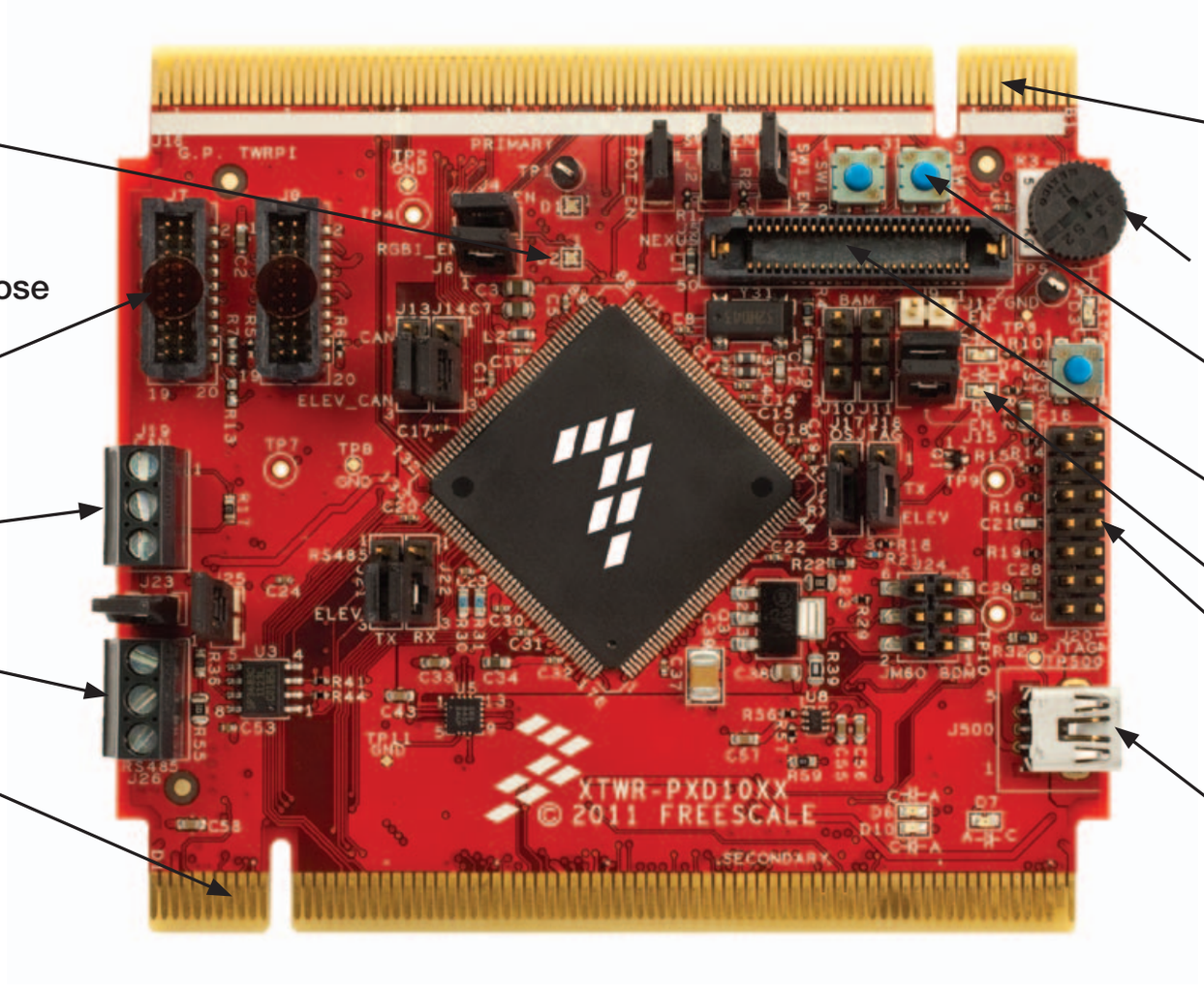
Quick Start Guide

TWR-PXD10

32-bit Power Architecture® MCU for
Entry-Level Industrial Display Solutions

freescale™

Get to Know the TWR-PXD10



TWR-PXD10
Freescale Tower System

The TWR-PXD10 module is part of the Freescale Tower System portfolio, a modular development platform that enables rapid prototyping and tool re-use through reconfigurable hardware. The TWR-PXD10 can be used with a broad selection of Tower System peripheral modules, including the new TWR-LCD-RGB which accepts RGB data from the PXD10 MCU graphics LCD controller.

TWR-PXD10 Features

- MPXD1010VLQ64 MCU (e200 32-bit Book E-compliant CPU core complex built on Power Architecture® technology, 64 MHz, graphics LCD module, 160 KB on-chip graphics SRAM, up to 1 MB on-chip flash with flash controller)
- Interfaces to the new TWR-LCD-RGB Tower peripheral module (accepts RGB data directly from the PXD10 MCU LCD controller)
- MC9S08JM60 open source JTAG (OSJTAG) circuit
- Spansion S25FL064P 64 MB QSPI memory
- General-purpose TWRPI socket (Tower plug-in module)
- On-board CAN transceiver
- On-board RS485 half duplex transceiver
- Two RGB LEDs for user interface
- Two mechanical push buttons for user interface
- One potentiometer for ADC testing

Step-by-Step Installation Instructions

In this quick start guide, you will learn how to set up the TWR-PXD10 module and run the included demonstration software. For more detailed information, please see the user manual found on the included DVD or at **freescale.com/TWR-PXD10**.

