

Product:	FETK-T5.0A	Rev :	06	Page 1 of 10
Title :	Release-Notes			



Product :	FETK-T5.0A			
Title :	Release Notes			
File :	FETK-T5.0A_Release-Notes_V06.docx			
TTNR :	F-00K-113-728			
Comments :	<p>Currently shipped: 122512716A011/01</p> <p>FPGA-Boot version: V1.2.25 FPGA-A version: V1.27.16 Hardware-state: A010/02</p>			
Created:	Name R. Mai	Department DAP/XPC-Fe1	Signature R. Mai	Date 2024-08-21
Released:	Name A. Sprenger	Department DAP/XPC-Fe1	Signature A. Sprenger	Date 2024-08-21

Changes

Revision	Description	Date	Name	Signature
01	122512323A011/01 - for FETK-T5.0A - Initial version	2023-03-14	Mai	Mai
02	122512435A011/01 - New or Enhanced Functions [3.1] and Firmware Modification [5.3]	2023-06-15	Spr	Spr
03	122512512A011/01 - New or Enhanced Functions [3.1] and Firmware Modification [5.3]	2023-09-18	Mai	Mai
04	122512611A011/01 - New or Enhanced Functions [3.1] and Firmware Modification [5.3]	2023-11-24	Mai	Mai
05	122512716A011/01 - New or Enhanced Functions [3.1] and Firmware Modification [5.3]	2024-02-28	Mai	Mai
06	122512716A011/01 - New or Enhanced Functions [3.1]	2024-08-21	Mai	Mai

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1 General Information

1.1 Safety Notice

Calibration activities influence the behavior of the ECU and the systems controlled by the ECU. This may result in unexpected behavior of the vehicle and thus can lead to safety critical situations. Only well trained personnel should be allowed to perform calibration activities.

1.2 System Requirements

To access the ECU the FETK-T5.0A has to be connected via ES89x modules.

The system can be used for high speed Measurement, Calibration and ECU flash programming with INCA. Support of ASCET / INTECRIO Rapid Prototyping applications e.g. functional prototyping – bypass depends on the functionality of connected modules. For supported tool versions refer to chapter 2.4. The FETK-T5.0A and ES89x system use the standardized protocol "XCP on Ethernet" for PC communication. Thus 3rd party tools can be connected to the ECU as well.

2 Version Syntax and Tool Chain Information

2.1 Version-Syntax of the FETK-T5.0A

The **FETK-T5.0A hardware version** information is located on the product sticker and can be read out of the FETK using the firmware update tool HSP or XETK Configuration Tool.

Overall Hardware Version Syntax: **aaabbbccddd/ee**

Description of PLD-Code Information (modification details refer chapter 3)

aaa FPGA-Boot-Code version (1.0.0, 1.0.1, 1.0.2, ...)
bbb FPGA-Code version (1.0.0, 1.0.1, 1.0.2, ...)

The hardware version of the PCB is also located on the label attached to the PCBs. These version is subordinate to the Overall hardware state cannot be read out by software.

PCB Hardware State Syntax: **deee/ff**

Description of Hardware-Information (modification details refer chapter 4)

c PCB Version (A=V1.0, B=V1.1, C=V1.2, ...)
ddd PCB Hardware State (010, 011, 012, ...)
ee PCB Population Variant (00, 01, 02, ...)

The first delivered hardware state of the FETK-T5.0A is the following:

FETK-T5.0A: **122512323A0101/01**

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2.2 Version information of the tool chain components

To get this FETK running with the other components of the tool chain please make sure that the version mentioned below or a newer one is used. If your software, firmware or hardware version is older, please update it using HSP.

If you have any problems to get this FETK running please contact our local customer support or sales representative.

Updates or refreshes can be downloaded from the ETAS homepage:

<http://de.etasgroup.com>

<http://en.etasgroup.com>

2.3 Hardware support

The FETK-T5.0A is supported by ES891.

2.4 Software and microcontroller support

Microcontroller	HSP	INCA	ETK Tools	ASCET-RP	INTECRIO
NXP S32Gxxx	V13.4.0	V7.4.4	V4.3.4	V6.4.5	V5.0.3
NXP S32Zxxx	V13.4.0	V7.4.4	V4.3.4	V6.4.5	V5.0.3
NXP S32Exxx	V13.6.0	V7.4.6	V4.3.6	V6.4.5	V5.0.3

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3 What's New - Release Notes

This chapter lists the main improvements compared to a previous shipped FETK product. Additionally, a detailed list of already known issues can be found here.

