Company	Trenz Electronic GmbH
PCN Number	PCN-20240302
Title	TE0725-03 to TE0725-04 Hardware Revision Change
Subject	Hardware Revision Change
Issue Date	2024-06-06

1 Products Affected

This change affects all Trenz Electronic TE0725 SoMs: TE0725-03*.

Affected Product	Replacement
TE0725-03-15-1C	TE0725-04-21C-1-A
TE0725-03-35-2C	TE0725-04-42C-1-A
TE0725-03-100-2C	TE0725-04-72C-1-A
TE0725-03-100-2CF	TE0725-04-72C-1-F
TE0725-03-100-2I9	TE0725-04-72I-1-B

2 Changes

2.1 #1 Changed DCDC EN5311QI (U11) to MPM3834CGPA (U5) and adapted power circuit.

Type: Schematic Change

Reason: EOL of Component.

Impact: None. Increased current output capability. Minor changes in electrical characteristics.

2.2 #2 Changed DCDC EN6347QI (U10) to MPM3860GQW-Z and adapted power circuit.

Type: Schematic Change

Reason: EOL of Component.

Impact: None. Increased current output capability. Minor changes in electrical characteristics.

2.3 #3 Changed power sequencing.

Type: Schematic Change

Reason: Improve power sequencing.

Impact: Check that the new power-up sequence fits your requirements. Voltage rail 3.3V delivered by external power supply via connectors enables 1V voltage rail (DCDC U10). 1V DCDC (U10) enables 1.8V voltage rail (DCDC U5) via signal PG_1V. 1.8V DCDC (U5) enables 2.5V voltage rail (DCDC U6) via signal PG_1.8V.

2.4 #4 Changed HyperRAM (U4) from S27KS0641DPBHI000 to IS66WVH8M8FALL-166B1LI.

Type: BOM change

Reason: EOL of component.

Impact: Custom design needs to be updated by customer.

2.5 #5 Changed clock (U3) from SiT8008AI-73-XXS-100.000000E to SiT8008BI-73-XXS-100.000000E.

Type: Schematic Change

Reason: Use new clock revision.

Impact: None.

2.6 #6 Added jumper (J3) option (default: not fitted) and resistor (R36) to enable JTAG only boot mode.

Type: Schematic Change

Reason: QSPI programming problems with newer Vivado versions.

Impact: None. JTAG boot mode directly accessible. Fix QSPI programming problems with newer Vivado versions according to AR#00002 - QSPI Programming issues[1].

1 https://wiki.trenz-electronic.de/pages/viewpage.action?pageId=105689937

2.7 #7 Added diode (D1) between signals "INIT" and "PROG_B".

Type: Schematic Change

Reason: Keep FPGA in reset while signal "PROG_B" is low during initial power-up.

Impact: None.

2.8 #8 Added diode (D4) between voltage monitor (U9) pin 3 net "nRST" and voltage rail 3.3V.

Type: Schematic Change

Reason: Protect manual reset pin.

Impact: None.

2.9 #9 Added pull-up resistor (R37) for signal "H1_A3".

Type: Schematic Change

Reason: Setup CS# signal externally.

Impact: None.

2.10 #10 Set resistor (R13) to not fitted.

Type: BOM Change

Reason: Resistor is not needed due to new diode.

Impact: None.

2.11 #11 Changed inductor (L1, L2, L3, L4, L6) from BKP0603HS121-T to MPZ0603S121HT000.

Type: BOM Change

Reason: EOL of component.

Impact: None.

2.12 #12 Added testpoint (TP1, ..., TP10).

Type: Schematic Change

Reason: Voltage and system monitoring improvement.

Impact: None.

2.13 #13 Removed track-it traceability pad S/N.

Type: Schematic Change

Reason: EOL of Component.

Impact: None.

2.14 #14 Changed fiducials to standard fiducial type.

Type: Schematic Change

Reason: Use standard fiducials.

Impact: None.

2.15 #15 Updated components from library.

Type: Schematic Change

Reason: Use latest component data.

Impact: None.

2.16 #16 Added legal notices, system and power overview. Updated revision history. Updated page count and order.

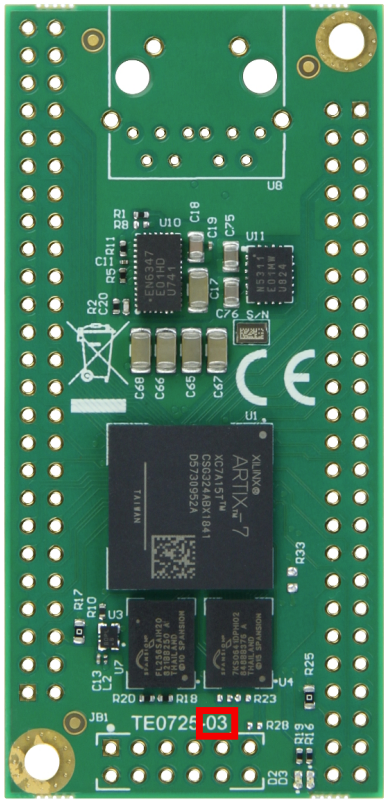
Type: Documentation Update

Reason: Documentation improvement.

Impact: None.

3 Method of Identification

The revision number is shown on the top side of the PCB. Revision number position changes between REV03 and REV04 on top side of the PCB.



4 Production Shipment Schedule

From December 2024, after old stock is gone. If the new revision is not suitable for your application and still the former revision of the board is needed, please contact us.

5 Contact Information

If you have any questions related to this PCN, please contact Trenz Electronics Technical Support at

- forum.trenz-electronic.de[2]
- wiki.trenz-electronic.de[3]
- support%trenz-electronic.de[4] (subject = PCN-20240302)

2 http://forum.trenz-electronic.de/
3 http://wiki.trenz-electronic.de/
4 mailto:support@trenz-electronic.de?subject=PCN-20240302

- phone
  - national calls: 05741 3200-0
  - international calls: 0049 5741 3200-0

6 Disclaimer

Any projected dates in this PCN are based on the most current product information at the time this PCN is being issued, but they may change due to unforeseen circumstances. For the latest schedule and any other information, please contact your local Trenz Electronic sales office, technical support or local distributor.

This PCN follows JEDEC Standard J-STD-046.