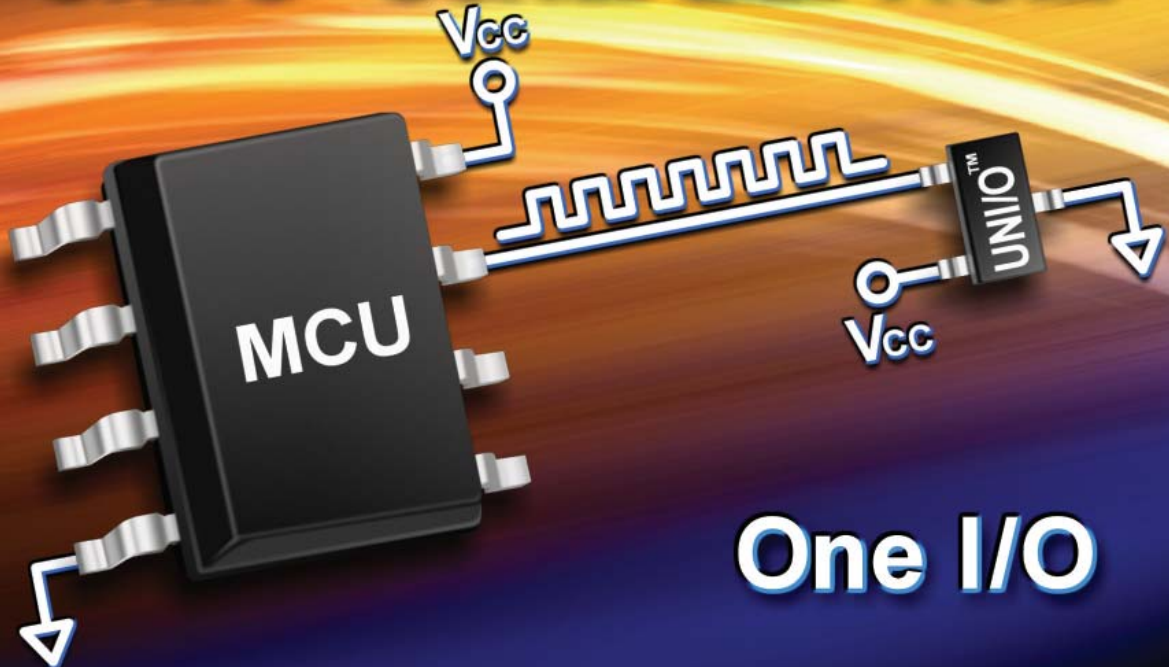




UNI/O™ Serial EEPROMs
Single I/O Bus Interface

UNI/O™ Serial EEPROM



One I/O

Introducing the UNI/O EEPROM Family

Need more microcontroller pins for new features?

Want to stay with a low pin-count microcontroller rather than switching to a more expensive one?

Microchip's new UNI/O serial EEPROM uses only ONE connection to the host microcontroller. This compares to two or three pins for I²C™, and three to six pins for Microwire or SPI buses. This new, proprietary bus offers advanced features like a status register and write protection on demand, along with all I/O, memory array and command functions through a single pin.

New Communications Standard

UNI/O bus: First introduced on serial EEPROMs

- Manchester Communications
 - Clock and data in a single serial bit stream
 - Signal transition in the middle of bit period
- MCU establishes data rate
- EEPROM tracks data rate – Frequency and Phase
- Software Addressable

Benefits

A single I/O EEPROM can simplify your design and reduce system cost

- Free up pins on the MCU
 - Add a new feature to your application
 - Move to a smaller MCU
- Free up pins on your connector
 - Smaller connector = lower cost
- More compact design

Advanced Features

- Single I/O Interface
- 1-16 Kbit Memory Densities
- 1.8-5.5V Operating Voltage
- 10-100 KHz Operating Frequency
- 1 Million Erase/Write Cycles
- Software Write Protect
 - ¼, ½ or Full Array
- Status Register
- Set/Erase entire memory with a single command
- ESD Protection > 4 KV
- Noise Filtration Circuitry
- Packaging: 3-pin SOT-23
8-pin SOIC, MSOP & TDFN
- Temperature: Industrial (-40°C to +85°C)
Extended (-40°C to +125°C)