3.1 New or Enhanced Functions

3.1.1 In INCA 7.5.2 and HSP 14.2.0

Issue Identifier	Description
ETKF-2898	Multiple distab 17 events config and output areas
TFS 761633	TI_I751 [INCA/FETK S1B] - Measurement breaks after disconnecting and reconnection of ECU VCC

3.1.2 In INCA 7.5.0 and HSP 14.0.0

Issue Identifier	Description
TFS 747373	TX_INCA750:-First Measurement value from coldstart is incorrect
ETKF-2749	Support trace timestamps for S32G
ETKF-2410	Support Extension of UPXML Update Protocol and EX8xx Update Master/Slave Protocol for Semantic Versioning
ETKF-2435	TEA-MGR: Extend update helper to support semantic versioning info

3.1.3 In INCA 7.4.7 and HSP 13.7.0

Issue Identifier	Description
TFS 738325	Change of value is not visible in INCA. Value is freezed till neighbor signal is added
TFS 741048	Calibration not possible when PHYSICAL_ADDRESS used for data segment
ETKPRG-1813	XCP Extensions: program, verify and checksum calculation
ETKF-2314	Fast trigger polling rate
ETKF-2990	Performance Improvements JTAG
ETKF-2377, ETKF-2507	support of additional address spaces

3.1.4 In INCA 7.4.6 and HSP 13.6.0

Issue Identifier	Description
ETKF-2226	Support for NXP S32E controller
ETKF-2049	JTAG short DR scan on wait acknowledge
ETKF-2466	Increase trace interpreter slicer/decoder frequency to 75Mhz
ETKF-2395	Performance Improvements for JTAG

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3.1.5 In INCA 7.4.5 and HSP 13.5.0

Issue Identifier	Description
TFS 715132	very high timestamp jitter for TRACESuppD17 Raster
TFS 719331	FETK with measurement Drops when using Timer Rasters with MonVars
TFS 722709	Invalid ECU memory access may occur when reading ECU inform block magic pattern
ETKF-2323	Improve Scheduling of ECU access arbitration

3.1.6 In INCA 7.4.4 and HSP 13.4.0

Issue Identifier	Description
n/a	Initial version, support of FETK-T5.0A

3.2 Known issues

3.2.1 In INCA 7.4.4 and HSP 13.0.0

Issue Identifier	Description
TFS 715132	very high timestamp jitter for TRACESuppD17 Raster
ETKPRG-1690	Flashing support for NXP S32

4 Product Variants

In general the FETK-T5.0A can be purchased in one variant.

4.1 FETK-T5.0A

Item number	F-00K-113-728																																				
Description	FETK-T5.0A Emulator Probe for the NXP S32 microcontroller family																																				
For details refer the datasheet	<table border="1"> <thead> <tr> <th>DIM</th> <th>MILLIMETERS</th> <th>INCHES</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>56.50^{+0.2}_{-0.2}</td> <td>2.224^{+0.008}_{-0.008}</td> </tr> <tr> <td>B</td> <td>53.00^{+0.2}_{-0.2}</td> <td>2.087^{+0.008}_{-0.008}</td> </tr> <tr> <td>C</td> <td>44.00^{+0.2}_{-0.2}</td> <td>1.732^{+0.008}_{-0.008}</td> </tr> <tr> <td>D</td> <td>29.25^{+0.2}_{-0.2}</td> <td>1.152^{+0.008}_{-0.008}</td> </tr> <tr> <td>E</td> <td>15.50^{+0.2}_{-0.2}</td> <td>0.610^{+0.008}_{-0.008}</td> </tr> <tr> <td>F</td> <td>3.00^{+0.2}_{-0.2}</td> <td>0.118^{+0.008}_{-0.008}</td> </tr> <tr> <td>G</td> <td>3.50^{+0.1}_{-0.1}</td> <td>0.138^{+0.004}_{-0.004}</td> </tr> <tr> <td>H</td> <td>33.25^{+0.2}_{-0.2}</td> <td>1.309^{+0.008}_{-0.008}</td> </tr> <tr> <td>I</td> <td>30.00^{+0.2}_{-0.2}</td> <td>1.181^{+0.008}_{-0.008}</td> </tr> <tr> <td>J</td> <td>9.00^{+0.2}_{-0.2}</td> <td>0.354^{+0.008}_{-0.008}</td> </tr> <tr> <td>K</td> <td>12.00^{+0.2}_{-0.2}</td> <td>0.472^{+0.008}_{-0.008}</td> </tr> </tbody> </table>	DIM	MILLIMETERS	INCHES	A	56.50 ^{+0.2} _{-0.2}	2.224 ^{+0.008} _{-0.008}	B	53.00 ^{+0.2} _{-0.2}	2.087 ^{+0.008} _{-0.008}	C	44.00 ^{+0.2} _{-0.2}	1.732 ^{+0.008} _{-0.008}	D	29.25 ^{+0.2} _{-0.2}	1.152 ^{+0.008} _{-0.008}	E	15.50 ^{+0.2} _{-0.2}	0.610 ^{+0.008} _{-0.008}	F	3.00 ^{+0.2} _{-0.2}	0.118 ^{+0.008} _{-0.008}	G	3.50 ^{+0.1} _{-0.1}	0.138 ^{+0.004} _{-0.004}	H	33.25 ^{+0.2} _{-0.2}	1.309 ^{+0.008} _{-0.008}	I	30.00 ^{+0.2} _{-0.2}	1.181 ^{+0.008} _{-0.008}	J	9.00 ^{+0.2} _{-0.2}	0.354 ^{+0.008} _{-0.008}	K	12.00 ^{+0.2} _{-0.2}	0.472 ^{+0.008} _{-0.008}
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5 Firmware Modifications