1 Connect the TWR-PXD10

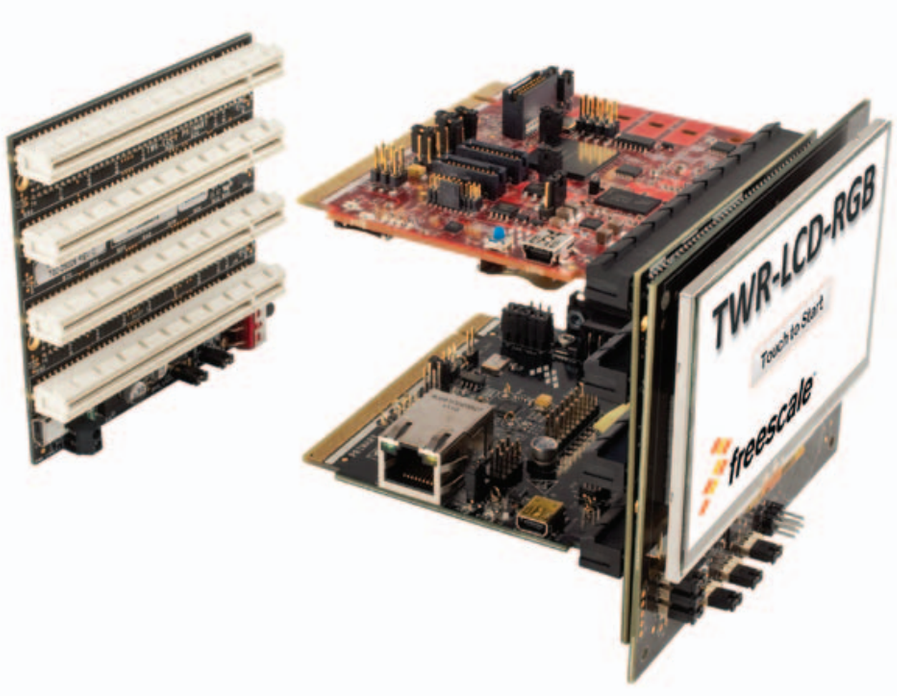
Locate the “secondary” elevator in the assembled Tower Kit

Press the expansion connectors on the back of the TWR-LCD-RGB module onto the matching side expansion port connectors found on the outer side of the secondary elevator.

Insert the TWR-PXD10 board into the primary and secondary elevator board. The primary and secondary cards for each module are indicated along the card edges.

2 Power Up the TWR-PXD10

Connect the TWR-PXD10 board to a computer or a wall charger using the provided USB cable. Additionally, the USB connector on the primary elevator or OSJTAG connector can be used to power up the board.



3 Follow the On-Screen Menu

Press the Swell software icon to start the animation. Using the slider, you can modify the speed of the flying PX series chips. By selecting the collision checkbox, the PX logos will collide.

Additional Software and Tools

- MQX™ real-time OS
- Swell software PEG graphical user interface
- Green Hills software MULTI IDE
- Serial bootloader utility
- CodeWarrior v10.x Eclipse Development Studio
- OSJTAG virtual serial port using USB
- Rapid Application Initialization and Documentation Tool (RAppID)
- FreeMASTER run-time debugging tool

TWR-PXD10 Jumper Options

The following is a list of all jumper options. The default installed jumper settings are shown in white text within blue boxes.

General Jumper Configuration

Jumper	Function
J1	Enable/Disable potentiometer
J2	Enable/Disable SW1
J3	Enable/Disable SW2
J4	Enable/Disable RGB LED 2
J6	Enable/Disable RGB LED 1
J9	Enable/Disable OSJTAG interface bootloader mode
J12	Enable/Disable user LED 2
J15	Enable/Disable user LED 1
J23	Enable/Disable on-board CAN transceiver terminator resistor
J25	Enable/Disable on-board RS485 half duplex transceiver terminator resistor

UART Configuration

Jumper	Position	Function
J21	1-2	UART0 RX is connected to RS485 transceiver
	2-3	UART0 RX is connected to UART0_RX on primary elevator
J22	1-2	UART0 TX is connected to RS485 transceiver
	2-3	UART0 TX is connected to UART0_TX on primary elevator

UART Configuration (continued)

Jumper	Position	Function
17	1-2	UART1 RX is connected to OSJTAG
	2-3	UART1 RX is connected to UART1_RX on primary elevator
18	1-2	UART1 TX is connected to OSJTAG
	2-3	UART1 TX is connected to UART1_TX on primary elevator

Boot Assistance Module (BAM) Configuration

Jumper	Position	Function
J10	1-2	FABM is connected to VDD (BAM usage)
	2-3	FABM is connected to GND (BAM usage)
	open	PB5 is used as SPIB_SOUT
J11	1-2	ABS[0] is connected to VDD (BAM usage)
	2-3	ABS[0] is connected to GND(BAM usage)
	open	PB6 is used as SPIB_SIN

CAN Configuration

Jumper	Position	Function
J13	1-2	CAN_0_TX is connected to on-board transceiver
	2-3	CAN_0_TX is connected to CAN0_TX on primary elevator
J14	1-2	CAN_0_RX is connected to on-board transceiver
	2-3	CAN_0_RX is connected to CAN0_RX on primary elevator

Visit **freescale.com/TWR-PXD10** for the latest information on the TWR-PXD10 module, including:

- Board database: Schematics, layout and BOM
- User manual
- Quick start guide
- Software BSPs and CodeWarrior development studio
- Demos and tutorial
- Fact sheet

Support

Visit **freescale.com/support** for a list of phone numbers within your region.

Warranty

Visit **freescale.com/warranty** for complete warranty information.

For more information, visit freescale.com/Tower

Join the online Tower community at towergeeks.org

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