Get Started With a Simple Evaluation

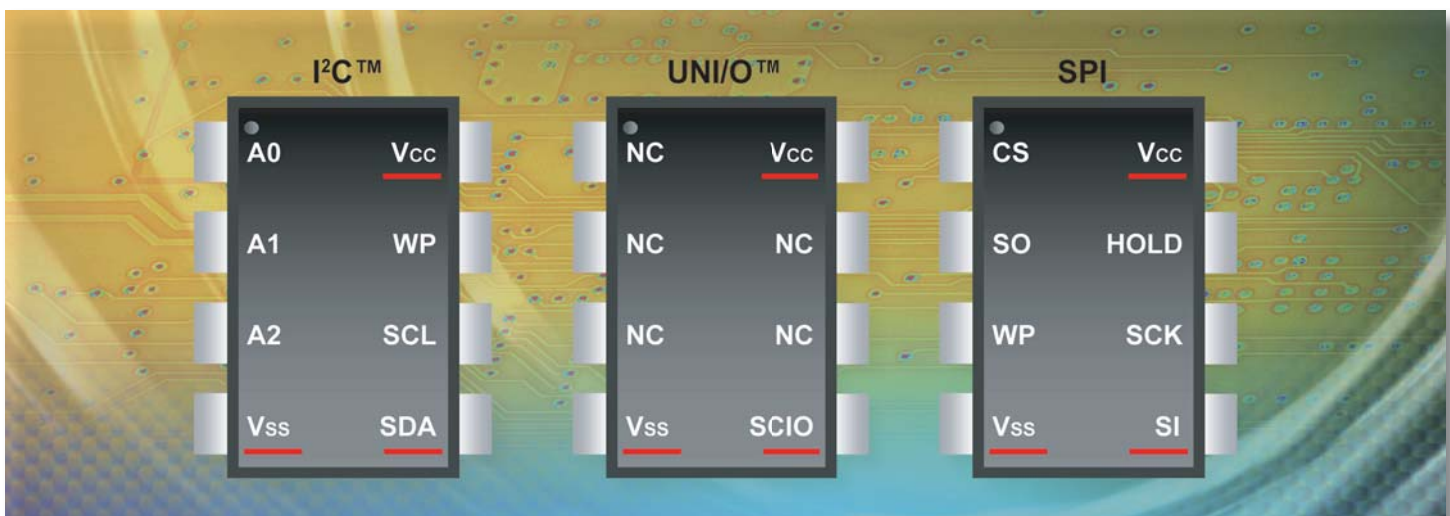
Use your existing hardware

- UNI/O EEPROMs can fit in existing sockets
 - Pin-out similar to I²C and SPI EEPROMs
 - 8-pin packages share Vcc, Vss and Data Line

