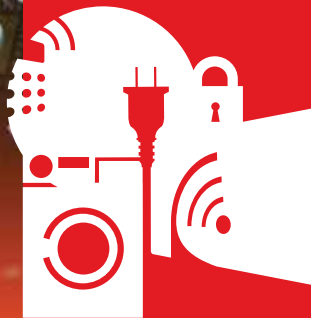




Quick Start Guide

TWR-MCF51JG

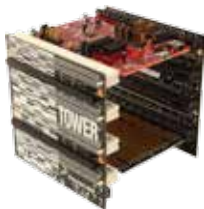
32-bit ColdFire+ MCU Module with
256 KB Flash and 64 KB SRAM Memory



TOWER SYSTEM



Get to know the TWR-MCF51JG



TWR-MCF51JG Freescale Tower System

The TWR-MCF51JG module is part of the Freescale Tower System portfolio, a modular development platform that enables rapid prototyping and tool re-use through reconfigurable hardware. Elevate your design to the next level by building your Tower System today.



TWRPIMCF51JG

- Tower System compatible MCU module
- MCF51JG256 ColdFire+ MCU (50 MHz, 256 KB flash, 64 KB RAM, 5 mm x 5 mm 44 MAPLGA package)
- On-board debug circuit (OSBDM) with virtual serial port
- Dual role USB interface with Micro-AB USB connector
- General-purpose Tower plug-in (TWRPI) socket
- Serial audio interface (SAI) header
- Three-axis accelerometer (MMA8451Q)
- Two (2) user-controllable LEDs
- Two (2) user push button switches and one (1) reset push button switch



Step-by-Step Installation Instructions

In this quick start guide, you will learn how to set up the TWR-MCF51JG module and run the included demonstrated software. For more detailed information, review the user manual at freescale.com/TWR-MCF51JG.

1

Download Software and Tools

Download installation software and documentation under **“Jump Start Your Design”** at freescale.com/TWR-MCF51JG.

**3**

Configure the Hardware

Connect one end of the USB cable to the PC and the other end to the OSBDM USB (J14) mini-B connector on the TWR-MCF51JG module. Allow the PC to automatically configure the USB drivers if needed.

2

Install Software and Tools

Install the P&E Micro OSBDM OSJTAG Tower Toolkit to install the OSBDM and USB-to-serial drivers. You may need to restart your computer for proper driver installation.



4 Open the Terminal Utility

Go to Start > All Programs > P&E OSBDM OSJTAG Virtual Serial Toolkit > Utilities > Terminal Utility

Set the baud rate to 19200 (Important: This is not the default).

Other settings include: Port: USB COM, Parity: None, Bits: 8.



Click “Open Serial Port”

5 Explore the Pre-Programmed Demo

The MCU comes pre-programmed with MQX™ RTOS running a simple demo app that shows low power mode entry/exit.

Notice the orange LED (D4) blinks at a slow rate and the MCU prints a short message to the terminal once per second.

6 Press the SW2 Push Button

The demo app goes into time-out mode. It will count down from 20 seconds and then enter very low power stop (VLPS) mode. After 10 seconds, the RTC will wake the MCU and restart the demo. Pressing SW2 again will also wake the MCU.

```
Hi from MCP51JG256...
Hi from MCP51JG256...
Hi from MCP51JG256...
Hi from MCP51JG256...
Hi from MCP51JG256...
Timing out in 20 seconds...
Timing out in 19 seconds...
Timing out in 18 seconds...
Timing out in 17 seconds...
Timing out in 16 seconds...
Timing out in 15 seconds...
```

TWR-MCF51JG Jumper Options

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

Jumper	Option	Setting	Description
J1	USB Power Switch Enable Input Connection	ON	Connect PTA1 to USB power switch enable input
		OFF	Disconnect PTA1 from USB power switch enable
J2	USB Power Switch Flag Output Connection	ON	Connect PTA2 to USB power switch over-current flag output
		OFF	Disconnect PTA2 from USB power switch over-current flag output
J4	SCI1/SPI1 Connection Selection	1-2	Connect SCI1_RX/SPI1_MISO to SPI1_MISO on primary edge
		2-3	Connect SCI1_RX/SPI1_MISO to SCI1_RX (RXD1) on primary edge
J5	SCI1/SPI1 Connection Selection	1-2	Connect SCI1_TX/SPI1_MOSI to SPI1_MOSI on primary edge
		2-3	Connect SCI1_TX/SPI1_MOSI to SCI1_TX (TXD1) on primary edge
J9	Board Power Source Selection	3-5	Supply board power from the 3.3 V on-board regulator. See TWR-MCF51JG user manual for other options.
J10	Regulator Power Source Selection	1-2	Power the on-board voltage regulators from the OSBDM USB interface (J14).
		5-6	Power the MCF51JG on-chip regulator from the JG USB interface (J8). See TWR-MCF51JG user manual for other options.

Jumper	Option	Setting	Description
J12	MCU Voltage Selector	1-2	Power MCU from board power source selection jumper (J9)
		2-3	Power MCU with output of on-chip voltage regulator (VOUT33)
J13	OSBDM Mode Selection	ON	OSBDM bootloader mode (OSBDM firmware reprogramming)
		OFF	Debugger mode
J15	EzPort Power Connection	ON	Connect on-board 5 V supply to EzPort header (supports powering board from external EzPort probe)
		OFF	Disconnect on-board 5 V supply from EzPort header



Get Started

Download installation software and documentation under
“**Jump Start Your Design**” at freescale.com/TWR-MCF51JG.

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

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Document Number: MCF51JGQSG REV 0
Agile Number: 926-27129 Rev A