5.1 General remarks to this chapter

The programmable logic code within the FETK-T5.0A is stored onto programmable logic devices (FPGA). For the version syntax please refer to chapter 2.1.

Attention:

For updating the FETK - firmware with a later version by using HSP, all FETK firmware packages will be updated one after another. This will last a few minutes and must not be cancelled by the user. In case the firmware update had been finished unsuccessfully due to some reason, the update will have to be repeated. HSP will program the rescue packages onto the FETK. This procedure makes the firmware update fail-safe.

5.2 FPGA-Boot-Code

Revision	Description
Version 1.2.25	Initial Version

Delivery condition:

The FPGA-Boot version 1.2.25 will be programmed into all shipments

5.3 FPGA-Code

Revision	Description
Version 1.23.23	Initial Version
Version 1.24.35	<ul style="list-style-type: none"> - TFS 715132 very high timestamp jitter for TRACESuppD17 Raster - TFS 719331 FETK with measurement Drops when using Timer Rasters with MonVars - ETKF-2323 Improve Scheduling of ECU access arbitration
Version 1.25.12	<ul style="list-style-type: none"> - ETKF-2226: Support for NXP S32E controller - ETKF-2049: JTAG short DR scan on wait acknowledge - ETKF-2466: Increase trace interpreter slicer/decoder frequency to 75Mhz - ETKF-2395: Performance Improvements for JTAG
Version 1.26.11	<ul style="list-style-type: none"> - ETKF-2314: Fast trigger polling rate - ETKF-2377, ETKF-2507: support of additional address spaces
Version 1.27.16	<ul style="list-style-type: none"> - TFS 747373: TX_INCA750:-First Measurement value from coldstart is incorrect - ETKF-2749: Support trace timestamps for S32G - ETKF-2410: Support Extension of UPXML Update Protocol and EX8xx Update Master/Slave Protocol for Semantic Versioning - ETKF-2435: TEA-MGR: Extend update helper to support semantic versioning info

Delivery condition:

The FPGA version 1.27.16 will be programmed into all shipments

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6 Hardware Modifications

6.1 General remarks to this chapter

Hardware issues or obsolete parts can make it necessary to modify the population of the FETK. Information about the modifications is listed underneath. The hardware state starts with version **A011/01**. For the version syntax please refer to chapter 2.1.

6.2 No modification at hardware state A011/01

6.3 Hardware delivery condition

The hardware state **A011/01** will be delivered with all new shipments.

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7 Abbreviations

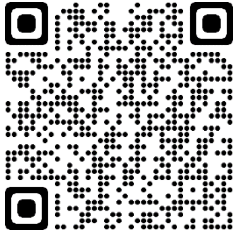
ASCET-RP	Rapid Prototyping Software of ETAS
CPLD	C omplex P rogrammable L ogic D evice
ES891	MC hardware
ETK Tools	Configuration Software, in order to configure a (X)ETK / FETK
FETK	Product (emulator test probe)
Firmware	Software for MC hardware; necessary for implementation of new features or bug fixes
FPGA	F ield P rogrammable G ate A rray; interface component to the application hardware
Hot-fix	Software bug-fix for a refresh version
HS	H eat S preader
HSP	H ardware S ervice P ack; ETAS product which includes the firmware for the complete ETAS hardware, shipped together with INCA but also available as standalone product, download at ETAS homepage possible
INCA	Measurement and Calibration Software of ETAS
INTECRIO	Rapid Prototyping Software of ETAS
MC	M easurement & C alibration
PCB	P rinted C ircuit B oard
RP	R apid P rototyping
SBB	S ervice B ased B ypass
Tool chain	MC hardware (e.g. ES690) and software (e.g. INCA)
XETK Configuration Tool	Configuration Software, in order to configure a (X)ETK / FETK
XCP	Universal Measurement and Calibration Protocol

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8 Contact Information

8.1 Technical Support

For details of your local sales office as well as your local technical support team and product hotlines, take a look at the website: www.etas.com/hotlines



8.2 ETAS Headquarters

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