Product :	XETK-S20.1B			
Title :	Release Notes			
File :	XETK-S20.1B_Release-NotesV16.docx			
TTNR :	F-00K-110-093			
Comments :	Current shipped (hardware state): **D014/01** Current released firmware version: **HSP 12.0.0**			
Created:	Name T. Oexner	Department NE/EHE	Signature T. Oexner	Date 2016-04-26
Released:	Name R. Mai	Department PGA/PRM-M2	Signature R. Mai	Date 2020-03-23

Changes

Revision	Description	Date	Name	Signature
01	Initial Version	2016-04-26	Oexner	Oexner
02	Updated HDC/Firmware with HSP11.1.0	2016-06-09	Oexner	Oexner
03	Software and Microcontroller Support updated	2016-09-20	Oexner	Oexner
04	Updated HDC/Firmware with HSP11.2.1	2016-10-24	Oexner	Oexner
05	Updated Firmware with HSP11.3.0	2016-12-20	Oexner	Oexner
06	Updated Firmware with HSP11.4.0	2016-03-13	Oexner	Oexner
07	Improvements and bug fixes with HSP11.6.0	2017-09-21	Förmer	Förmer
08	Updated Firmware with HSP11.7.0	2017-12-01	Mai	Mai
09	Improvements, bug fixes an updated Firmware with HSP11.8.0	2018-03-14	Mai	Mai
10	Improvements, bug fixes an updated Firmware with HSP11.9.0	2018-06-18	Mai	Mai

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11	Improvements, bug fixes an updated Firmware with HSP11.10.0	2018-09-13	Mai	Mai
12	Improvements, bug fixes an updated Firmware with HSP11.11.0	2018-12-12	Mai	Mai
13	Improvements, bug fixes an updated Firmware with HSP11.12.0	2019-03-20	Mai	Mai
14	Improvements, bug fixes an updated Firmware with HSP11.14.0	2019-09-17	Mai	Mai
15	Improvements, bug fixes an updated Firmware with HSP11.15.0	2019-12-10	Mai	Mai
16	Improvements, bug fixes an updated Firmware with HSP12.0.0	2020-03-23	Mai	Mai

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Table of content

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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

Recommended system requirements on a PC running ETK Drivers and Tools, HSP or Inca:

- 2 GHz Pentium-PC or equivalent, equipped with
  - 1 GB RAM (basic hardware), depending on the use cases 2GB RAM are advantageous
  - Hard disk with minimum 10 GB free disk space
  - DVD-ROM for installation
  - XGA-Graphic card with XGA-screen and resolution of at least 1024 x 768 with 16 bit colors, DirectX 7
  - Fast Ethernet adapter 100BaseT
    - with full duplex capability
    - configured as component TCP/IP only
    - separate to e.g. company network
  - WINDOWS® XP (SP3 or higher), WINDOWS®VISTA (SP1 or higher) or WINDOWS®7

1.3 Restrictions

WINDOWS® 95b, WINDOWS® NT, WINDOWS® 2000 and WINDOWS® 98SE are not supported

1.4 Miscellaneous

To ensure the highest data throughput from the XETK device up to the PC system no other PC software should be run via this Ethernet adapter.

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2 Version Syntax and Tool-Chain Information

2.1 Version-Syntax of the XETK-S20.1B

The XETK-S20.1B hardware version information is located on the product sticker and can be read out of the XETK using the firmware update tool HSP or XETK Configuration Tool.

Hardware State Syntax: **abbb/cc**

Description (modification details refer chapter 5)

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

The XETK-S20.0B Firmware version information can be read out of the XETK using the firmware update tool HSP or XETK Configuration Tool. It is not printed onto a XETK sticker.

Firmware-Version Syntax: **aaa.bbb.ccccc**

Description (modification details refer chapter 5)

aaa	Major Release (0...255)
bbb	Minor Release (0...255)
ccccc	Revision/Patch (0...65535)

Firmware Packages:

HDC Work	aaa.bbb.ccccc
Firmware Work	aaa.bbb.ccccc
HDC Rescue	aaa.bbb.ccccc
Firmware Rescue	aaa.bbb.ccccc
CPLD	aaa.bbb.ccccc

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2.2 Version information of the tool-chain components

To get this XETK 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.
If you have any problems to get this XETK 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 Software and microcontroller support

