

# ARM Devices Supported by LabVIEW

## Overview

The LabVIEW Embedded Module for ARM Microcontrollers can be used to program over 260 ARM7, ARM9, and Cortex-M3 based devices. This tutorial will examine the LabVIEW supported microcontrollers as well as examine adding support for additional microcontrollers.

## Supported Features

There are two tiers of support for ARM Microcontrollers in LabVIEW. Tier 1 devices are validated microcontrollers that provide an out-of-the-box programming experience. In addition to basic programming and mathematics, tier 1 devices also provide LabVIEW palettes for communications, analog, and digital I/O. Tier 2 devices provide processor support, but no specific palettes are provided, so this requires you to develop and integrate drivers. The following table shows the feature breakdown of tier 1 and tier 2 processors.

	Tier1	Tier2
Basic Programming Structures	✓	✓
Numeric, Boolean Logic	✓	✓
Arrays , Clusters, Matrices	✓	✓
Semaphores, Queues, FIFOs	✓	✓
Mathematics, Signal Processing	✓	✓
Statistics	✓	✓
TCP/IP, Serial Communication	✓	✗
Analog I/O	✓	✗
Digital I/O	✓	✗
PWM	✓	✗
CAN, I2C, SPI Communication	✓	✗
LCD	✓	✗
Interrupt Manager	✓	✗
Cycle-Accurate Simulation	✓	?

## Tier 1 Devices

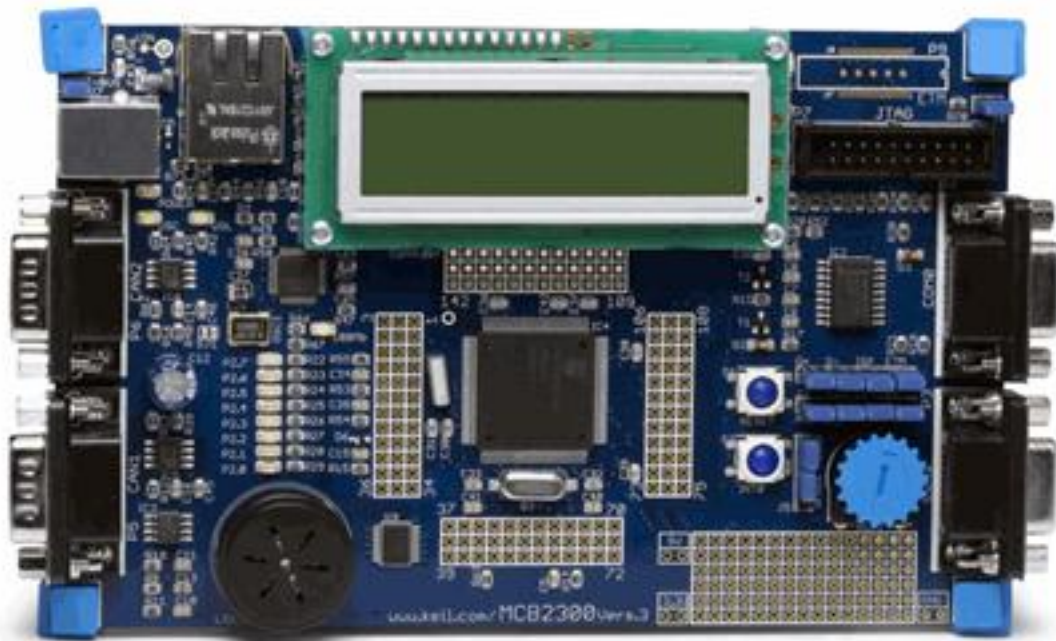
### Cortex-M3

The LM3S8962 evaluation board introduces you to the Stellaris LM3S8962 MCU from Luminary Micro. This kit offers analog input, a speaker, OLED display, Ethernet, and eight LEDs. For more information on this device, visit [Luminary Micro](#). To purchase this hardware kit with an evaluation version of the LabVIEW Embedded Module for ARM Microcontrollers, visit [ni.com/arm](http://ni.com/arm).

