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File :	ETKS1.1-D_Change_Information_V2.2.doc			
TTN :	F-00K-001-859			
Comments :	<p>Currently shipped: (12)201322A011 (FPGA-Boot-Code version: V1.2) FPGA-D1 version: V2.0 FPGA-D2 version: V1.3 FPGA-D3 version: V2.2 Hardware-state: A011</p>			
Created:	Name Mai	Department PMC/EPM-22	Signature Mai	Date 2005-06-09
Released:	Name Müller/ Lustig	Department PMC/EPM-22	Signature Müller/ Lustig	Date 2005-06-10

Changes

Revision	Description	Date	Name	Signature
1.0	(10)12A010 - initial Version	26.10.2001	Müller	Müller
1.1	(10)1310A010 - new controller support SH 7058FCC and new configuration variant ETKS1.1-D2 enabled [chapter 3.3.1 & 3.4.1]	08.07.2002	Müller	Müller
1.2	(12)1512A010 - coldstart within both configurations (ETKS1.1-D1 and ETKS1.1-D2) enabled [chapter 3.2.1, 3.3.1 & 3.4.1]	01.09.2003	Müller	Müller
2.0	(12)2013A010 - SH7058RFCC support & 100MBit/s calibration interface for the ETKS1.1-D1 configuration enabled [chapter 3.3.1 & 3.4.1]	21.10.2003	Müller	Müller
2.1	(12)2013A011 - Power up problem under certain conditions requires a HW adaptation [chapter 4.2.1]	30.11.2004	Müller	Müller
2.2	(12)201322A011 - new controller support SH 7059FCC with new configuration variant ETKS1.1-D3 enabled [chapter 3.5.1]	09.06.2005	Mai	Mai

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1 General remarks to this document

This document consists of three main parts.

Chapter 2 contains general information about the required tool-chain to use this ETK.

Two different items are described.

- Explanation of the version-system of the ETKS1.1-D
- The required versions of software (INCA / ASCET) , HSP (calibration hardware firmware of e.g. ES690, ES1232, MAC2...) and ETK - hardware.
Additionally other requirements for running the ETK.

Chapter 3 contains information about PLD-Code changes concerning this ETK

Chapter 4 contains information about hardware changes concerning this ETK

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2 Tool-Chain Information

2.1 Version-Syntax of the ETKS1.1-D

The ETKS1.1-D version information is located on the sticker of the ETK or can be read out of the ETK using the ETK-Configuration Tool.

The old version information has the following syntax: **(aa₀)aa₁cddd/ee**
or **(aa₀)aa₁aa₂cddd/ee**

The new version information has the following syntax: **(aa₀)aa₁aa₂aa₃cddd/ee**

PLD-Code Information:

(aa₀): FPGA-Boot-Code version (10, 11, 12,...) see chapter 3
The FPGA-Boot-Code version is not printed onto the ETK - label.
aa₁: FPGA-D1-Code version (10, 11, 12,...) see chapter 3
aa₂: FPGA-D2-Code version (10, 11, 12,...) see chapter 3
aa₃: FPGA-D3-Code version (10, 11, 12,...) see chapter 3

Hardware-Information:

c : PCB version (A, B, C, ...)
ddd: Hardware state of the PCB (010, 011, 012, ...) see chapter 4
ee: Assembly variant of the PCB (00, 01, 02, ...)

The first delivered hardware state of the ETKS1.1-D was **(10)12A010/01**.

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2.2 Version information of the Tool-Chain components

To get this ETK 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 ETK running please contact our local customer support or sales representative.

Name	Needed version	Remarks
HSP	V 1.0	First HSP version will support ETKS1.1-D
MAC2	V 4.1.9	Supported
ES690	✓	Supported
ES1000.2-system	V 4.1.9	ES1200/1, ES1231 and ES1232 supported with ES1120
ES1000.1	V 4.1.9	Supported
Software		
VS100	Not supported	
DOS ETK-Config-Tool	Not supported	
ETK Configuration Tool	V 1.4.3	
INCA	V 3.1.3	(basic mode)
ASCET	V 4.1.2	INCA in parallel to ASCET-SD V4.1.2 and TIPEXP V4.3.0

Support of new controller SH7058FCC & enable new ETKS1.1-D2 configuration:

Name	Needed version	Remarks
HSP	V 1.1	By using the new features without the mentioned HSP problems will occur.
INCA	V 3.2.2	By using the new features without the mentioned INCA problems will occur. (basic mode)

Support of new controller SH7059FCC & enable new ETKS1.1-D3 configuration:

Name	Needed version	Remarks
HSP	V 4.1	By using the new features without the mentioned HSP problems will occur.
INCA	V 5.2.1	By using the new features without the mentioned INCA problems will occur. (basic mode)

