

# MCP25020/25025/25050/25055 CAN I/O Expanders Developer's Kit

**Adding Controller Area Network (CAN) support to small, cost-sensitive, thin client applications is now easier than ever.**

The **MCP250XX CAN I/O Expander Developer's Kit** includes everything needed to create a CAN based system using Microchip's CAN I/O Expander family. It can be used to evaluate, demonstrate and develop CAN nodes using these CAN I/O Expanders. This kit contains a target board that has three CAN nodes on it all connected via a CAN bus. One CAN node is the master, one is a slave node that contains a pre-configured CAN I/O Expander device that is used in demonstration mode, and the third is an unconfigured device that is next to a prototype area for users to develop and configure their own CAN nodes using an **MCP250XX** device. The target board is connected to a PC through a parallel port interface that allows the user to manipulate specific functionality of the CAN I/O Expander devices. Software for the PC provides a user-friendly interface to the target board. All of this functionality is provided by this developer's kit to aid in shortening development times for CAN based nodes using the Microchip CAN I/O Expander family of products.

The demonstration mode has an **MCP25050** that is configured prior to shipping and is programmed to manipulate analog inputs via potentiometers, PWM outputs via a piezoelectric buzzer and an incandescent lamp, and digital inputs via push-button switches. CAN messages can be sent and received between the master node and the demonstration node via the PC user interface or via the input/output functionality discussed above. Users can also set up a watch window to display the message traffic as they manipulate the inputs and outputs. In this manner, the users can see a working network being demonstrated with one of the nodes being an MCP25050 CAN I/O Expander device.

Another function of the developer's kit is that the PC with included software can be used to emulate an MCP250XX device. This mode is used to manipulate the registers of the MCP250XX devices in order to evaluate all of the different functionality and configurations of the device family. After users are comfortable with a configuration, they can then prototype their own CAN node. An unconfigured MCP250XX device is supplied with prototyping area also included on the target board. A header is provided to enable oscilloscope access to the I/O pins for development and troubleshooting. Once prototyping is complete, the kit can be used to program up the device configuration in much the same manner that Microchip PICmicro® MCUs are programmed.



## Features:

- Speeds understanding of CAN I/O Expander family
  - Ability to manipulate configuration and pin function registers
  - Ability to manipulate inputs and outputs via the PC user interface or the demonstration node
  - Ability to demonstrate working CAN network that includes an MCP25050 Mixed-Signal CAN I/O Expander
- Provides ability to prototype user-defined CAN node
  - Includes prototype area and an unconfigured device
  - Includes oscilloscope probe points for verification and troubleshooting of prototype system
- Enables programming of device default configuration directly from developer's kit
- Allows connection of external CAN networks
- Software watch window can be used as basic CAN bus monitor



**MICROCHIP**

Analog/Interface Development Systems

## Ordering Information:

The MCP250XX CAN I/O Expander Developer's Kit part number is DV250501.

For more information about any other Microchip products, contact the Microchip Sales Office, representative or authorized distributor near you.

## Host System Requirements:

PC running Microsoft Windows® 95 OS or higher

One unused parallel port

CD-ROM drive

8MB RAM

10MB of Hard Disk Space

## Additional Information:

- Microchip's web site: [www.microchip.com](http://www.microchip.com)
- Microchip's Technical Library CD-ROM, Order No. DS00161
- Analog/Interface Handbook, Order No. DS00207
- Product Line Card, Order No. DS00148
- Analog Design Pack CD-ROM, Order No. DS51205
- Microchip's Overview, Quality Systems and Customer Interface System, Order No. DS00169
- Third Party Software and Hardware Support:
  - *Third Party Guide*, Order No. DS00104
- MCP2502X/2505X Data Sheet - *CAN I/O Expander Family*, Order No. DS21664

## Customer Support:

Microchip maintains a worldwide network of distributors, representatives, local sales offices, Field Application Engineers, and Corporate Application Engineers. Microchip's Internet home page can be reached at: [www.microchip.com](http://www.microchip.com)

### Development Tools for Analog and Interface Products from Microchip

FilterLab®	Active Filter Software Design Tool
MCP2120/2150 Developer's Kit	Infrared Products Developer's Kit
MCP2510 CAN Developer's Kit	MCP2510 CAN Evaluation/Development Tool
MXDEV™ 1 Analog Evaluation System	Evaluation Kit for MCP Devices
MCP3201/02 Evaluation Daughter Kit	Analog-to-Digital Converter - Two Channel*
MCP3204/08 Evaluation Daughter Kit	Analog-to-Digital Converter - Four Channel*
MCP41XXX/MCP42XXX Evaluation Daughter Kit	Digital Pot Evaluation and Demonstration*
TC3400DEMO	Demo Board for TC340X Sigma-Delta ADCs
TC3400EV	Evaluation Kit for TC340X Sigma-Delta ADCs
TC642DEMO	Fan Control Module for TC64X Devices
TC642EV	Evaluation Kit for TC64X Fan Controllers
TC650DEMO	Demo Board for TC650/651 Fan Control ICs
TC652DEMO	Demo Board for TC652/653 Fan Control ICs
TC74DEMO	Demo Board for TC74 Digital Thermal Sensor
TC670DEMO	Board for TC670 Predictive Fan Failure Detector

\*Note: Requires MXDEV Analog Evaluation Kit.

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