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UNECE Software Update - General Diagnostic Requirements - Errata CRC

F-LAH UNECE-SU v1.2 bug list and its correction

Technical development, cross-sectional load booklet: LAH.DUM.905.E - Errata CRC

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Specification version	1.0
Baseline	4.6 ( )

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1 Purpose

[I: UNECE-SUv1.2_ErrCRC_7]

This document contains necessary error corrections to the functional specification "UN- ECE Software Update - General Diagnostic Requirements" (LAH.DUM.905.E).

2 Validity range

[A: UNECE-SUv1.2_ErrCRC_9]

[BsM-E.D: no, BsM-E.L: no, BsM-E.T: no, BsM-O: no, BsM-Sa.FuSi: no]

This document is only valid in conjunction with the F-LAH "UNECE Software Update - General Diagnostic Requirements (LAH.DUM.905.E)" up to version 1.2.

3 List of errata

3.1 Errata in "4.1.1.1 Requirements for embedded systems".

3.1.1 [general Anf.: F-LAH_RxSWIN-620]

[I: UNECE-SUv1.2_ErrCRC_85]

The routine "0x0544-Verify_partial_software_checksum" must also be available in the bootloader in the "ECUPro- gramingSession (0x02)".

[A: UNECE-SUv1.2_ErrCRC_82]

[BsM-E.D: no, BsM-E.L: no, BsM-E.T: no, BsM-O: no, BsM-Sa.FuSi: no]

old
:
Contrary to document /6/ and document /2/, the routine "0x0544-Verify_partial_software_checksum" must be available in the application in the "DefaultSession (0x01)" and in the "ExtendedSession (0x03)". In the boot loader, the routine "0x0544-Verify_partial_software_checksum" must be available in the "ExtendedSession (0x03)".

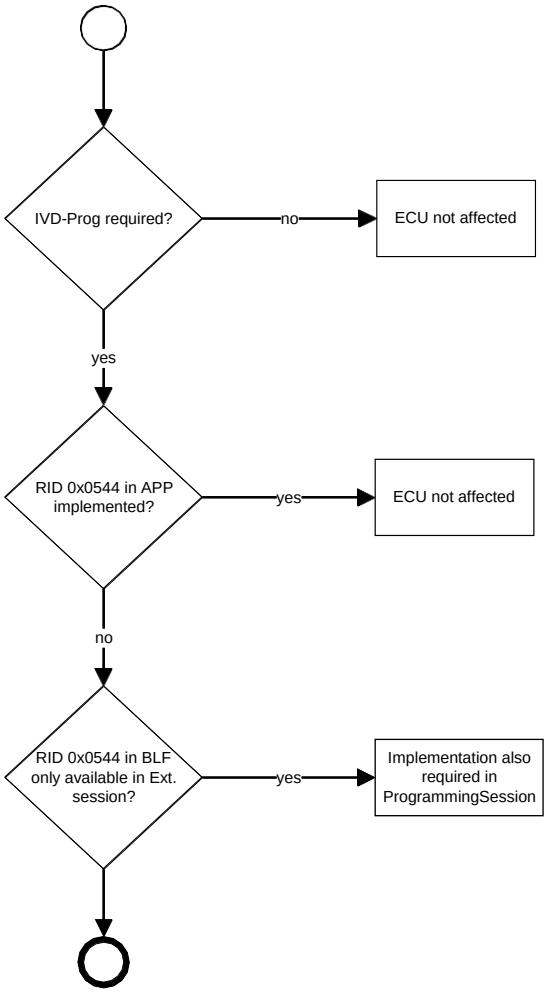
[A: UNECE-SUv1.2_ErrCRC_84]

[BsM-E.D: no, BsM-E.L: no, BsM-E.T: no, BsM-O: no, BsM-Sa.FuSi: no]

new:
Contrary to document /6/ and document /2/, the routine "0x544-Verify_partial-software_checksum" must be available in the application in the "DefaultSession (0x01)" and in the "ExtendedSession (0x03)". In the bootloader, the routine "0x0544-Verify_partial_software_checksum" must be available in the "ExtendedSession (0x03)" **and the ECUProgrammingSession (0x02).**

[I: UNECE-SUv1.2_ErrCRC_94]

Figure 3-1 Decision tree RID 0x0544



3.1.2 PaddingByte for Block ID in ODX Tag <SOURCE-START-ADDRESS>

[I: UNECE-SUv1.2_ErrCRC_87]

For the calculation of the programming hash value, the block ID with a length of two bytes [general start: F-LAH_RxSWIN-345] is assumed. Control units that use one-digit block IDs in the flash container and in the programme data must be internally preceded by a fill byte with a leading zero.

