



## TE0808-04-09-1EE-S Starter Kit

**Order number:** TE0808-04-09-1EE-S

**Product information "TE0808-04-09-1EE-S Starter Kit"**

The Trenz Electronic Starter Kit TE0808-04-09-1EE-S consists of a TE0808-04-09EG-1EE module with ZU9 on a TEBF0808-04 base board including a pre-assembled heatsink, in a black Core V1 Mini-ITX Enclosure. Supplied with a Be Quiet! 400W power supply for the enclosure, two mounted XMOD FTDI JTAG Adapter, an 8 GB micro SD card, an USB cable, screws and bolts.

## TE0808-04-09-1EE

The Trenz Electronic TE0808-04-09EG-1EE is a MPSoC module integrating a Xilinx Zynq UltraScale+, 4 GByte DDR4 SDRAM, 128 MByte Flash memory for configuration and operation, 20 Gigabit transceivers, and powerful switch-mode power supplies for all on-board voltages. A large number of configurable I/O's is provided via rugged high-speed stacking connections.

### TE0808-04-09-1EE Key Features

- Xilinx Zynq UltraScale+ XCZU9EG-1FFVC900E
- ZU9EG 900 Pin Packages
- 3 mm mounting holes for skyline heat spreader
- Size: 52 x 76 mm
- B2B Connectors: 4 x 160 pin
- Rugged for shock and high vibration
- 4 GByte 64-Bit DDR4 SDRAM
- 128 MByte SPI Boot Flash (dual parallel)
- User I/Os
  - 65 x PS MIOs, 48 x PL HD GPIOs, 156 x PL HP GPIOs (3 banks)
  - Serial transceivers: 4 x GTR + 16 x GTH
  - Transceiver clocks inputs and outputs
  - PLL clock generator inputs and outputs
- Si5345 - 10 output PLL
- All power supplies on board, single 3.3V Power required
  - 14 on-board DC/DC regulators and 13 LDOs
  - LP, FP, PL separately controlled power domains
- Support for all boot modes (except NAND) and scenarios
- Support for any combination of PS connected peripherals
- Evenly spread supply pins for good signal integrity.

Other assembly options for cost or performance optimization plus high volume prices available on request.

### Recommended Software

Vivado Design Suite - HLx Edition Download

Vivado Design Suite HLx Editions include Partial Reconfiguration at no additional cost with the Vivado HL Design Edition and HL System Edition. In-warranty users can regenerate their licenses to gain access to this feature.

Overview of all Editions of Vivado Design Suite Editions

### TEBF0808-04 Base board

The Trenz Electronic TEBF0808 UltraITX+ base board has been developed individually for the TE0808 UltraSOM+ MPSoC.

## Key Features TEBF0808-04

- Mini-ITX form factor
- ATX Power supply connector (12V only PS Required)
- optional 12V Standard Power Plug
- USB3 with USB3 HUB
- Gigabit Ethernet RJ45
- MicroSD Card (bootable)
- eMMC (bootable)
- PCIe slot - PS GT Connected, one PCIe lane (16 Lane Connector)
- Displayport Single Lane PS GT Connected
- One SATA Connector
- FMC HPC Slot (1.8V max VCCIO)
- Dual SFP+
- One Samtec FireFly (4 GT lanes bidir)
- One Samtec FireFly connector for reverse loopback
- Fan connectors, PC Enclosure, FMC Fan
- Intel front panel connector (PWR/RST/LED)
- Intel HDA Audio connector
- CAN FD Transceiver (10 Pin IDC Connector)
- 20 Pin ARM JTAG Connector (PS JTAG0)

## PC Enclosure Accessible I/O

- PCIe
- FMC
- Dual SFP+
- RJ45 Gigabit Ethernet
- 2x USB3 Host
- Displayport
- microSD
- Two LED's
- CAN FD (using DB9 to IDC10 Cable)

## Core V1 Mini-ITX Gehäuse - technical features

- Dimensions: 260 x 276 x 316 mm (B x H x T)
- Material: Steel
- Colour: Black
- Drive Slots: 2 x 3,5 Zoll (intern, 3,5 Zoll) and 2 x 2,5 Zoll (intern, 2,5 Zoll)
- Expansion slots: 2
- I/O-Panel: 2 x USB 3.0 and 1 x Audio In/Out each
- Maximum graphic card length: 255 mm (inner enclosure)
- Maximum graphic card length: 285 mm (outer enclosure)
- Maximum CPU cooler height: 140 mm
- Maximum length power supply: 200 mm

## Package Content Starter Kit

- 1 x Core V1 Mini-ITX Enclosure- black with viewing window and removable sled walls
- 1 x Power Supply Be quiet! BN142 System Power 7, 400 Watt, 12V, ATX 2.3 with fan
- 1 x TE0808-04-09EG-1EE with ZU9
- 1 x TEBF0808-04 base board
- 1 x Heatsink MBH31001-15W/2.6
- 1 x TE0790-02 XMOD FTDI JTAG Adapter (compatible with Xilinx-Tools), pre-assembled
- 1 x TE0790-02L XMOD FTDI JTAG Adapter (independent from Xilinx-Tools), pre-assembled
- 1 x 8 GB Class 4 microSDHC card
- 1 x USB cable, Typ A to Typ B Mini, 2 meter length
- 2 x Phillips screws, M3 x 6, pan head, zinc coated
- 2 x Spacer bolts, M3, 10 mm

*All modules produced by Trenz Electronic are developed and manufactured in Germany.*







