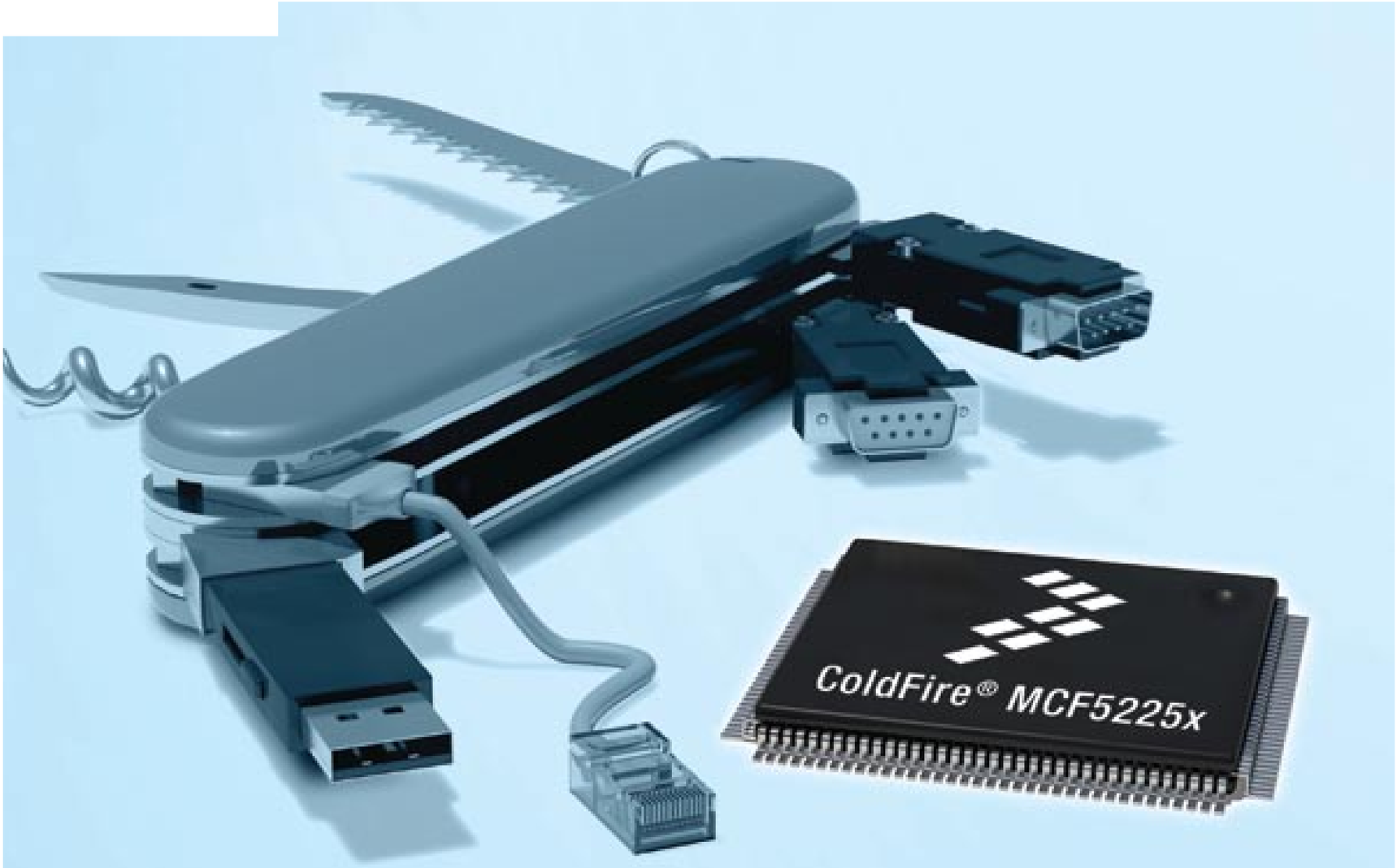
ide for TWR-MCF5225X

TOWER SYSTEM

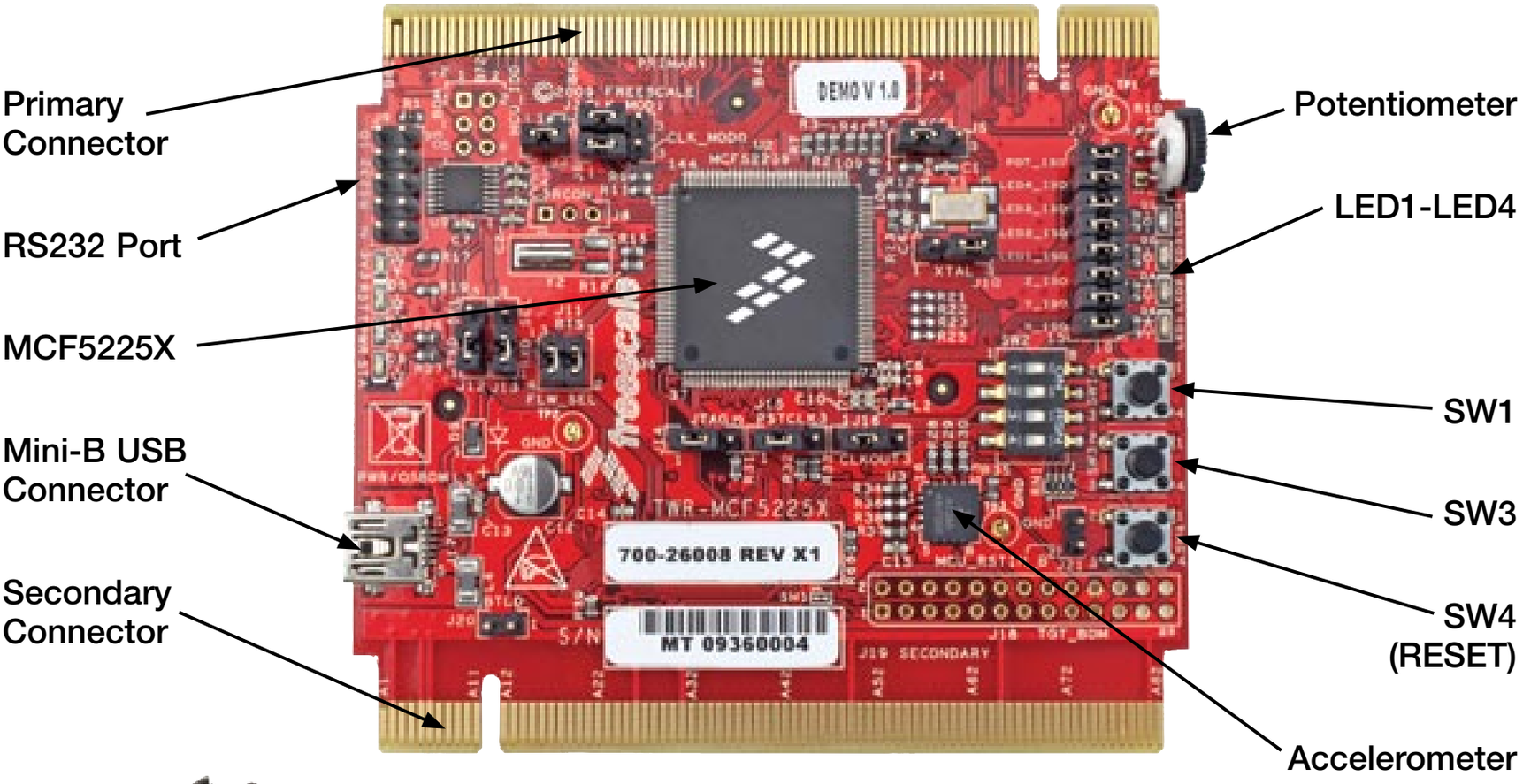


MCF5225X

ColdFire® connectivity MCUs

freescale™
semiconductor

Get to know the TWR-MCF5225X





TWR-MCF5225X-KIT
Freescale Tower System

The TWR-MCF5225X module is part of the Freescale Tower System, a modular development platform that enables rapid prototyping and tool re-use through reconfigurable hardware. Take your design to the next level and begin constructing your Tower System today.

Step-by-Step Installation Instructions

In this Quick Start Guide, you will learn how to set up the TWR-MCF5225X module and run the default accelerometer demonstration.

STEP 1 Install software and tools

- Install CodeWarrior™ Development Studio for ColdFire® Architectures v7.1 or later (Professional Edition—30 day license)*
- Install CodeWarrior Patch v7.1.2
- Install Freescale MQX™ RTOS v3.4

Install in the order listed. Each of these is included on the DVD. CodeWarrior included offers a 30-day evaluation license. *Professional Edition is required to run the MQX Lab Tutorials for unrestricted code size and task aware debugging. For updates, please visit **www.freescale.com/tower**.

STEP 2 Connect the USB cable

Connect one end of the USB cable to the PC and the other end to the mini-B connector on the TWR-MCF5225X module. Allow the PC to automatically configure the USB drivers if needed.

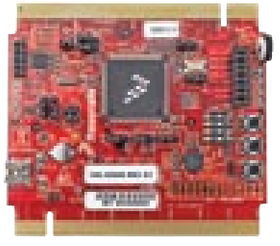
STEP 3 Tilt the board

When the TWR-MCF5225X module is flat, **LED4** blinks slowly. Tilting the board will cause **LED4** to blink faster.