[A: UNECE-SUv1.2_ErrCRC_88]

[BsM-E.D: no, BsM-E.L: no, BsM-E.T: no, BsM-O: no, BsM-Sa.FuSi: no]

old: not available

[A: UNECE-SUv1.2_ErrCRC_89]

[BsM-E.D: no, BsM-E.L: no, BsM-E.T: no, BsM-O: no, BsM-Sa.FuSi: no]

new:
Control units that address logical blocks via a 1-byte block ID must insert a leading zero into the block ID for internal calculation of the programming hash value (e.g. 0x01 -> 0x00 01).

3.1.3 [general Anf.: F-LAH_RxSWIN-1008]

[I: UNECE-SUv1.2_ErrCRC_91]

For non-partially programmable servers, the SW versions in the OWN-IDENTs must be incremented when the SW version is changed.

[A: UNECE-SUv1.2_ErrCRC_92]

[BsM-E.D: no, BsM-E.L: no, BsM-E.T: no, BsM-O: no, BsM-Sa.FuSi: no]

old:

In deviation from document /6/ and /14/, partial flashing is mandatory for all updateable ECUs (according to document /6/). The logical software block version must be contained in the XML tag <OWN-IDENTS>.... </OWN-IDENTS> of the respective logical block.

[A: UNECE-SUv1.2_ErrCRC_93]

[BsM-E.D: no, BsM-E.L: no, BsM-E.T: no, BsM-O: no, BsM-Sa.FuSi: no]

new:

In deviation from document /6/ and /14/, partial flashing must be implemented for all updateable control units (according to document /6/). However, for servers that cannot support partial programming the SW versions in all data blocks in the OWN-IDENTs must be incremented when the SW version 0xF189-VW Application Software Version Number is changed. All DATABLOCKs of the type "FLASH_DATA" must have OWN-IDENT entries.

3.2 Errata in "4.1.1.2 Requirements for non-embedded systems or file-based systems".

[I: UNECE-SUv1.2_ErrCRC_12]

Integrity Validation Data for programming (instruction code) may only be dependent on the application and bootloader software. Integrity Validation Data for programming (instruction code) must not have any dependency on metadata (e.g. user certificate, timestamp, logistics data, random number) of the software blocks of the application and bootloader software.

[A: UNECE-SUv1.2_ErrCRC_97]

[BsM-E.D: no, BsM-E.L: no, BsM-E.T: no, BsM-O: no, BsM-Sa.FuSi: no]

old: not available

[A: UNECE-SUv1.2_ErrCRC_79]

[BsM-E.D: no, BsM-E.L: no, BsM-E.T: no, BsM-O: no, BsM-Sa.FuSi: no]

New: Systems (embedded or non-embedded) that have a system-specific IVD calculation method must implement the routine "0x029A-Calculate_module_hash_value" and must not implement the routine "0x0544-Verify_partial_software_checksum".

3.3 Errata in "4.1.1.2.1 - Use of Flashcontainer "ODX-Flash/PDX-Flash""

[I: UNECE-SUv1.2_ErrCRC_53]

In addition to the changes listed here, all requirements of chapter 4.1.1.2.1 - Use of flash container "ODX-Flash/PDX-Flash" of embedded systems with system-spe- cific IVD calculation method must be taken into account.

3.3.1 [general Anf.: F-LAH_RxSWIN-1119]

[A: UNECE-SUv1.2_ErrCRC_96]

[BsM-E.D: no, BsM-E.L: no, BsM-E.T: no, BsM-O: no, BsM-Sa.FuSi: no]

old:
When using flash containers according to document /14/, the programming hash value for non-embedded or file-based systems can be calculated system-specifically.

[A: UNECE-SUv1.2_ErrCRC_52]

[BsM-E.D: no, BsM-E.L: no, BsM-E.T: no, BsM-O: no, BsM-Sa.FuSi: no]

new:
When using flash containers according to document /14/, the calculation of the programming hash value for non-embedded or file-based systems **or embedded systems** can be carried out system-specifically **with a system-specific IVD calculation method.**

3.3.2 [general Anf.: F-LAH_RxSWIN-1082]

[A: UNECE-SUv1.2_ErrCRC_15]

[BsM-E.D: no, BsM-E.L: no, BsM-E.T: no, BsM-O: no, BsM-Sa.FuSi: no]

old:
In the case of non-embedded systems or file-based systems that are programmed via UDS according to documentation /6/, the target hash value of the programming calculated by the supplier in the offline process and the hash procedure used must be documented in the ODX flash file and be readable and evaluable for IT systems.

[A: UNECE-SUv1.2_ErrCRC_17]

[BsM-E.D: no, BsM-E.L: no, BsM-E.T: no, BsM-O: no, BsM-Sa.FuSi: no]

new:
In the case of non-embedded systems or file-based systems programmed via UDS in accordance with documentation /6/ **or embedded systems with a system-specific IVD calculation method**, the target hash value of the programming calculated by the supplier in the offline process and the hash method used must be documented in the ODX flash file and must be readable and evaluable for IT systems.