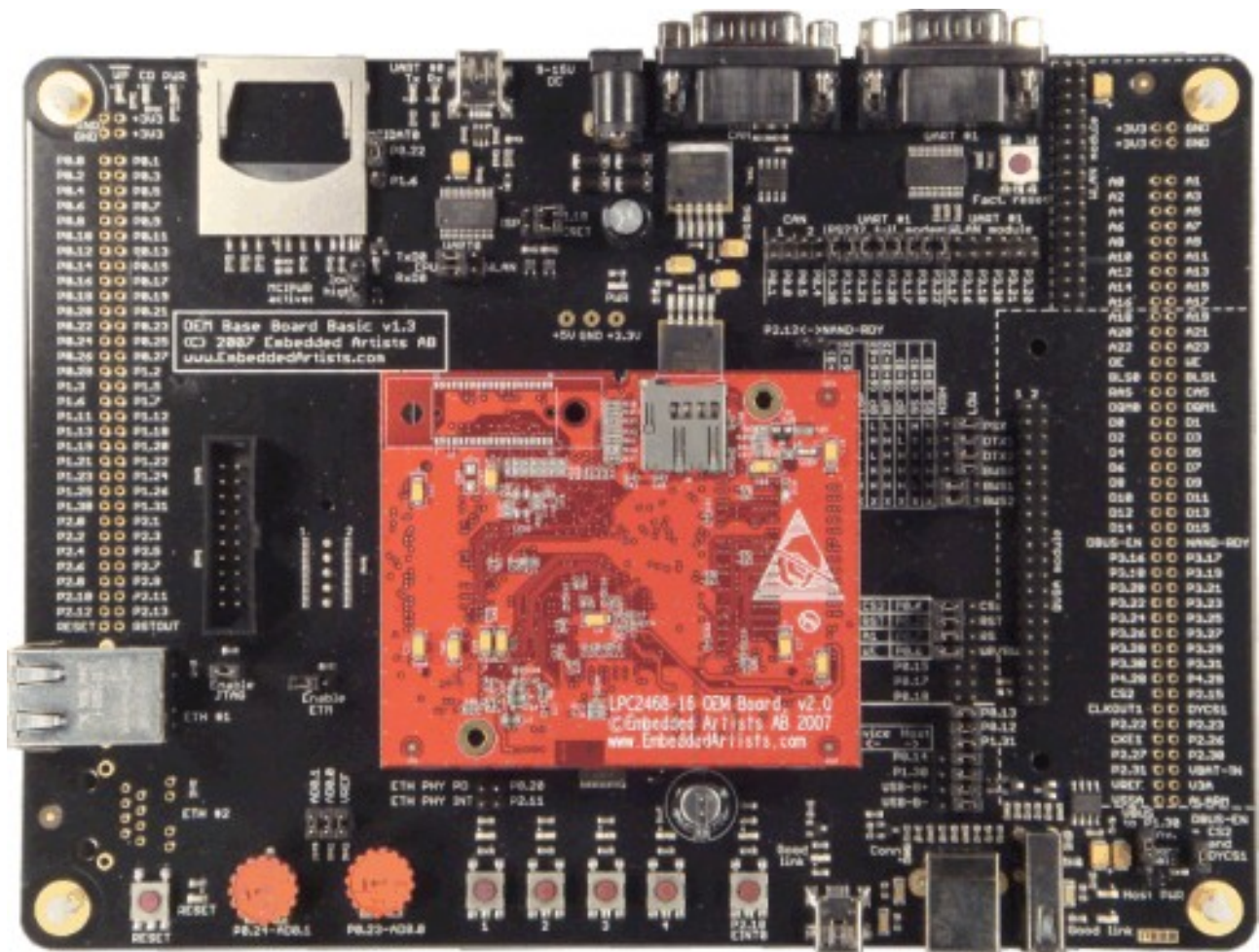


## ARM7

The Keil MCB2300 evaluation board introduces you to the NXP LPC2300 ARM family from Philips. This kit offers analog input (via potentiometer), a speaker, two serial interfaces, LCD, ethernet, and LEDs. For more information on this device, visit [Keil](http://www.keil.com). To purchase this hardware kit with an evaluation version of the LabVIEW Embedded Module for ARM Microcontrollers, visit [ni.com/arm](http://ni.com/arm).



The Keil MCB2400 evaluation board introduces you to the NXP LPC2400 ARM family from Philips. This kit offers 32 Mb of RAM, analog input (via potentiometer), a speaker, one serial interface, one CAN interface, ethernet, and LEDs. For more information on this device and to purchase this evaluation kit visit [Keil](http://www.keil.com).



## Community Contributed

To search for other community contributed Tier 1 devices, visit [ni.com/community](http://ni.com/community).

## Tier 2 Devices

Behind the scenes, the LabVIEW Embedded Module for ARM Microcontrollers uses the Keil uVision

development toolchain to compile, download, and debug applications on ARM Microcontrollers. Therefore, any devices that are supported by the RL-ARM Real-Time Library can be programmed with LabVIEW. For a list of currently supported devices, you can consult the [Keil Device Database](#).

If you would like to run LabVIEW on another processor, read this tutorial on [using a Tier2 ARM device with the LabVIEW Embedded Module for ARM Microcontrollers](#).