Company	Trenz Electronic GmbH
PCN Number	PCN-20220228
Title	TE0720-03 to TE0720-04 Hardware Revision Change
Subject	Hardware Revision Change
Issue Date	2022-03-11

1 Products Affected

This change affects all Trenz Electronic TE0720 SoMs of revision 03.

Affected Product	Replacement
TE0720-03-*	TE0720-04-*

2 Changes

2.1 #1 Replace EN6347QI (U1) by MPM3840GQV-Z

Type: Schematic Change

Reason: Enpirion DCDCs are discontinued.

Impact: None.

2.2 #2 Replace EP53F8QI (U2, U3) by MPM3834CGPA

Type: Schematic Change

Reason: Enpirion DCDCs are discontinued.

Impact: None. Maximum continuous output current of DCDC increased from 1.5 A to 3 A on each rail.

2.3 #3 Replace TPS27082LDDCR (Q1) by MP5077GG-Z

Type: Schematic Change

Reason: Supply chain optimization.

Impact: None.

2.4 #4 Replace BKP0603HS (L1, L2, L3, L4, L5, L7, L8) by MPZ0603S121HT000

Type: Schematic Change

Reason: Ferrite bead are discontinued.

Impact: None.

2.5 #5 Changed capacitor (C14)

Type: Schematic Change

Reason: DCDC change.

Impact: None. Designator changed.

2.6 #6 Changed voltage divider resistors (R21, R61) to set the threshold for U26.

Type: Schematic Change

Reason: Set reset threshold for U26 to 0.904 V.

Impact: None, improved reset behaviour.

2.7 #7 Added power supervisor BD39040MUF (U27)

Type: Schematic Change

Reason: Improved voltage rail supervision.

Impact: None. All power rails are now monitored.

2.8 #8 Connect BD39040MUF "PG_All" - signal U27.15 to system controller U19.C12 with pull-up resistor R67.

Type: Schematic Change

Reason: Power Supervisor connection.

Impact: None. If custom CPLD design used, check for compatibility.

2.9 #9 Connect BD39040MUF WatchDog to CPLD.

Type: Schematic Change

Reason: WatchDog connected for possible future use to CPLD.

Impact: None. WatchDog connected for custom use to CPLD. If custom CPLD design used, check for compatibility.

2.10 #10 Signal MIO8 (U5.E5) connected to system controller (U19.N7).

Type: Schematic Change

Reason: Enable boundary scan for MIO bank 1.

Impact: None. If custom CPLD design used, check for compatibility.

2.11 #11 Added pull-down resistors R64 for net "ON_1V0".

Type: Schematic Change

Reason: Default pull-down option to avoid floating states.

Impact: None.

2.12 #12 Added pull-down resistors R65 for net "ON_1V8".

Type: Schematic Change

Reason: Default pull-down option to avoid floating states.

Impact: None.

2.13 #13 Power supervisor U26 connected to 3.3VIN power rail (was 3.3V).

Type: Schematic Change

Reason: Avoid high-signal-state at U26 manual reset pin 3 without powered supervisor.

Impact: None.

2.14 #14 Added protection diode D3 to U26.3 (#MR input).

Type: Schematic Change

Reason: Avoid voltage high-signal-state at U26 manual reset pin 3 without powered supervisor.

Impact: None.

2.15 #15 Changed PCB layout of power supplies.

Type: PCB Change

Reason: DCDCs with new footprints needs to be used.

Impact: None.

2.16 #16 Added option to install Heatsink SuperGrip (c).

Type: PCB Change

Reason: Improve optional cooling solution.

Impact: None.

2.17 #17 Added capacitors C7, C8, and C9 (100uF, 1V).

Type: PCB Change

Reason: Improve decoupling for "1V" voltage rail.

Impact: None.

2.18 #18 Changed PCB layout of Samtec B2B signals.

Type: PCB Change

Reason: Result of this PCN changes.

Impact: The length of the tracks has been changed. Pinout of Samtec B2B connectors is not affected. Changed trace length has to be taken into account in existing designs. The trace length for new revision are added to the 4x5 series pinout generator[1]. Please, check if change in trace length still matches your requirements. Adaption of carrier may be necessary.

2.19 #19 Changed schematic documentation.

Type: DOC Change

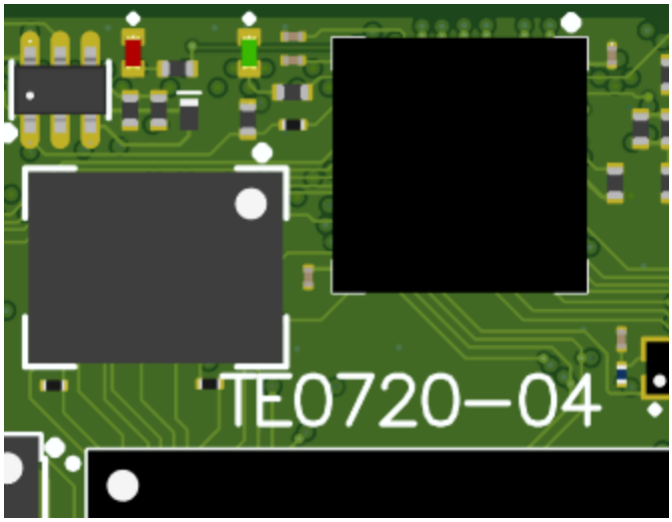
Reason: Documentation optimization.

Impact: None. B2B information, legal notices, change history, system overview, power diagram and power page are inserted or changed. Schematic page number changes.

1 https://shop.trenz-electronic.de/trenzdownloads/Trenz_Electronic/Pinout/4x5_series_pinout_tracelength.xlsx

3 Method of Identification

The model code and revision number of the module "TE0720-04" are printed on the top side of the PCB for revision 04.



4 Production Shipment Schedule

The new revision 04 will be shipped from October 2022. 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-20220228)
- phone
    - national calls: 05741 3200-0
    - international calls: 0049 5741 3200-0

2 http://forum.trenz-electronic.de/
3 http://wiki.trenz-electronic.de/
4 mailto:support@trenz-electronic.de?subject=PCN-20220228

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.