This document provides a brief introduction to the MachXO5-55TD or MachXO5-55TDQ Evaluation Board.

Labels (clockwise from top-left): User LEDs (D1-D8); Power Switch (SW6); MachXO5-55TD or MachXO5-55TDQ Device (U3); J19 (Bottom); JP4; J17 (Bottom); J11 (Bottom); SW5; PMOD Header (J15); 50 Pin FPC Connector (CN2); PCIe Edge Connector (CN1); DIP Switches (SW1); SW7

Check Kit Content

1
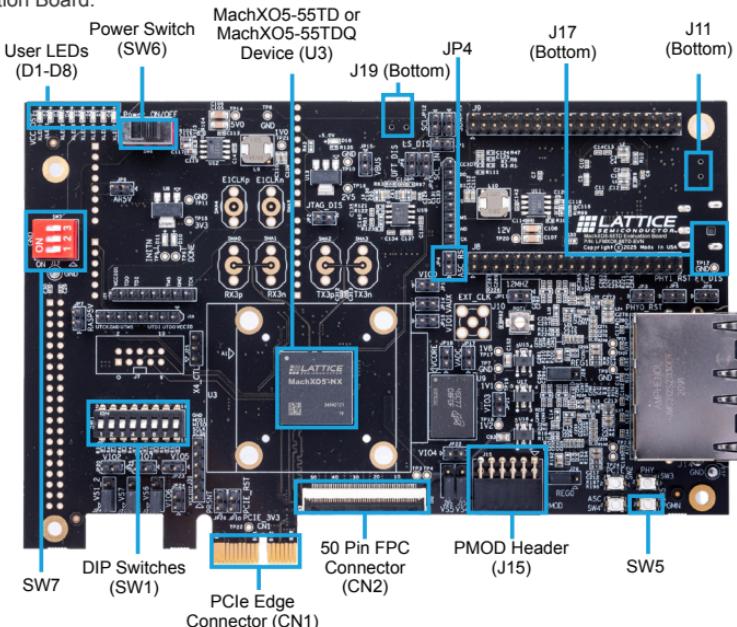
The MachXO5-55TD or MachXO5-55TDQ Evaluation Board Kit contains the following items:

- ■ MachXO5-55TD or MachXO5-55TDQ Evaluation Board with demo design
- ■ 12 V AC/DC power adapter and international plug adapters
- ■ Cables
- ■ Quick Start Guide with Lattice Radiant® software download information

Installing the Software

2

- ■ The MachXO5-55TD or MachXO5-55TDQ Evaluation Board comes with pre-programmed bitstream.
- ■ Download and install Lattice Radiant design software version 2024.2.1 or later for MachXO5-55TD, and version 2025.2 or later for MachXO5-55TDQ, from latticesemi. com/radiant. If your requirement is limited to reprovisioning the board, you may instead use the Radiant Programmer Standalone software—version 2024.2.1 or later for MachXO5-55TD, and version 2025.2 or later for MachXO5-55TDQ.

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3 Using the MachXO5-55TD or MachXO5-55TDQ Evaluation Board

The MachXO5-55TD or MachXO5-55TDQ Evaluation Board is factory-programmed with a default demonstration design. Upon powering up the board, LEDs D1 through D8 begin blinking, indicating that the board is operating correctly.

Powering the Board

■ The board can be powered by a 12 V supply through the power adaptor connector J17, the 12 V PCIe edge connector (CN1), or by a 5 V supply through the mini USB connector J11

■ The input power source is selected using the Power Selection switch (SW6)
  ■ Switching SW6 to the left selects the 12 V input (either from J17 or the PCIe connector)
  ■ Switching SW6 to the right selects the 5 V mini-USB input (J11)

4 Observing the Demonstration program

■ Connect the mini-USB cable to J19 to view the demo status via a terminal program
■ Connect jumper at JP4 to make pin D19 pull-high
■ You must set the UART Baud Rate settings below to display the UART output correctly
  1. Speed: 115200
  2. Data: 8-bit
  3. Parity: none
  4. Stop bits: 1-bit
  5. Flow control: none
■ Once the terminal program is connected, press SW5 to see output like the below image:
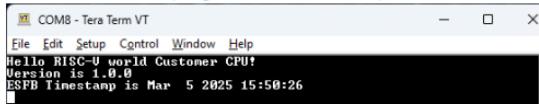
5 Doing more with the MachXO5-55TD or MachXO5-55TDQ Evaluation Board

Check the Lattice website at latticesemi.com/products/developmentboardsandkits/machxo5-nx-55td-evaluation-board (MachXO5-55TD) or latticesemi.com/en/Products DevelopmentBoardsAndKits/machxo5-nx-55td-evaluation-board (MachXO5-55TDQ) to download the complete User Guide, additional demonstrations and other resources.

Technical Support

www.latticesemi.com/support