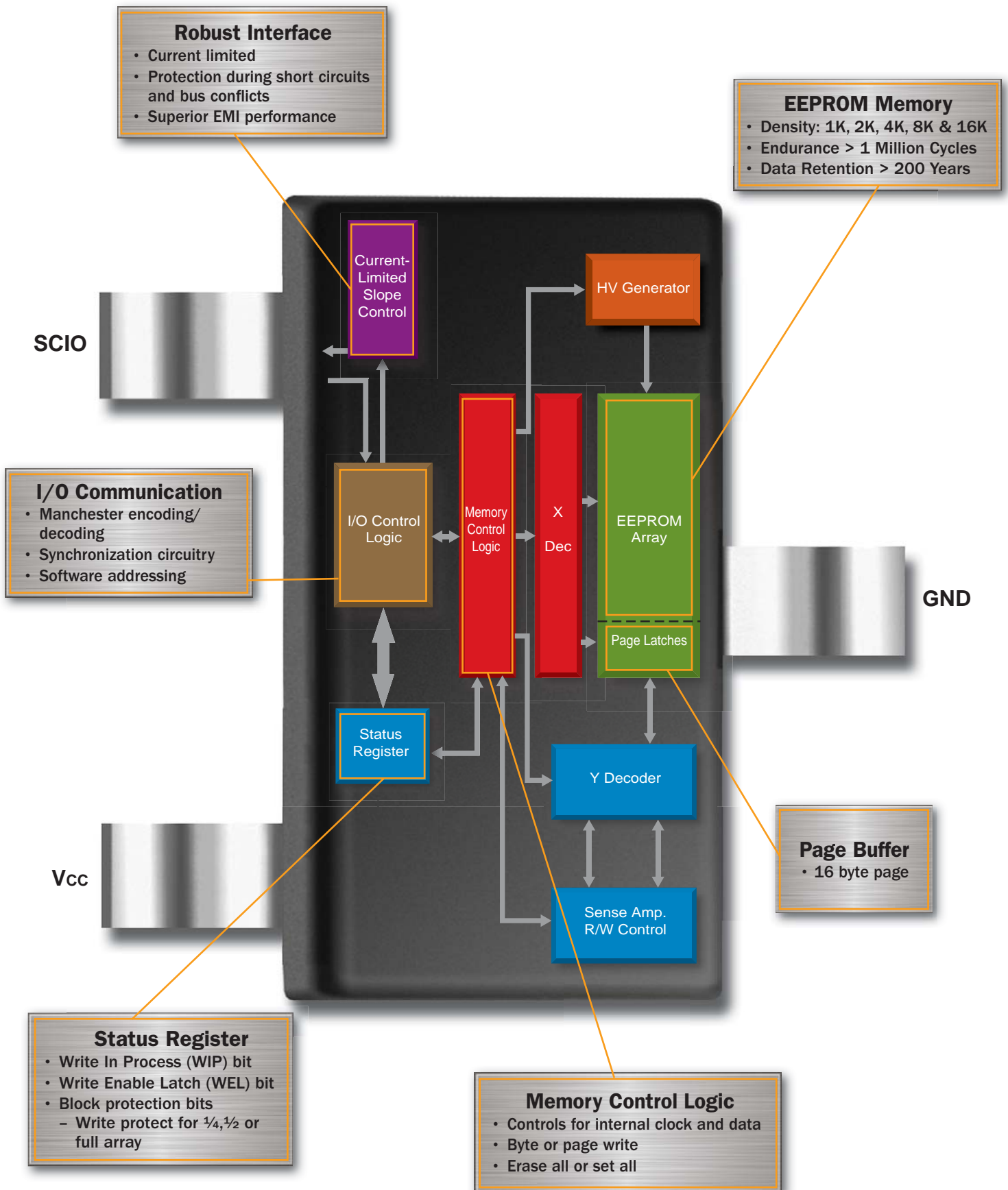
Use Microchip's software drivers

- UNI/O software drivers available for many popular microcontrollers
- New drivers coming

Current EEPROM 8-lead Pin Outs



Inside the UNI/O EEPROM



Designing with the UNI/O Serial EEPROM

Resources to help you get started quickly ...

MPLAB® Starter Kit for Serial Memory Products (Part Number DV243003)



Increase productivity, reduce time to market and create a rock-solid design using this sophisticated development system. The MPLAB Starter Kit includes everything necessary to quickly program and develop a robust and reliable Serial EEPROM design, and reduce the time required for system integration and hardware/software debug.

- Windows® 2000, XP and Vista™ operating systems
- Total Endurance™ software model
- MPLAB Starter Kit board and user interface software
- Quick start guide
- Serial EEPROM sample pack

Additional Resources

Microchip Advanced Part Selector (MAPS): www.microchip.com/maps

Getting Started with UNI/O™ Webinar: <http://techtrain.microchip.com/webseminars>

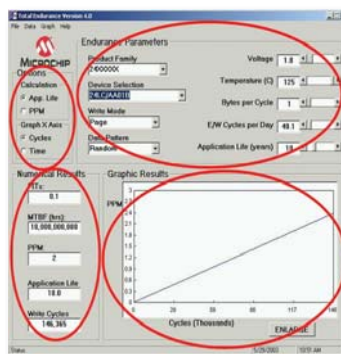
Over 50 different application notes, many with source code options can be found at: www.microchip.com/appnotes

Get started with Microchip's Serial EEPROMs in four easy steps: www.microchip.com/EEPROM

UNI/O Bus Software Drivers

MCU Family	Device	Architecture		Language	Timer Resources
		Data Bus	Instruction Word		
PIC® MCU	PIC10F202 PIC12F508 PIC16F505	8-bit	12-bit	Assembly	Firmware
PIC MCU	PIC12F609 PIC16F610	8-bit	14-bit	Assembly	Firmware
PIC MCU	PIC12F683 PIC16F616	8-bit	14-bit	Assembly	HW Peripheral
PIC MCU	PIC12F683 PIC16F616	8-bit	14-bit	C	HW Peripheral
PIC MCU	PIC18F1220	8-bit	16-bit	Assembly	Firmware
PIC MCU	PIC18F24J10	8-bit	16-bit	Assembly	HW Peripheral
PIC MCU	PIC18F24J10	8-bit	16-bit	C	HW Peripheral
PIC MCU	PIC24FJ128GA010	16-bit	24-bit	C	HW Peripheral
dsPIC® DSC	dsPIC33F256GP710	16-bit	24-bit	C	HW Peripheral
PIC MCU	PIC32XXX	32-bit	32-bit	C	HW Peripheral
ARM7 Core	AT91SAM7S256	32-bit	32-bit	C	HW Peripheral
8051	89LPC952	8-bit	8-bit	Assembly	HW Peripheral
8051	89LPC952	8-bit	8-bit	C	HW Peripheral
MSP430	MSP430F1232	16-bit	16-bit	C	HW Peripheral

