

# Essentials Core Components For Custom AudioLink Board

## 1: MIMXRT1062DVJ6B (ARM Cortex-M7 chip)

- Pins like **VDD-SOC-IN**: Power Supply

**VDD-HIGH-IN**: Power For I/O Pads

**USB1-DN/DP**: USB differentials data lines Neg/Pos

**BOOT-MODE**: Boot Configuration on power-UP/reset

\* These pins are essential

2: Power Management: Voltage regulators and power rails

→ **TLV7S733P** (3.3V regulator)

- decoupling capacitors (C6-C32)
- BAT54C diodes for VBAT
- Ferrite beads and inductors (L2-L4) for filtering

## 3: Crystal Oscillators

- **24 MHz Crystal**: Main System Clock

- **37.768 KHz Crystal**: Only if using RTC or Sleep

## 4: USB Interface

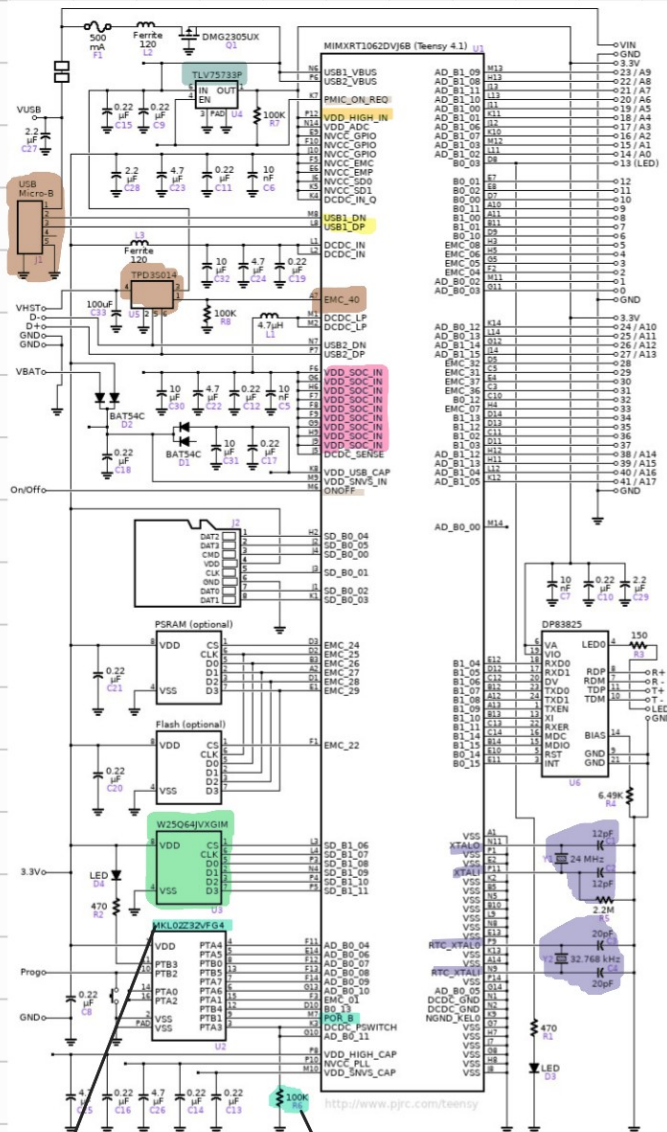
- Pins: **USB1-DN**, **USB1-DP**
- ESD Protection (**TPD3S014**)
- USB micro Port and related passives (C27-C28)

## 5: Boot Configuration

- Boot Mode: R6 to boot From Internal Flash
- **PMIC-ON-REC** and **ONOFF** for startup (Pull-UPS and momentary button)

## 6: Debug / Programming

- **W25Q64JVK6IM**: boot loader



Bootloader microcontroller programmed by PJRC (not publicly available) ensures that **BOOT-MODE** is low at power up, which selects normal flash booting