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Support coldstart:

Name	Needed version	Remarks
MAC2	×	Coldstart will not be supported by MAC2
ES1000.1	×	Coldstart will not be supported by ES1111 (VCU1)
HSP	V 2.2	By using the new features without the mentioned HSP, problems will occur.
INCA	V 4.0.3	By using the new features without the mentioned INCA, problems will occur. (basic mode)

Support of new controller SH7058RFCC & enable 100MBit/s calibration interface:

Name	Needed version	Remarks
MAC2	×	100MBit/s mode will not be supported by MAC2
ES1000.1	×	100 MBit/s will not be supported by ES1111 (VCU1) or ES1000.2 + ES1200/1
HSP	V 2.2	By using the new features without the mentioned HSP problems will occur.
INCA	V 4.0.4	(basic, compatibility and advanced mode)

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>

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3 PLD-Code Changes

3.1 General remarks to this chapter

The programmable logic code within the ETKS1.1-D is stored onto programmable logic devices (FPGA). The FPGA-code starts with version 1.0. For the version syntax please refer to chapter 2.1.

3.2 FPGA-Boot-Code version 1.0 was the first delivered version

3.2.1 Details of change

Version 1.2: File dated 12.11.2002
Cause: Manufacturing test enlarged in order to achieve a better product quality. That's why a new FPGA-Boot code was necessary.

Attention: For updating the ETK - HDC with the latest version by using the ETK - configuration tool, all ETK - FPGA - packages will be updated one after another.

3.2.2 Delivery condition

The FPGA-Boot version **1.2** will be programmed into all new shipments.

3.3 FPGA-D1-Code version 1.2 was the first delivered version

3.3.1 Details of change

Version 1.3: File dated 17.05.2002
Cause: New SH7058FCC enabled
Remedy: New FPGA-D1 code provides the new functionality.

Version 1.5: File dated 20.11.2002
Cause: Coldstart enabled and ECU start-up communication improved.
Remedy: New FPGA-D1 code provides the new functionality.

Version 2.0: File dated 08.10.2003
Cause: - New SH7058RFCC (Hitachi) μ C enabled
- 100MBit/s calibration interface for this configuration enabled
Remedy: New FPGA-D1 code provides the new functionality.

Attention: For updating the ETK - HDC with the latest version by using the ETK - configuration tool, all ETK - FPGA - packages will be updated one after another.

3.3.2 Delivery condition

The FPGA-D1 version **2.0** will be programmed into all new shipments.

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3.4 FPGA-D2-Code version 1.0 was the first delivered version

3.4.1 Details of change

Version 1.2: File dated 20.11.2002

Cause: Coldstart enabled and ECU start-up communication improved.

Remedy: New FPGA-D2 code provides the new functionality.

Version 1.3: File dated 10.10.2003

Solved Problem: Under special conditions the ETK does not enter the power-save mode. (behavior occurs only in a rough and noisy environment).

Remedy: New FPGA-D2 - code in order to get rid of the problem.

Attention: For updating the ETK - HDC with the latest version by using the ETK - configuration tool, all ETK - FPGA - packages will be updated one after another.

3.4.2 Delivery condition

The FPGA-D2 version **1.3** will be programmed into all new shipments.

3.5 FPGA-D3-Code version 2.2 was the first delivered version

3.5.1 Details of change

Version 2.2: file dated 22.04.2005

3.5.2 Delivery condition

The FPGA-D3 version **2.2** will be programmed into all new shipments.

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4 Hardware Changes

4.1 General remarks to this chapter

Hardware problems or obsolete parts can make it necessary to change the manufacturing of this ETK. Information about the changes are listed underneath. The hardware-state starts with version A010. For the version syntax please refer to chapter 2.1.

4.2 Changes from Hardware-state A010 to version A011

4.2.1 Details of Change

Changes:

Under certain conditions the ETK reset generator causes an error while ETK booting. A new PLD version (V11) for the XR3064 eliminates this problem.

4.2.2 Delivery condition

The hardware-state **A011** will be delivered with all new shipments.
ETKs with 'older' hardware-states can be modified to the current valid state.

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5 Abbreviations

ETK	Emulator test probe
ES1000	VME - system, successor of INCA-VME
INCA-VME	Old VME - system for MC and RP
ES690	MC hardware, successor of MAC2
MAC2	Old MC hardware
INCA	MC software, successor of VS100
VS100	MC software
ETK Configuration Tool	Configuration Software, in order to configure an ETK, successor of the old DOS tool
DOS ETK-Config-Tool	Old configuration software, in order to configure an ETK
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 bugfixes
Hotfix	Software bugfix 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
PLD	P rogrammable L ogic D evice
FPGA	F ree 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