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| <b>Company</b>    | Trenz Electronic GmbH                             |
| <b>PCN Number</b> | PCN-20250819                                      |
| <b>Title</b>      | TEF0008-02 to TEF0008-03 Hardware Revision Change |
| <b>Subject</b>    | Hardware Revision Change                          |
| <b>Issue Date</b> | 2025-08-21                                        |

## Products Affected

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This change affects all Trenz Electronic TEF0008 boards: TEF0008-02-D.

| <b>Affected Product</b> | <b>Replacement</b> |
|-------------------------|--------------------|
| TEF0008-02-D            | TEF0008-03-D       |

## Changes

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### #1 Changed DCDC EP53A7HQL (U6) to MPM3834CGPA-Z and adapted power circuit.

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**Type:** Schematic Change

**Reason:** EOL of Component.

**Impact:** None. Minor changes in electrical characteristics.

### #2 Connected DCDC (U6) power good signal "PG\_1V8" via added resistor (R49) to FMC power good signal "PG\_M2C".

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**Type:** Schematic Change

**Reason:** Improve power-sequence handling.

**Impact:** Signal "PG\_M2C" is asserted only after power rail "1.8V" powered-up.

### #3 Changed EEPROM (U4) 24LC128-I/ST to M24C32-RDW6TP.

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**Type:** BOM Change

**Reason:** Follow VITA 57.1 standard.

**Impact:** Decreased memory size from 128 kbit to 32 kbit.

## #4 Changed EEPROM (U4) I2C address.

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- Default assembly option:
  - Connected FMC GA0 to EEPROM address bit 1 via resistor (R40 (default: assembled)).
  - Connected FMC GA1 to EEPROM address bit 0 via resistor (R39 (default: assembled)).
- Backwards compatible assembly option (on request):
  - Connected FMC GA0 to EEPROM address bit 0 via resistor (R38 (default: not assembled)).
  - Connected FMC GA1 to EEPROM address bit 1 via resistor (R41 (default: not assembled)).

**Type:** Schematic Change

**Reason:** Follow VITA 57.1 standard.

**Impact:** Changed I2C address needs to be considered within system design.

## #5 Added second differential clock at system controller (U5).

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- Connected net "GCLKF\_P/N" between PLL (U2) pin 28 and 27 and system controller (U5) pin H4 and H5.
- Connected 0.9 V reference voltage net "0V9\_VTT" at system controller (U5) pin L1.
- Supplied PLL (U2) pin 26 with "PLL\_VDD\_1V8" and added decoupling capacitor C61.
- Added clock termination circuit (R43 ... R47, C62, C63).
- Updated clock documentation.

**Type:** Schematic Change

**Reason:** Add differential clock and obtain already existing clock at the same time.

**Impact:** None. Already existing clock at system controller (U5) pin H6 and G5 can be used as before and a new differential clock should be available now.

## #6 Added DIP switch (S1) to control signal "JTAG\_EN" and add a user DIP switch together with pull-up resistor (R48).

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**Type:** Schematic Change

**Reason:** Enable signal "JTAG\_EN" control.

**Impact:** None. Enable possibility to disable system controller JTAG interface.

## #7 Changed commercial grade system controller 10M08SAU169C7G (U5) to industrial grade system controller 10M08SAU169I7G.

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**Type:** BOM Change

**Reason:** Increase temperature range.

**Impact:** None. Increase temperature range.

## #8 Changed 10 $\mu$ F, 10 V capacitor (C35, C38, C41, C44, C47, C50, C53, C56) to 22 $\mu$ F, 6.3 V.

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**Type:** BOM Change

**Reason:** Follow SFP+ recommendation.

**Impact:** None. Minor changes in electrical characteristics.

## #9 Changed 1 $\mu$ H inductor (L4 ... L11) to 4.7 $\mu$ H.

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**Type:** Schematic Change

**Reason:** Follow SFP+ recommendation.

**Impact:** None. Minor changes in electrical characteristics.

## #10 Removed track-it traceability pad (S/N1) from PCB completely.

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**Type:** Schematic Change

**Reason:** EOL of Component.

**Impact:** None.

## #11 Added test points (TP11, TP12).

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**Type:** Schematic Change

**Reason:** Improve measurement possibilities.

**Impact:** None.

## #12 Added UKCA-, RoHS- and ESD-logo.

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**Type:** PCB Change

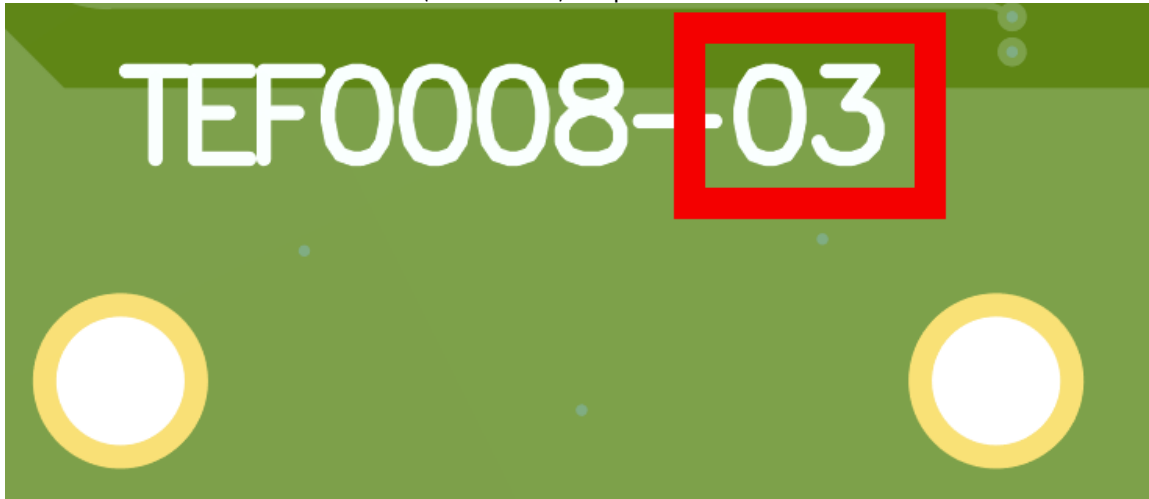
**Reason:** Improve product classification.

**Impact:** None.

## Method of Identification

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The model code and revision number (TEF0008-03) are printed on the bottom side of the PCB.



## Production Shipment Schedule

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From February 2026, 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.

## 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](https://forum.trenz-electronic.de)
- [wiki.trenz-electronic.de](https://wiki.trenz-electronic.de)
- [support@trenz-electronic.de](mailto:support@trenz-electronic.de) (subject = PCN-20250819)
- phone
  - national calls: 05741 3200-0
  - international calls: 0049 5741 3200-0

## 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.