AURIX™ TC37xEXT variants

About this document

Scope and purpose

This document is an addendum to the TC37xEXT Product Data Sheet and User's Manual, listing all planned product variants, key parameters such as memory size and optional features.

The User's Manual lists functions implemented on the Silicon, but this document counts functions that are pinning dependent; i.e. functions are counted that are connected to at least one package pin. As pins are overlaid with several functions the pinning needs to be checked (see Product Data Sheet) to determine the number of usable functions in an application.

Naming conventions

Prefix:

- SAK: $T_{ambient}$ Temperature Range from -40 °C up to +125 °C.
- SAL: $T_{ambient}$ Temperature Range from -40 °C up to +150 °C (packaged device).

Feature package:

- P: Standard feature.
- E: Emulation device with all features of the emulated standard type, additionally full MCDS, overlay functionality for calibration, AGBT as trace interface for development (depending on the package).
- C,V,Z: Customer Specific.
- A: ADAS ext. Memory.
- T: ADAS + emulation.
- X: Extended Feature device. These products contain the extended memory (EMEM) of the ADAS subsystem. The ADAS peripherals SPU, RIF and CIF are not available.
- M: MotionWise software.
- F: Extended Flash.
- G: Additional Connectivity.
- H: ADAS Standard feature.
- N: Standard feature with AMU.

Table of contents

1 TC37xEXT AB step

A table of TC37xEXT AT step variants.

Table 1 TC37xEXT variants

SAK-TC377TX-96F300S	SAL-TC377TX-96F300S
Step	
AB	AB
Production status	
Standard	Standard
Package type	
PG-LFBGA-292	PG-LFBGA-292
Pinout	
TX	TX
Reference silicon	
TC37xEXT	TC37xEXT
Temperature range (ambient)	
-40°C up to +125°C	-40°C up to +150°C
Chip ID ***Attention:*** ***The value of SCU_CHIPID in the UCODE field contains the default value 0 not the µCode version.***	
0xA9017781	0xA9017781
Cores / checker cores	
3/3	3/3
Maximum frequency (MHz)	
300	300
Program flash (MB)	
6	6
Data flash 0 (single-ended) (KB)	
256	256
Total SRAM (without EMEM and Cache) (KB)	
992	992
EMEM Size (KB)	
3072	3072
DSPR (KB)	
240 in CPU0&1; 96 other	240 in CPU0&1; 96 other
DLMU (KB)	
64 per CPU	64 per CPU

1 TC37xEXT AB step

Table 1 TC37xEXT variants (continued)

SAK-TC377TX-96F300S	SAL-TC377TX-96F300S
PSPR (KB)	
64	64
LMU (KB)	
0	0
DAM (KB)	
32	32
AMU[1)]	
No	No
ADC (primary groups/channels)	
4/32	4/32
ADC (secondary groups/channels)	
4/60	4/60
ADC (fast compare channels)	
4	4
ADC (EDSADC channels)	
6	6
CAN (modules/nodes)	
3/3x4	3/3x4
FlexRay (modules/channels)	
1/1x2	1/1x2
HSSL modules	
1	1
ASCLIN modules / with ASC and LIN / with 3-wire SPI	
12/12/11	12/12/11
QSPI modules / with LVDS	
5/2	5/2
SENT channels	
15	15
MSC modules	
2	2
PSI5 channels	
2	2

1 AMU is abbreviated as ASC Modeling Unit. For Additional details about AMU, Contact an Infineon Representative

1 TC37xEXT AB step

Table 1 TC37xEXT variants (continued)

SAK-TC377TX-96F300S	SAL-TC377TX-96F300S
PSI5-S module	
Yes	Yes
SDMMC module	
Yes	Yes
Maximum Ethernet availability: 1GBit/100Mbit/No	
2x1Gbit/s	2x1Gbit/s
MCDS availability	
MCDS	MCDS
ADAS cluster available	
No	No
HSM available	
Yes	Yes

2 Memory maps of TC37xEXT variants

The available feature variants currently have no influence on the memory map.

Revision history

Document version	Date of release	Description of changes
V1.0	2019-03-05	• First release.
V1.1	2019-06-12	• Chapter 1: Removed the following Variants in the 'Variants Table' - SAL-TC377TE-96 F300S, SAL-TC375TE-96 F300W, SAK-TC375TE-96 F300W, SAK-TC374TE-96 F300W, SAL-TC370TE-96 F300 • Chapter 2: Updated the Memory Maps of TC37xEXT variants to remove the Ethernet and ADC variation on the memory maps. • Chapter 1: TC37xEXT AB step variants table format changed to fit all the contents. • Chapter 1: Added new row in the variant tables called "AMU" with the footnote for additional details. • Chapter: About this document: Feature package definitions are updated to consistent with the product naming nomenclature definition.

Trademarks

All referenced product or service names and trademarks are the property of their respective owners.

Edition 2019-06

Published by

Infineon Technologies AG

81726 Munich, Germany

Do you have a question about any aspect of this document?

Email: erratum@infineon.com

Document reference
IFX-cmp1559120797632

IMPORTANT NOTICE

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics (“Beschaffenheitsgarantie”) .

With respect to any examples, hints or any typical values stated herein and/or any information regarding the application of the product, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of any third party.

In addition, any information given in this document is subject to customer’s compliance with its obligations stated in this document and any applicable legal requirements, norms and standards concerning customer’s products and any use of the product of Infineon Technologies in customer’s applications.

The data contained in this document is exclusively intended for technically trained staff. It is the responsibility of customer’s technical departments to evaluate the suitability of the product for the intended application and the completeness of the product information given in this document with respect to such application.

WARNINGS

Due to technical requirements products may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by Infineon Technologies in a written document signed by authorized representatives of Infineon Technologies, Infineon Technologies’ products may not be used in any applications where a failure of the product or any consequences of the use thereof can reasonably be expected to result in personal injury