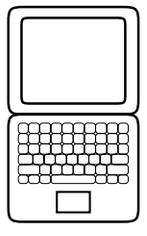
STEP 4 Explore further by conducting Lab 1: HVAC Controller, Freescale MQX™ RTOS for MCF52259

To run a demonstration using the TWR-MCF5225X, follow the instructions in **Lab 1: HVAC Controller, Freescale MQX RTOS for MCF52259**.

The lab is located in the **TWR-MCF5225X-KIT-LAB** document, located under the Training tab on the DVD.







STEP 5 Learn more about the MCF52259 and MQX software

Read the release notes and the MQX training labs that are located on the DVD and at **www.freescale.com/tower**.

- **Lab 1:** HVAC Controller, Freescale MQX RTOS for MCF52259
- **Lab 2:** USB Functionality, Freescale MQX USB and MFS
- **Lab 3:** Telnet and FTP Operation, Freescale MQX RTCS
- **Lab 4:** Web-Enabled HVAC System, Freescale MQX RTCS
- **Lab 5:** Finding an Error Using Task Aware Debugging (TAD) in CodeWarrior
- **Lab 6:** Ethernet to Serial Bridge, Freescale MQX RTCS

Use **Lab 1** to re-program the board with the default demonstration.
These labs require the TWR-SER serial and TWR-ELEV elevator modules.

STEP 6 Run simple MQX projects

The included lab tutorials represent completed end applications fully utilizing the microcontroller resources. To begin your application, there are simple MQX templates located under **C:\Program Files\Freescale\Freescale MQX 3.4\mqx\examples**

Please visit **www.freescale.com/tower** and **www.freescale.com/mqx** for the most updated Lab Tutorial, application notes and other documents.

Jumper Options

The following is a list of all the jumper options. The default installed jumper settings are shown in bold.

Jumper	Option	Setting	Description
J3	Default Clock Mode Selection (CLKMOD1)	**1-2**	Disable PLL at startup
		2-3	Enable PLL at startup
J4	MCU Power Connection	**ON**	Supply 3.3V to MCU
		OFF	Isolate MCU from power (connect an ammeter to measure current)
J5	Clock Input Source Selection	**1-2**	Connect EXTAL to the on-board crystal
		2-3	Connect EXTAL to the CLKIN0 signal on the elevator connector
J6	Default Clock Mode Selection (CLKMOD0)	**1-2**	Do not use crystal oscillator at startup
		2-3	Use crystal oscillator at startup
J7	Peripheral Selection	**1-2**	Connect AN3 to Potentiometer
		3-4	Connect TIN3/TOUT3/PWM6 to LED4
		5-6	Connect TIN2/TOUT2/PWM4 to LED3
		7-8	Connect TIN1/TOUT1/PWM2 to LED2
		9-10	Connect TIN0/TOUT0/PWM0 to LED1
		11-12	Connect AN2 to accelerometor Z-access
		13-14	Connect AN1 to accelerometor Y-access
		15-16	Connect AN0 to accelerometor X-access
J10	Default Clock Mode Selection (XTAL)	1-2	Bypass crystal oscillator at startup (if CLKMOD0 = 0)
		2-3	Enable internal relaxation oscillator at startup (if CLKMOD0 = 0)
		OFF	Use crystal oscillator at startup

Jumper	Option	Setting	Description
J11	UART Hardware Flow Control Connections	**1-2**	Connect CTS0 to the RS232 transciever for flow control
		3-4	Connect RTS0 to the RS232 transciever for flow control
J12	UART TXD0 Routing Selection	**1-2**	Connect TXD0 to the RS232 transceiver
		2-3	Connect TXD0 to the OSBDM debugger interface circuit
J13	UART RXD0 Routing Selection	**1-2**	Connect RXD0 to the RS232 transceiver
		2-3	Connect RXD0 to the OSBDM debugger interface circuit
J14	BDM/JTAG Enable Selection	**1-2**	BDM mode
		2-3	JTAG mode
J15	TCLK/PSTCLK Routing Selection	**1-2**	Connect TCLK/PSTCLK to PSTCLK for BDM mode
		2-3	Connect TCLK/PSTCLK to TCLK for JTAG mode
J16	TCLK/PSTCLK/CLKOUT Routing Selection	**1-2**	Connect TCLK/PSTCLK/CLKOUT to TCLK/PSTCLK for BDM/JTAG mode
		2-3	Connect TCLK/PSTCLK/CLKOUT to CLKOUT0 on the elevator connector
J20	OSBDM Bootloader Selection	ON	OSBDM bootloader mode (OSBDM firmware reprogramming)
		OFF	Debugger mode
J21	RESET Select	ON	Suspend MCU in reset state (hold RSTIN low)
		OFF	Release RSTIN so it can be controlled by SW4 to initiate reset sequences





Learn more at www.freescale.com/tower.

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Agile Number: 926-26008 / REV A