FREE Total Endurance™ Software



Microchip's Total Endurance Software provides you with unprecedented visibility into Serial EEPROM based applications. Describe your system to an advanced

mathematical model (with a friendly human interface), and it will predict the performance and reliability of the Serial EEPROM within that environment. Design trade-off analysis that formerly consumed days or weeks can now be accomplished in minutes with a level of accuracy that delivers a truly robust design.

UNI/O Serial EEPROM Product Specifications

UNI/O Product Family

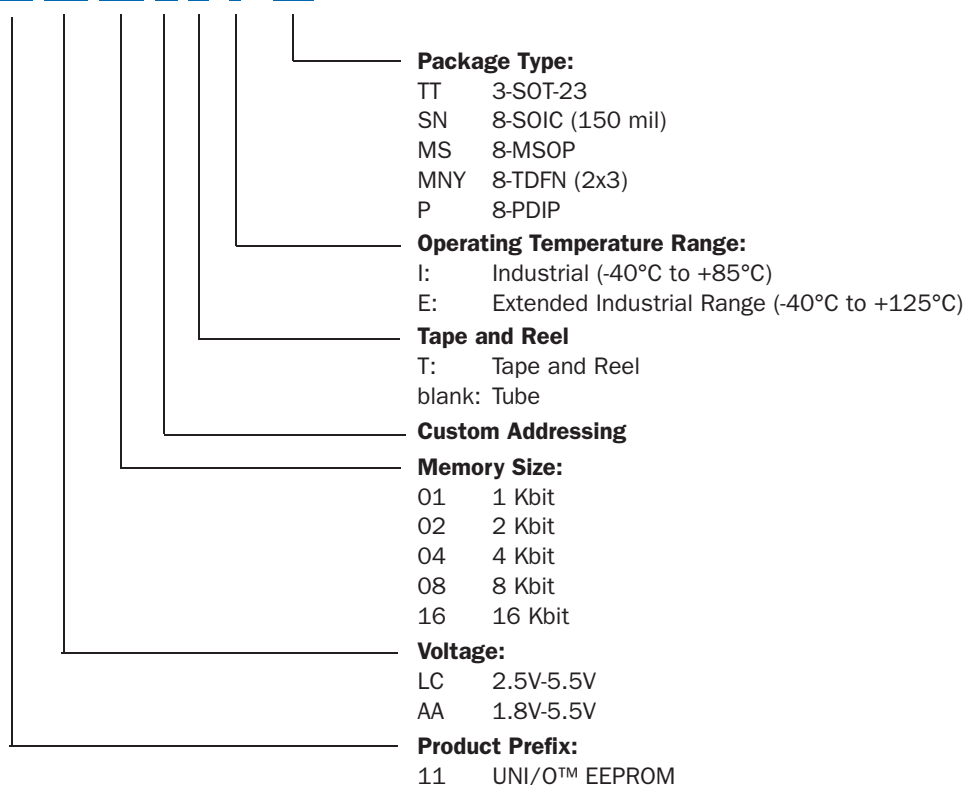
Device	Density (bits)	Organization	Page Size (bytes)	Operating Voltage	Temperature Range	Packages
11AA010	1K	128 x 8	16	1.8-5.5V	I	TT, SN, MNY, MS, P
11LC010	1K	128 x 8	16	2.5-5.5V	I, E	TT, SN, MNY, MS, P
11AA020	2K	256 x 8	16	1.8-5.5V	I	TT, SN, MNY, MS, P
11LC020	2K	256 x 8	16	2.5-5.5V	I, E	TT, SN, MNY, MS, P
11AA040	4K	512 x 8	16	1.8-5.5V	I	TT, SN, MNY, MS, P
11LC040	4K	512 x 8	16	2.5-5.5V	I, E	TT, SN, MNY, MS, P
11AA080	8K	1024 x 8	16	1.8-5.5V	I	TT, SN, MNY, MS, P
11LC080	8K	1024 x 8	16	2.5-5.5V	I, E	TT, SN, MNY, MS, P
11AA160	16K	2048 x 8	16	1.8-5.5V	I	TT, SN, MNY, MS, P
11LC160	16K	2048 x 8	16	2.5-5.5V	I, E	TT, SN, MNY, MS, P

Note: All devices are Pb-Free and RoHS compliant.

