TEC0850 Getting Started

Overview

The Trenz Electronic TEC0850 is an industrial-grade MPSoC SoM integrating a Xilinx Zynq UltraScale+ MPSoC, with 64-bit wide SODIMM DDR4 SDRAM, max. Dual 512 MByte Flash memory for configuration and operation. 24 Gigabit transceivers on PL side and 4 PS side. Powerful switch-mode power supplies for all onboard voltages. A large number of configurable I/Os. 3U form factor.

Power supply

Board takes power from J1E connector. Voltage is 12V maximum current 6.65A. See TEC0850 TRM for details.

DIP-Switches

S1

Switch	Description
1	SC JTAGEN (OFF: MAX 10, ON SoC)
2	EEPROM WP (Write protect, ON active)
3	FPGA PUDC (ON: internal pull-up resistors enabled, OFF: floating)
4	SC Switch (Reserved for future use)

S2

Switch	Description
1	Boot Mode 3
2	Boot Mode 2
3	Boot Mode 1
4	Boot Mode 0

See Zynq UltraScale+ Device Technical Reference Manual page 236 for full boot modes description. Most common modes are

Boot Mode	SW2:1	SW2:2	SW2:3	SW2:4
JTAG Boot Mode	ON	ON	ON	ON
Quad-SPI	ON	ON	OFF	ON
SD Card	ON	OFF	ON	OFF

LEDs

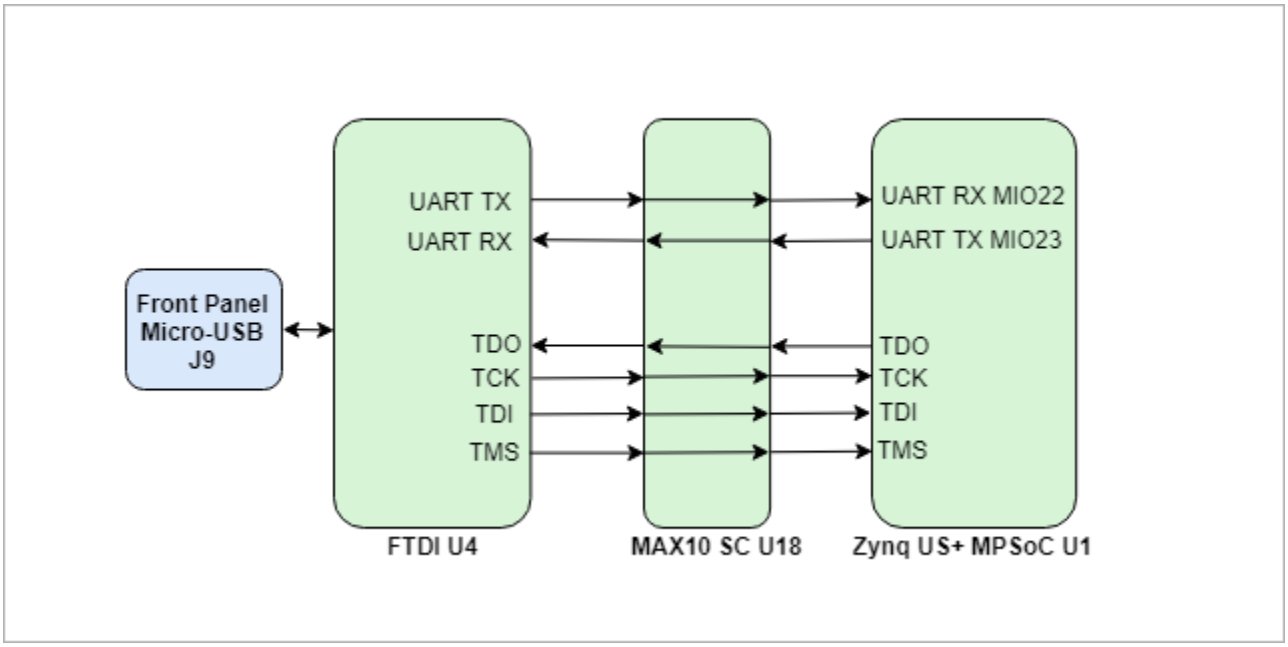
LED	Signal	Chip	Pin	Description

Front panel LED 1 (Red)	LED_FP_1	FPGA U1	AF15	PL User defined LED
Front panel LED 2 (Green)	LED_FP_2	FPGA U1	AG15	PL User defined LED
Front panel LED 3 (Green)	LED_FP_3	FPGA U1	AE15	PL User defined LED
Front panel LED 4 (Green)	LED_FP_4	SC U18	M4	Power Good

JTAG/UART

Board has USB-UART bridge based on FTDI FT2232 chip. Use of this feature requires that USB driver is installed on your host PC. UART0 with MIO 22 .. 23 should be selected in "Zynq UltraScale+ MPSoC" configuration.

Connected device depends on JTAGEN DIP (S1-1)



Reference Designs

TEC0850 Reference Designs

Notes