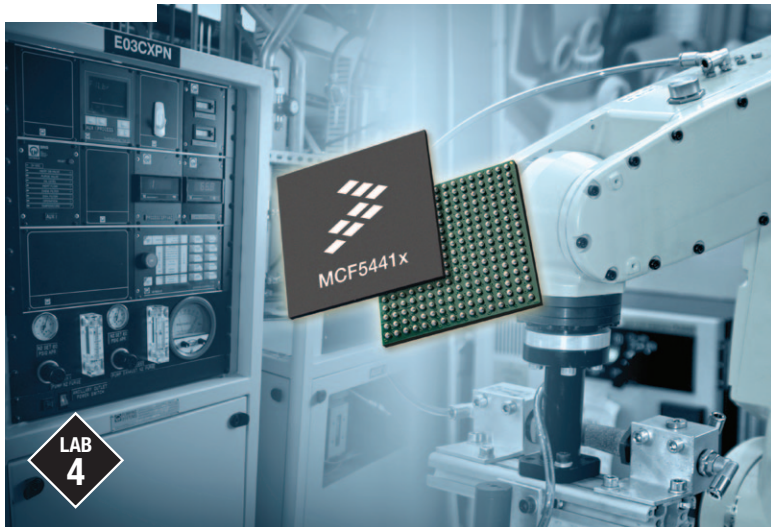




TWR-MCF5441X

TOWER SYSTEM



LAB  
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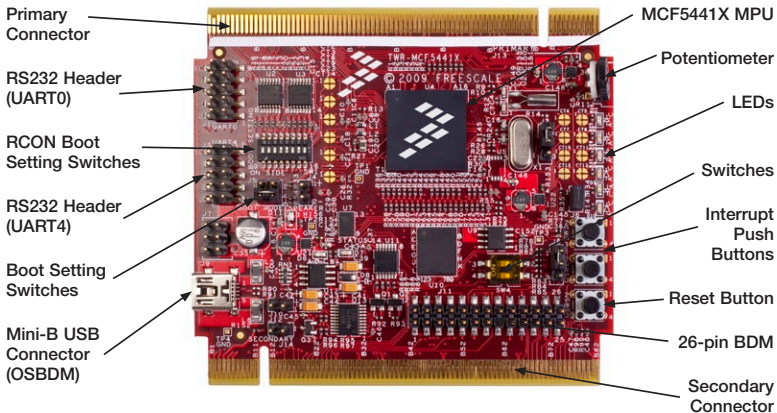
## MCF5441X

Linux<sup>®</sup> — Getting Started  
with RTC and Telnet





# Get to know the TWR-MCF5441x



## TWR-MCF5441X-KIT Freescale Tower System

The TWR-MCF5441X 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.

## Linux – Getting Started with RTC and Telnet

This document explains the out-of-box demo of Freescale TWR-MCF5441X system. TWR-MCF5441X system is a Freescale tower compatible system and based on ColdFire™ Architecture microprocessor MCF5441X. This document presumes that the reader has already gone through the Quick Start Guide and followed the steps to setup the hardware system ready. If not, please refer to the Quick Start Guide first.

## Lab Tutorial for Embedded Linux Kernel

### How to start Linux

The TWR-MCF5441X module will start Linux demo when the user provides power the Tower System. U-boot boot loader will bring up and automatically count down from 5 to bring up Linux Kernel. If any key is pressed during the count down, count down will stop and goes to u-boot prompt. Enter the following command on the U-Boot command line to start the Linux Kernel.

U-Boot Command: “-> run jffs2boot”



## How to run the real time clock application in Linux

Here is the guide to launch real time clock application (RTC) preinstalled in the system. By default, the clock is set to 2112-01-01 03:48:53 UTC (186096037). Enter the following commands on the Linux command line to execute the applications.

Linux command: “[root@freescale /]# date”

Linux command: “[root@freescale /]# hwclock”

1. To set the clock to a known date and time, use the following command:  
# date -u MMDDhhmm[CC][YY].ss  
For example: date -u 010912002010.30 will set the time to Jan 9 12:00:30 2010.
2. To sync up with hwclock, type “hwclock -w”
3. Now both hwclock and date application are synchronized. To display the current date and time, enter hwclock or date command.  
[root@freescale /]# date  
Fri Jan 1 12:00:30 UTC 2010  
[root@freescale /]# hwclock  
Fri Jan 1 12:00:32 2010 0.000000 seconds

## Prepare the network and telnet to the telnet server

The default Ethernet for eth0 device is the RJ45 on the TWR-SER2 tower board. First, you need to setup the network of the TWR-MCF5441X if Ethernet is not connected after Linux bring up.

1. Use Ethernet cable to connect RJ45 connector on the TWR-SER2 port A to your internet connection.
2. If your network has a DHCP server, type the following command in console:  
# udhcpc
3. If your network does not have a DHCP server, you need to configure your target network IP manually. Here is the step:  
# ifconfig eth0 <target ipaddress>  
netmask <target netmask> up
4. You can use ping command to check if the Ethernet is working properly.  
# ping <known IP address on the network>
5. If the network is ready, you may start the telnet session by typing the following command in console:  
# telnet <telnet server IP address>



# About the Tower System

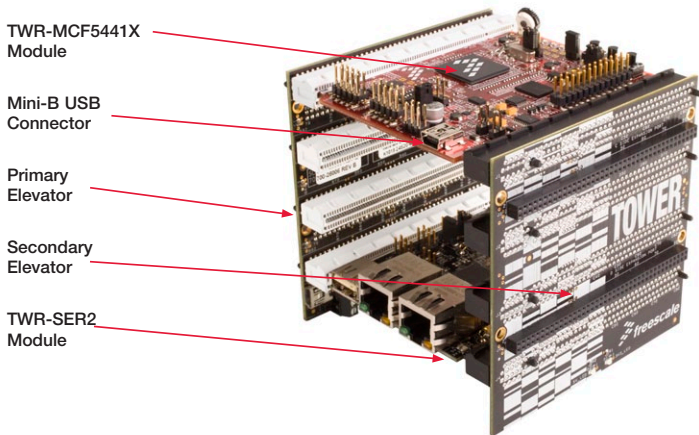


Figure 1: Tower System

Learn more at [www.freescale.com/tower](http://www.freescale.com/tower).

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