Microcontroller	HSP	INCA	ETK Tools	ASCET-RP	INTECRIO
TC23x	V11.10.0	V7.2.10	V4.1.12	A: V6.4 B: V6.4	A: V4.6 B: V4.6
TC26x	V11.2.0	V7.2.2	V4.1.3	A: V6.4 B: V6.4	A: V4.6 B: V4.6
TC26x-ED	V11.2.0	V7.2.2	V4.1.3	A: V6.4 B: V6.4	A: V4.6 B: V4.6
TC27x	V11.2.0	V7.2.2	V4.1.3	A: V6.4 B: V6.4	A: V4.6 B: V4.6
TC27x-ED (A-Step)	V11.0.1	V7.2	V4.1.0	A: V6.4 B: V6.1.4	A: V4.6 B: V4.2.2
TC27x-ED (B-Step, C-Step)	V11.0.1	V7.2	V4.1.0	A: V6.4 B: V6.1.4	A: V4.6 B: V4.2.2
TC29x	V11.8.0	V7.2.8	V4.1.9	A: V6.4 B: V6.3	A: V4.6 B: V4.3
TC29x-ED	V11.0.1	V7.2	V4.1.0	A: V6.4 B: V6.3	A: V4.6 B: V4.3
TC36x-PD	V11.15.0	V7.2.15	V4.1.16	A: V6.4 B: V6.4	A: V4.6 B: V4.6
TC37x-PD	V11.15.0	V7.2.15	V4.1.16	A: V6.4 B: V6.4	A: V4.6 B: V4.6
TC37x-ED	V11.12.0	V7.2.12	V4.1.13	A: V6.4 B: V6.4	A: V4.6 B: V4.6
TC38x-PD	V11.8.0	V7.2.8	V4.1.9	A: V6.4 B: V6.3	A: V4.6 B: V4.3
TC39x-ED (A-Step)	V11.2.1	V7.2.2	V4.1.3	A: V6.4 B: V6.4	A: V4.6 B: V4.6
TC39x-ED (B-Step)	V11.8.0	V7.2.8	V4.1.9	A: V6.4 B: V6.3	A: V4.6 B: V4.3

A: SBB V2.1
B: HBB [DISTAB13]

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3 What's New - Release Notes

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

3.1 New or Enhanced Functions

3.1.1 New with HSP12.0.0

Issue Identifier	Description
# 626970	ECU traps due to EE change when ECU is off
# 629990	ECU traps due to switching to new PC without stopping the measurement before
ETKPRG-621	Support TC33xPD

3.1.2 New with HSP11.15.0

Issue Identifier	Description
ETKPRG-517 ETKPRG-539	Support of TC36x-PD and TC37x-PD

3.1.3 New with HSP11.14.0

Issue Identifier	Description
611515	XETK_Configuration: 5us trigger polling period could result in an inaccessible XETK
619762	Infrequent wrong order of XCP counter between DTO and CTO response

3.1.4 New with HSP11.12.0

Issue Identifier	Description
ETKX-96	Improvements for DAP access on block read
ETKPRG-227	Support of TC37x-ED
# 607283	Measurement of dummy data in case of DAP errors

3.1.5 New with HSP11.11.0

Issue Identifier	Description
#600925	Loss of connection in case of DAQ Overload (XCP counter error)

3.1.6 New with HSP11.10.0

Issue Identifier	Description

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#595893	IP Manager cannot move XETK to different IP subnet when static IP is set
n/a	TC23x-PD supported

3.1.7 New with HSP11.9.0

Issue Identifier	Description
#589249	Static calibration with XCT does not work
#585676	Host connection is lost if attaching to running bypass with UDE
#588875	BDR not functioning when ECU has continuous running reset.
#587524	XETKS20 behavior is changed with HSP 11.7. regarding debug arbitration
#593528	Unable to avoid cpu mismatch message on TC29x projects
#592837	Access to ED RAM could fail while concurrently using a debugger by debug api

3.1.8 New with HSP11.8.0

Issue Identifier	Description
#588791	Calibration not working on some PD devices with (invalid calibration handle)
n/a	Support TC39xED_B and TC38xx
n/a	XCP Event if CPU type is not matching A2L file

3.1.9 New with HSP11.7.0

Issue Identifier	Description
n/a	Added support for LERTv3

3.1.10 New with HSP11.6.0

Issue Identifier	Description
n/a	Improved stability for XCP debugging feature
575539	Lauterbach Trace32 connected via XCP and INCA measurement in parallel leads to watchdog reset of XETK
571863	Lost connection after ECU shutdown

