

Company	Trenz Electronic GmbH
PCN Number	PCN-20220825
Title	TE0712-02 to TE0712-03 Revision Change
Subject	Change of hardware revision
Issue Date	2022-10-27

1 Products Affected

This change affects all Trenz Electronic TE0712 SoMs of revision 02: TE0712-02-*.

Affected Product	Replacement
TE0712-02-71I36-A	TE0712-03-71I36-A
TE0712-02-72C36-A	TE0712-03-72C36-A
TE0712-02-72C36-L	TE0712-03-72C36-L
TE0712-02-81I36-A	TE0712-03-81I36-A
TE0712-02-82C36-A	TE0712-03-82C36-A
TE0712-02-82C36-AW	TE0712-03-82C36-AW
TE0712-02-82C36-L	TE0712-03-82C36-L
TE0712-02-82I36-A	TE0712-03-82I36-A
TE0712-02-42I36-A	TE0712-03-42I36-A
TE0712-02-81I36-L	TE0712-03-81I36-L

2 Changes

2.1 #1 Changed EN63A0QI to MP8869SGL-Z for U14

Type: Schematic Change

Reason: EOL of Component

Impact: None. Minor changes in electrical characteristics.

2.2 #2 Changed EP53F8QI to MPM3834CGPA for U6 and U16.

Type: Schematic Change

Reason: EOL of Component

Impact: None. Minor changes in electrical characteristics.

2.3 #3 Changed power switch TPS27082LDDCR to MP5077GG-Z for Q1.

Type: Schematic Change

Reason: EOL of Component

Impact: None. Minor changes in electrical characteristics.

2.4 #4 Added power monitors STM6710LWB6F (U10, U11). Changed system controller pin 25 from 3.3V to signal "PG_ALL" from new power monitors. Added testpoint TP25 at signal "PG_ALL".

Type: Schematic Change

Reason: Power Handling Improvement

Impact: Voltages are monitored and if out of range reset is triggered.

2.5 #5 Added diode D3 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.

2.6 #6 Change resistor values for R2 and R68 from 4.87 kOhm to 2.2 kOhm.

Type: Schematic Change

Reason: Improve I2C stability for higher baud rates.

Impact: None. I2C stability improvement.

2.7 #7 Change resistor values for R62 from 2.49 kOhm to 4.99 kOhm and for R63 from 4.99 kOhm to 10 kOhm.

Type: BOM Change

Reason: BOM Optimization.

Impact: None. Minor changes in electrical characteristics for DCDC U8.

2.8 #8 Change capacitors in net "VIN" from 47 uF 6.3 V to 22 uF 10 V for C70, C80, C126, C127, C132, C176, C177.

Type: Schematic Change

Reason: Improve reliability.

Impact: None. Minor changes in electrical characteristics.

2.9 #9 Change capacitors C18, C19, C125, C158, C174.

Type: Schematic Change

Reason: BOM Optimization.

Impact: None. Minor changes in electrical characteristics.

2.10 #10 Change ferrid beads BKP0603HS121-T to MPZ0603S121HT000 for L1, L2, L3, and L5.

Type: Schematic Change

Reason: EOL of component.

Impact: None. I2C stability improvement.

2.11 #11 Connect U14 to I2C bus via resistors R80 and R81 and pull-up resistors R26 and R27 and testpoints TP23 and TP24.

Type: Schematic Change

Reason: Improvement of DCDC handling.

Impact: None. I2C bus has additional device.

2.12 #12 Change SI5338A-B-GM firmware.

- New CBP version (4.6) is used which leads to MultiSynth parameter changes.

- Enable optional FPGA Fabric clock CLK0 100 MHz with LVDS.
- Enable clock CLK1 50 MHz with two single ended (Port A and B) CMOS in phase clocks instead of one (Port A) used for ETH PHY synchronisation.

Type: Firmware Change

Reason: Improved PLL settings.

Impact: Two additional clocks are available. Settings are saved in NVM. Minor changes in electrical characteristics.

2.13 #13 Added legal notices, project overview, and revision changes. Updated page count and page order.

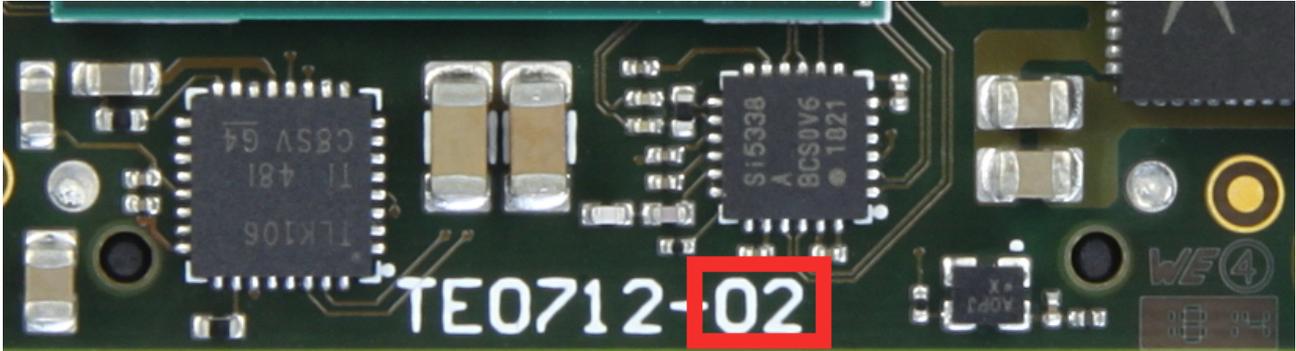
Type: Documentation Update

Reason: Documentation improvement.

Impact: None.

3 Method of Identification

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



4 Production Shipment Schedule

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

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

- forum.trenz-electronic.de¹
- wiki.trenz-electronic.de²
- support@trenz-electronic.de³ (subject = PCN-20220825)
- 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.

¹ <http://forum.trenz-electronic.de/>

² <http://wiki.trenz-electronic.de/>

³ <mailto:support@trenz-electronic.de?subject=PCN-20220825>