Product :	XETK-T2.1			
Title :	Change Information			
File :	XETK-T2.1_Change_Information_V03.doc			
TTNR :	XETK-T2.1A F-00K-106-348 XETK-T2.1B F-00K-106-349 XETK-T2.1C F-00K-106-350 XETK-T2.1D F-00K-107-026			
Comments :	Current shipped (hardware state): **C011** Current released firmware version: **HSP 8.1.3**			
Created:	Name R. Mai	Department MCD/PRM-H	Signature Mir	Date 2010-09-21
Released:	Name H. Buck	Department EPH1	Signature Bk	Date 2010-09-21

Changes

Revision	Description	Date	Name	Signature
01	C011 initial hardware version [chapter 5] HSP 7.1.1 initial firmware version [chapter 6]	2009-01-26	R. Mai	R. Mai
	HSP 7.1.2 EHI 86621 solved [chapter 3]	2009-03-10	R. Mai	R. Mai
02	HSP 8.0.0 / ETK Drivers & Tools V2.1.3 Solved Issues added [chapter 3] New Firmware Modifications added [chapter 6]	2009-06-24	R. Mai	R. Mai
03	HSP 8.1.3 New HW Variant added [chapter 4.4]	21.09.2010	R. Mai	R. Mai

Table of content

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 tool PC for Measurement & Calibration:
2 GHz Pentium-PC or equivalent, equipped with

- 512 MB RAM (basic hardware), depending on the use cases 1GB RAM are advantageous
- Hard disk with minimum 10 GB free disk space
- CD-ROM for installation
- XGA-Graphic card with XGA-screen and resolution of 1024 x 768 with 16 bit colors
- Fast Ethernet adapter 100BaseT
  - with full duplex capability
  - configured as component TCP/IP only
  - separate to e.g. company network
- WINDOWS® XP SP2, WINDOWS® 2000 SP3 or higher, WINDOWS®VISTA

For the usage of INCA the user needs read and write access to the registry path HKEY_LOCAL_MACHINE\Software\ETAS.

1.3 Restrictions

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

Depending on the used PC hardware and software, the PC performance and thus the performance of INCA might be negatively affected when hyper threading is activated. In such a case we recommend not to use hyper threading.

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.

2 Version Syntax and Tool-Chain Information

2.1 Version-Syntax of the XETK-T2.1

The XETK-T2.1 hardware version information is located on the sticker of the XETK or can be read out of the XETK using the firmware update tool HSP.

Hardware State Syntax: **abbb/cc**

Description (modification details refer chapter 4)

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-T2.1 Firmware version information can be read out of the XETK using the firmware update tool HSP. 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

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.

Product Name	**Version**	**Remarks**
Firmware / HSP	V7.1.1	Initial version
	V8.1.3	XETK-T2.1D only
INCA	V6.2.1	Initial version
ETK Drivers and Tools	V2.1.1	Initial version
XETK Configuration Tool	V2.1.1	Initial version
ASCET-RP	Not supported	
INTECRIO	V3.1.0	Initial Version
RTA-TRACE	V2.1.2	Initial Version

The registered user will automatically receive the newest INCA-version (CD-ROM)
Updates or refreshes can be downloaded from the ETAS homepage:
http://de.etasgroup.com
http://en.etasgroup.com

3 What's New - Release Notes

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

3.1 New or Enhanced Functions

3.1.1 In ETK Drivers & Tools V2.1.3 & HSP V8.0.0

Type	Description	
Corrections	Call #85437 Call #83892	Concurrent write access to Measurement RAM on XETK is enabled and makes Adaptive Characteristics usable
	Call #87714	Distab is enabled when only STIM direction of a raster is used

3.2 Known issues

3.2.1 In ETK Drivers & Tools V2.1.1 & HSP V7.1.2

Issue Identifier	Description	Module
Call #86621	With the usage of Distab16, only TDM is possible. Distab measurement is not working.	HSP 7.1.1

3.2.2In ETK Drivers & Tools V2.1.1 & HSP V7.1.1

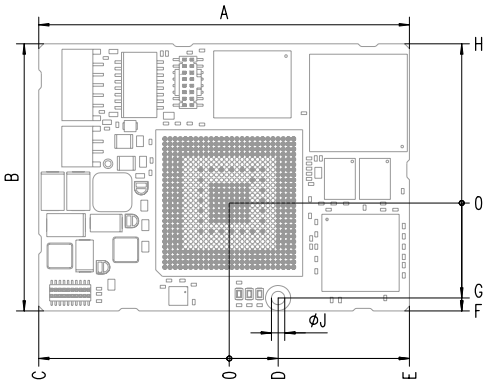
Issue Identifier	Description	Module
Call #75487	In case PC does not fulfil ETAS XETK system requirements, data acquisition will be stopped by XETK – no warning will be provided to user.	INCA 6.0 + ETK D&T

Call #82921	Device Status “calibration data” is blinking if RAM adapter mode is set to “not initialized” in XETK Configuration Tool.	ETK D&T 2.0.0 (-> XCT)
Call #83677	In case of ETAS master e. g. XETK Configuration Tool accesses the XETK device, HSP doesn’t find any connected hardware.	HSP 7.0.1
Call #84069	Special usage raster will be set to measurement raster when downloading to XETK by XETK Configuration Tool.	ETK D&T 2.0.1 (-> ASAP1B)
Call #84073	RTA trace parameter can’t be configured by XETK Configuration Tool. Workaround is to add the RTA trace parameter manually to A2L file and download via XETK Configuration Tool.	ETK D&T 2.0.1 (-> XCT)
Call #84392	Write access to a emulated RAM area not possible with adaptive characteristics	INCA

4 Product Variants

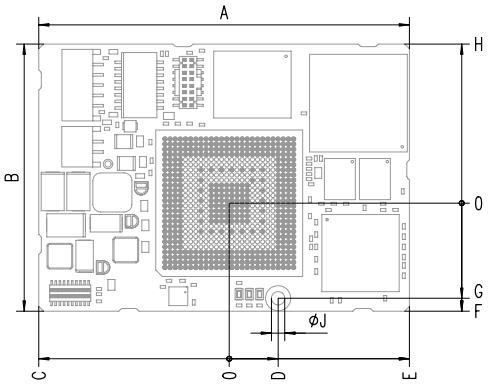
In general the XETK-T2.1 can be purchased in three variants. The electrical and system functionality differs a bit in the all variants (ECU Adapter and BDF support). The mechanical dimensions are identical for all three variants.

