921: [825] after adding to server with default configuration 825 panel still sent interlock events](https://rosslare.visualstudio.com/Embedded/_workitems/edit/6921) | AC825v02.08.11.hex | x805v03.52.hex |  |
|  | AC825x02\_08\_12 (Bugs fix, no comm with x805) | 29/1/19 | 1. **Bugs** fix    1. [Bug 6962: [825] After FW update for 825 connection lost with extensions](https://rosslare.visualstudio.com/Embedded/_workitems/edit/6962) | AC825v02.08.12.hex | x805v03.52.hex |  |
|  | AC825x02\_08\_13 (Bugs fix, FW update to x805 fails) | 10/2/19 | 1. **Bugs** fix    1. [Bug 6947: [FW update] After FW update need panel enabling](https://rosslare.visualstudio.com/Embedded/_workitems/edit/6947)    2. [Bug 7061: [Dual Authentication] - Setting a user with "Time Zone Immunity" fails in 825 network.](https://rosslare.visualstudio.com/Embedded/_workitems/edit/7061) | AC825v02.08.13.hex | x805v03.52.hex |  |
|  | AC825x02\_08\_14 (Bugs fix, Log is missing from log file) | 12/2/19 | 1. **Bugs** fix    1. [Bug 6755: [825 Logs] AC-825 Logs: Log is missing from log file (though it was sent successfully)](https://rosslare.visualstudio.com/Embedded/_workitems/edit/6755)    2. [Bug 6946: [Downloads] Downloads stuck in DB](https://rosslare.visualstudio.com/Embedded/_workitems/edit/6946) | AC825v02.08.14.hex | x805v03.52.hex |  |
|  | AC825x02\_08\_15 (Bugs fix, False door APB) | 17/2/19 | 1. **Bugs** fix    1. [Bug 7009: [AC-825] false door antipassback on AC-825](https://rosslare.visualstudio.com/Embedded/_workitems/edit/7009) | AC825v02.08.15.hex | x805v03.52.hex |  |
|  | AC825x02\_08\_18 (Bugs fix, Interlock + OSDP search) | 27/3/19 | 1. **Bugs** fix    1. [Bug 7380: [AC-825] interlock groups does not work correctly](https://rosslare.visualstudio.com/Embedded/_workitems/edit/7380)    2. [Bug 7404: Search result for 825 extensions in 27.6.1.6 displays wrongly](https://rosslare.visualstudio.com/Embedded/_workitems/edit/7404)    3. [Bug 7261: [AC-825] Received packets are handled wrongly by AC-825](https://rosslare.visualstudio.com/Embedded/_workitems/edit/7261)    4. [Bug 6772: Bug 6772: [AC-825] -panel lose FW when 3rd party "lift" reader connect to port 3 - Seadan](https://rosslare.visualstudio.com/Embedded/_workitems/edit/6772) | AC825v02.08.18.hex | x805v03.52.hex | AC825\_**BOOT-2.00**.hex  First time that HEX file was created by Mickey’s tool (“**HEX Converter**”) |
|  | AC825x02\_08\_19 (Bugs fix, Interlock with Dual auth) | 2/4/19 | 1. **Bugs** fix    1. [Bug 7481: [Dual Authentication] Interlock doesn't work after credential presented to reader in Dual Authentication mode](https://dev.azure.com/rosslare/Embedded/_workitems/edit/7481) 2. **Extra Features/Changes**    1. Add version of OSDP package for CP (Rosslare internal).   Version should be updated upon ANY change in OSDP package for CP (= Control Panel). | AC825v02.08.19.hex | x805v03.52.hex |  |
|  | AC825x02\_08\_20 (Bugs fix, Interlock + FW update to x805) | 17/4/19 | 1. **Bugs** fix    1. [Bug 7380: [AC-825] interlock groups does not work correctly](https://rosslare.visualstudio.com/EPIC/_workitems/edit/7380)    2. [Bug 7490: [AccessC] One D805 expansion cannot be found by OSDP.](https://rosslare.visualstudio.com/EPIC/_workitems/edit/7490)    3. [Bug 7518: AC825 cannot exit independently from config mode](https://rosslare.visualstudio.com/EPIC/_workitems/edit/7518)    4. Fix log message upon NACK, so last cmd ID will be correct (R&D internal) | AC825v02.08.20.hex | x805v03.52.hex |  |
