

<b>Company</b>	Trenz Electronic GmbH
<b>PCN Number</b>	PCN-20230620
<b>Title</b>	TE0710-02 to TE0710-03 Hardware Revision Change
<b>Subject</b>	Hardware Revision Change
<b>Issue Date</b>	2023-09-26

## 1 Products Affected

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This change affects all Trenz Electronic TE0710 SoMs: TE0710-02\*.

<b>Affected Product</b>	<b>Changes</b>	<b>Replacement</b>
TE0710-02-100-2CF	#1...#18	TE0710-03-72C21-A
TE0710-02-35-2CF	#1...#18	TE0710-03-42C21-A
TE0710-02-42I21-A	#2...#18	TE0710-03-42I21-A
TE0710-02-72I21-A	#2...#18	TE0710-03-72I21-A

## 2 Changes

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### 2.1 #1 Changed DDR3L SDRAM (U12) from IM4G08D3FABG-125 to IS43TR85120BL-125KBLI.

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**Type:** BOM change

**Reason:** EOL of Component.

**Impact:** New timings may be considered for existing designs.

### 2.2 #2 Changed DCDC EN6347QI (U1) to MPM3860GQW-Z and adapted power circuit.

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**Type:** Schematic Change

**Reason:** EOL of Component.

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

## 2.3 #3 Changed DCDC EN5311QI (U10, U11) to MPM3834CGPA and adapted power circuit.

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**Type:** Schematic Change

**Reason:** EOL of Component.

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

## 2.4 #4 Changed load switch from TPS27082LDDCR (Q1) to MP5077GG-Z and adapted circuit.

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**Type:** Schematic Change

**Reason:** BOM Optimization.

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

## 2.5 #5 Changed power supervisor TPS3805H33DCKR (U23) to STM6710LWB6F and adapted circuits.

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**Type:** Schematic Change

**Reason:** Improved power monitoring.

**Impact:** Improved power monitoring circuit by supervising additional voltage rails. If monitored voltages are out of range signal "PG\_ALL" is triggered.

## 2.6 #6 Improved voltage rail VTT decoupling via adding capacitors C135...C138.

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**Type:** Schematic Change

**Reason:** VTT decoupling improvement.

**Impact:** Improved VTT voltage rail reliability.

## 2.7 #7 Changed clock (U9) from SiT8008AI-73-XXS-25.000000E to SiT8008BI-73-XXS-25.000000E.

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**Type:** Schematic Change

**Reason:** Use new clock revision.

**Impact:** None.

## 2.8 #8 Changed ferrid bead BKP0603HS121-T (L1...L6) to MPZ0603S121HT000.

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**Type:** Schematic Change

**Reason:** EOL of Component.

**Impact:** None.

## 2.9 #9 Added diode D4 between signal nets "INIT" and "PROG\_B".

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**Type:** Schematic Change

**Reason:** Keep FPGA in reset while signal "PROG\_B" is low during initial power-up.

**Impact:** None.

## 2.10 #10 Added pull-up resistor R50 for signal net "PROG\_B".

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**Type:** Schematic Change

**Reason:** Remove floating signal situations and enable signal measurement.

**Impact:** None. Firmware reflects it but custom firmware needs to be updated by customer.

## 2.11 #11 Added testpoints TP1...TP28.

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**Type:** Schematic Change

**Reason:** Improve voltage measuring possibilities.

**Impact:** None.

## 2.12 #12 Changed size from 0805 to 0603 for capacitor C44.

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**Type:** Schematic Change

**Reason:** BOM Optimization.

**Impact:** None.

## 2.13 #13 Changed fiducials to standard fiducial type.

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**Type:** Schematic Change

**Reason:** Use standard fiducials.

**Impact:** None.

## 2.14 #14 Signal trace lengths changed

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**Type:** PCB change

**Reason:** Result of changes above.

**Impact:** Changed trace length have to be taken into account in existing designs. The trace length for new revision will be available in [TE0710 series pinout generator](#)<sup>1</sup>. Please check if change in trace length still matches your requirements. Adaption of carrier may be necessary.

## 2.15 #15 Added UKCA logo.

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**Type:** PCB Change

**Reason:** Required for export to UK.

**Impact:** None.

## 2.16 #16 Updated components from library.

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**Type:** Schematic Change

**Reason:** Use latest component data.

**Impact:** None.

## 2.17 #17 Updated documentation on page "B2B\_Connectors".

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**Type:** Documentation Update

**Reason:** Documentation improvement.

**Impact:** None.

## 2.18 #18 Updated overview, power overview, revision history and legal notices.

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**Type:** Documentation Update

**Reason:** Documentation improvement.

**Impact:** None.

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<sup>1</sup> [https://shop.trenz-electronic.de/trenzdownloads/Trenz\\_Electronic/Pinout/4x5\\_series\\_pinout\\_tracelength.xlsx](https://shop.trenz-electronic.de/trenzdownloads/Trenz_Electronic/Pinout/4x5_series_pinout_tracelength.xlsx)

## 3 Method of Identification

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The revision number is shown on the top side of the PCB.



## 4 Production Shipment Schedule

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This change takes place with immediate effect. 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

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

- [forum.trenz-electronic.de](http://forum.trenz-electronic.de)<sup>2</sup>
- [wiki.trenz-electronic.de](http://wiki.trenz-electronic.de)<sup>3</sup>
- [support@trenz-electronic.de](mailto:support@trenz-electronic.de)<sup>4</sup> (subject = PCN-20230620)
- phone
  - national calls: 05741 3200-0
  - international calls: 0049 5741 3200-0

## 6 Disclaimer

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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.

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<sup>2</sup> <http://forum.trenz-electronic.de/>

<sup>3</sup> <http://wiki.trenz-electronic.de/>

<sup>4</sup> <mailto:support@trenz-electronic.de?subject=PCN-20230620>