4.1 XETK-T2.1A

Item number	F-00K-106-348
Description	Emulator probe for ECUs with Infineon microcontroller TC179x with 1 MByte emulation RAM and a 441 pin ECU-adapter, without BDR support
For details refer the datasheet	

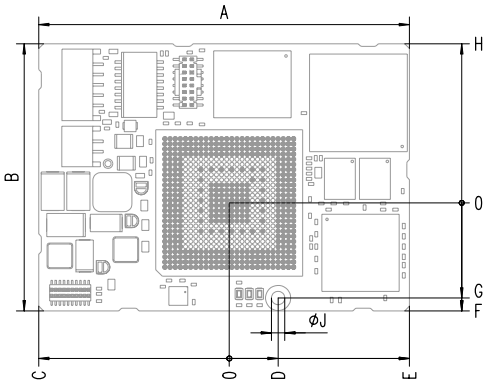
DIM	MILLIMETERS	INCHES
A	72.00	2.835
B	52.00	2.047
C	37.00	1.457
D	9.50	0.374
E	35.00	1.378
F	21.00	0.827
G	18.50	0.728
H	31.00	1.220
J	2.70	0.106

4.2 XETK-T2.1B

Item number	F-00K-106-349
Description	Emulator probe for ECUs with Infineon microcontroller TC179x with 1 MByte emulation RAM and a 441 pin ECU-adapter, with BDR support via JTAG
For details refer the datasheet	

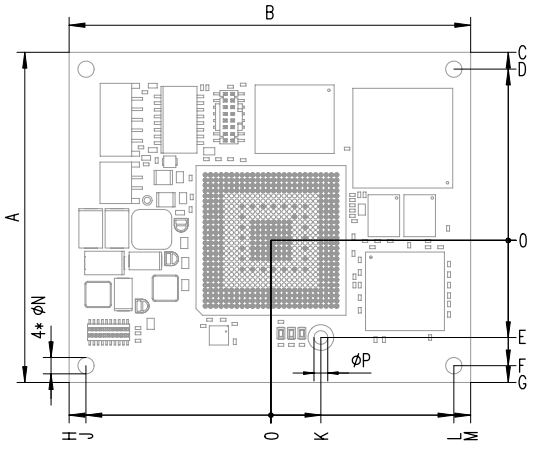
DIM	MILLIMETERS	INCHES
A	72.00	2.835
B	52.00	2.047
C	37.00	1.457
D	9.50	0.374
E	35.00	1.378
F	21.00	0.827
G	18.50	0.728
H	31.00	1.220
J	2.70	0.106

4.3 XETK-T2.1C

Item number	F-00K-106-243
Description	Emulator probe for ECUs with Infineon microcontroller TC179x with 1 MByte emulation RAM and a 416 pin ECU-adapter, with BDR support via JTAG
For details refer the datasheet	

DIM	MILLIMETERS	INCHES
A	72.00	2.835
B	52.00	2.047
C	37.00	1.457
D	9.50	0.374
E	35.00	1.378
F	21.00	0.827
G	18.50	0.728
H	31.00	1.220
J	2.70	0.106

4.4 XETK-T2.1D

Item number	F-00K-107-026
Description	Emulator probe for ECUs with Infineon microcontroller TC179x with 1 MByte emulation RAM and a 416 pin ECU-adapter, with BDR support via JTAG and additional holes for mounting inside the ECU housing.
For details refer the datasheet	

DIM	MILLIMETERS	INCHES
A	62.90	2.476
B	76.40	3.008
C	35.84	1.411
D	32.64	1.285
E	18.50	0.728
F	23.86	0.939
G	27.06	1.065
H	38.40	1.512
J	35.20	1.386
K	9.50	0.374
L	34.80	1.370
M	38.00	1.496
N	3.20	0.126
P	2.70	0.106

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 **C011**. For the version syntax please refer to chapter 2.1.

5.2 No modification at hardware state C011

5.3 Hardware delivery condition

The hardware state **C011** will be delivered with all new shipments.

6 Firmware Modifications

6.1 General remarks to this chapter

The programmable logic code within the XETK-T2.1 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	1.0.3
Firmware Work	1.0.18
FPGA Rescue	1.0.3
Firmware Rescue	1.0.18
CPLD	1.1.4

Attention:
For updating the XETK - firmware with a later version by using HSP, all XETK 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 XETK. This procedure makes the firmware update fail-safe.

6.3 Firmware delivery condition

The following firmware versions will be programmed into all XETK shipments:

	XETK-T2.1A, XETK-T2.1B and XETK-T2.1C	**XETK-T2.1D**
FPGA Work	1.0.25	1.0.26
Firmware Work	1.0.5	1.0.5
FPGA Rescue	1.0.25	1.0.26
Firmware Rescue	1.0.5	1.0.5
CPLD	1.1.4	1.1.4

In kind of any problems the above mentioned firmware can be programmed to the XETK by using HSP V8.1.3. 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 will last a few minutes.

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