Part Number Suffix Designations

Ordering information for Microchip UNI/O Memory products.

11 LC 01 0 T -I / TT



Packages Available for UNI/O EEPROM Memory



Shown approximate size.

For the most up-to-date information visit: www.microchip.com/UNIO

Support

Microchip is committed to supporting its customers in developing products faster and more efficiently. We maintain a worldwide network of field applications engineers and technical support ready to provide product and system assistance. In addition, the following service areas are available at www.microchip.com:

- **Support** link provides a way to get questions answered fast: <http://support.microchip.com>
- **Sample** link offers free evaluation samples of any Microchip device: <http://sample.microchip.com>
- **Training** link offers webinars, registration for local seminars/workshops and information on annual MASTERS events held throughout the world: www.microchip.com/training
- **Forum** link provides access to knowledge base and peer help: <http://forum.microchip.com>

Purchase



microchipDIRECT is a web-based purchasing site that gives you 24-hour-a-day access to all Microchip devices and

tools, including pricing, ordering, inventory and support. You can buy the products you need on an easily opened Microchip line of credit.

Sales Office Listing

AMERICAS

Atlanta

Tel: 678-957-9614

Boston

Tel: 774-760-0087

Chicago

Tel: 630-285-0071

Cleveland

Tel: 216-447-0464

Dallas

Tel: 972-818-7423

Detroit

Tel: 248-538-2250

Kokomo

Tel: 765-864-8360

Los Angeles

Tel: 949-462-9523

Santa Clara

Tel: 408-961-6444

Toronto

Mississauga, Ontario

Tel: 905-673-0699

EUROPE

Austria - Wels

Tel: 43-7242-2244-39

Denmark - Copenhagen

Tel: 45-4450-2828

France - Paris

Tel: 33-1-69-53-63-20

Germany - Munich

Tel: 49-89-627-144-0

Italy - Milan

Tel: 39-0331-742611

Netherlands - Drunen

Tel: 31-416-690399

Spain - Madrid

Tel: 34-91-708-08-90

UK - Wokingham

Tel: 44-118-921-5869

ASIA/PACIFIC

Australia - Sydney

Tel: 61-2-9868-6733

China - Beijing

Tel: 86-10-8528-2100

China - Chengdu

Tel: 86-28-8665-5511

China - Hong Kong SAR

Tel: 852-2401-1200

China - Nanjing

Tel: 86-25-8473-2460

China - Qingdao

Tel: 86-532-8502-7355

China - Shanghai

Tel: 86-21-5407-5533

China - Shenyang

Tel: 86-24-2334-2829

China - Shenzhen

Tel: 86-755-8203-2660

China - Wuhan

Tel: 86-27-5980-5300

China - Xiamen

Tel: 86-592-2388138

China - Xian

Tel: 86-29-8833-7252

China - Zhuhai

Tel: 86-756-3210040

ASIA/PACIFIC

India - Bangalore

Tel: 91-80-4182-8400

India - New Delhi

Tel: 91-11-4160-8631

India - Pune

Tel: 91-20-2566-1512

Japan - Yokohama

Tel: 81-45-471- 6166

Korea - Daegu

Tel: 82-53-744-4301

Korea - Seoul

Tel: 82-2-554-7200

Malaysia - Kuala Lumpur

Tel: 60-3-6201-9857

Malaysia - Penang

Tel: 60-4-227-8870

Philippines - Manila

Tel: 63-2-634-9065

Singapore

Tel: 65-6334-8870

Taiwan - Hsin Chu

Tel: 886-3-572-9526

Taiwan - Kaohsiung

Tel: 886-7-536-4818

Taiwan - Taipei

Tel: 886-2-2500-6610

Thailand - Bangkok

Tel: 66-2-694-1351



MICROCHIP
www.microchip.com/UNIO

Microchip Technology Inc. • 2355 W. Chandler Blvd. • Chandler, AZ 85224-6199

Microcontrollers • Digital Signal Controllers • Analog • Serial EEPROMs

Information subject to change. The Microchip name and logo, the Microchip logo, MPLAB and PIC are registered trademarks of Microchip Technology Incorporated in the U.S.A. and other countries. Total Endurance and UNI/O are trademarks of Microchip Technology Incorporated in the U.S.A. and other countries. All other trademarks mentioned herein are property of their respective companies. © 2008, Microchip Technology Incorporated. All Rights Reserved. Printed in the U.S.A. 4/08

DS22085A



Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9