|  | AC825x02\_09\_00 (Bugs fix, Input 14 caused reset + fix logs in x805) | 21/5/19 | 1. **Bugs** fix    1. [Bug 7698: [AC-825] when P/S-805 installed as piggybacked panel communication reset from input 14](https://dev.azure.com/rosslare/Embedded/_workitems/edit/7698)    2. [Bug 7485: [AC-825] False Door Forced open event](https://rosslare.visualstudio.com/Embedded/_workitems/edit/7485) 2. **x805**    1. Append a prefix of "**x805**" to log message (so it can be differed from AC-825 log messages) | AC825v02.09.00.hex | x805v03.53.hex |  |
|  | AC825x02\_09\_01 (Bugs fix, TAPB + interlock) | 5/6/19 | 1. **Bugs** fix    1. [Bug 7796: [AC-825] False time antipassback for some users](https://rosslare.visualstudio.com/Embedded/_workitems/edit/7796)    2. [Bug 7806: When the reader is in "card + card" mode an interlock doesn't work](https://dev.azure.com/rosslare/Embedded/_workitems/edit/7806) | AC825v02.09.01.hex | x805v03.53.hex |  |
|  | AC825x02\_09\_02 (Bugs fix, OSDP lost PDs) | 19/6/19 | 1. **Bugs** fix    1. [Bug 7809: x805 disconnected after working a few hours](https://rosslare.visualstudio.com/Embedded/_workitems/edit/7809)    2. [Bug 7833: APB after rest panel](https://rosslare.visualstudio.com/Embedded/_workitems/edit/7833)    3. [Task 7836: AC-825: Fix errors according to static analysis tool of IAR (C-STAT)](https://rosslare.visualstudio.com/Embedded/_workitems/edit/7836) 2. **x805**    1. Disable log messages, which level is lower than LOG\_INFO | AC825v02.09.02.hex | x805v03.54.hex |  |
|  | AC825x02\_09\_03 (Bugs fix, OSDP lost PDs) | 23/6/19 | 1. **Bugs** fix    1. [Bug 7809: x805 disconnected after working a few hours](https://rosslare.visualstudio.com/Embedded/_workitems/edit/7809)    2. [Bug 7820: OSDP Bus in AC-825 was Stuck](https://rosslare.visualstudio.com/Embedded/_workitems/edit/7820) | AC825v02.09.03.hex | x805v03.54.hex |  |
|  | AC825x02\_09\_10 (Bugs fix, OSDP lost PDs) | 28/6/19 | 1. **Bugs** fix    1. [Bug 7855: [AC-825] AC-825 performs "update extension" cmd every 20 seconds for 15 mins](https://rosslare.visualstudio.com/Embedded/_workitems/edit/7855)    2. [Bug 7820: OSDP Bus in AC-825 was Stuck](https://rosslare.visualstudio.com/Embedded/_workitems/edit/7820)    3. Add log upon **send response** (= reply) to NG | AC825v02.09.10.hex | x805v03.54.hex |  |
|  | AC825x02\_09\_13 (Bugs fix, Wrong event upon access denied) | 4/8/19 | 1. **Bugs** fix    1. [Bug 8084: [Configuration mode] Wrong sub-type "Invalid code type" sent from 825 in case of "Invalid date"](https://rosslare.visualstudio.com/Embedded/_workitems/edit/8084) | AC825v02.09.13.hex | x805v03.54.hex |  |
|  | AC825x02\_09\_14 (Bugs fix, Reader mode changed + Num of Dual auth readers) | 18/11/19 | 1. **Bugs** fix    1. [Bug 5214: [AC-825] Reader mode changed](https://rosslare.visualstudio.com/Embedded/_workitems/edit/8=5214)    2. [Bug 8306: [AC-825] upgrading from version 27.5.7.16 does not allow more than 10 card+pin per AC-825 networks](https://rosslare.visualstudio.com/Embedded/_workitems/edit/8306) | AC825v02.09.14.hex | x805v03.54.hex |  |
|  | AC825x02\_09\_16 (Bugs fix, Interlock group with Piggyback) | 12/12/19 | 1. **Bugs** fix    1. [Bug 8596: [825] Interlock group doesn't work on 825+piggyback](https://rosslare.visualstudio.com/Embedded/_workitems/edit/8596) | AC825v02.09.16.hex | x805v03.54.hex |  |