3.1.11 New with HSP11.4.0

Issue Identifier	Description
n/a	Support Feature "ECU_DEFINED_ERRORCODES"
n/a	Support monitoring VDDSBRAM

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3.1.12 New with HSP11.3.0

Issue Identifier	Description
n/a	Coldstart Performance Improvements for DISTAB13
n/a	Support dynamic EMU for ATI Vision
Call #547844	Measurement with large EE containing 9000 measurements does not start with XETK
Call #541623	Send keep-alives to detect connection losses
Call #547411	After stopping and starting the OS (on ES910) the INCA measurement delivers no more data
Call #543394	When using timer triggers, measurement setup can fail with "Number of possible direct triggers exceeded"

3.1.13 New with HSP11.2.1

Issue Identifier	Description
n/a	TC39x-ED (A-Step) supported
n/a	XCP Debugging Enhancement: Increased JTAG clock when playing debug sequences.
Call #543853	Bypass counter is now incremented based on the value already set in ECU, not starting from 0.
Call #543854	Distab17 change counter and event header now updated properly when Distab17 is used together with timer triggered rasters.
Call #543855	Update to ensure INCA measurement does not stop if an RP system accesses an XETK event configured for both DAQ and STIM.

3.1.14 New with HSP11.2.0

n/a

3.1.15 New with HSP11.1.0

Issue Identifier	Description
n/a	Support of XCP Debugging Enhancements (New User Commands DBG_HALT_AFTER_RESET, DBG_SEQUENCE_MULTIPLE)
Call #524191	DAP frequency switching is failing

3.1.16 New with HSP11.0.1

Initial release of XETK-S20.1B.

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4 Product Variants

The XETK-S20.1B can be purchased in one variant. For details refer to the user guide.

5 Hardware Modifications

5.1 General remarks to this chapter

Hardware issues or obsolete parts can make it necessary to modify the population of the XETK. Information about the modifications is listed underneath. The hardware state starts with version **D014/01**. For the version syntax please refer to chapter 2.1.

5.2 Hardware delivery condition

The hardware state **D014/01** will be delivered with all new shipments.

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6 Firmware Modifications

6.1 General remarks to this chapter

The programmable logic code within the XETK-S20.0B is stored onto programmable logic devices (FPGA, CPLD). The first released firmware version is listed underneath. For the version syntax please refer to chapter 2.1.

6.2 First delivered version

FPGA Work	1.0.93
Firmware Work	1.0.62
FPGA Rescue	1.0.93
Firmware Rescue	1.0.62
CPLD	1.0.3

6.3 Current delivery condition

The following firmware versions will be programmed into all XETK-S20.0B shipments:

FPGA Work	1.3.12
Firmware Work	1.10.19
FPGA Rescue	1.0.82
Firmware Rescue	1.10.19
CPLD	1.0.3

In case of any problems the above mentioned firmware can be programmed to the XETK by using HSP 11.14.0. This HSP version is similar to the currently delivered XETK products. Newer HSP versions could contain bug fixes and / or new features.

Attention: For updating the XETK - FPGA with a later version by using the HSP Firmware update tool, all XETK - packages will be updated one after another and this will last a few minutes.

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7 Abbreviations

XETK	Product (emulator test probe) which can directly be connected to the tools PC
INCA	Measurement and Calibration Software of ETAS
ASCET-RP	Rapid Prototyping Software of ETAS
INTECRIO	Rapid Prototyping Software of ETAS
XETK Configuration Tool	Configuration Software, in order to configure a XETK
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
firmware	Software for MC hardware; necessary for implementation of new features or bug fixes
Hot-fix	Software bug-fix for a refresh version
tool-chain	MC hardware (e.g. ES690) and software (e.g. INCA)
MC	**M**easurement & **C**alibration
RP	**R**apid **P**rototyping
CPLD	**C**omplex **P**rogrammable **L**ogic **D**evice
FPGA	**F**ield **P**rogrammable **G**ate **A**rray; interface component to the application hardware
PCB	**P**rinted **C**ircuit **B**oard
DPR	Dual Ported RAM; special RAM onto the ETK which allows an access from ECU and application hardware at the same time
/CS	Chip select

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