

- ▶ Based on the well established and popular Microchip PIC18F series of Microcontrollers with 10 MIPS performance and nanoWatt technology
- ▶ Wide Range 5.5—16 VDC Supply Voltage
- ▶ 64 Kbytes FLASH, 3328 Bytes SRAM, 1024 Bytes EEPROM
- ▶ 4 Buffered Analog Inputs and up to 9 direct Analog Inputs
- ▶ Up to 26 Digital I/O (Dependant on Run-Time Pin Assignments & Board Configuration)
- ▶ Up to 4 ECCP/PWM Outputs
- ▶ Integrated Parallel Slave Port
- ▶ On-board CanBUS (DeviceNet) driver
- ▶ Up to 3 External Interrupts and 3 Change Interrupts
- ▶ Configurable IC2 or SPI Serial Port
- ▶ 2 General Purpose on-board LED's driven by MCU
- ▶ 1 Enhanced UART. Can be used with direct TTL I/O, or RS-232 driver (RS-232 Driver can be disabled by MCU for low power operation)
- ▶ On-board Reset Switch
- ▶ Separate top-side ICD connector for programming or debug
- ▶ Small 32-Pin DIP format (1.0" row spacing, 0.1" lead spacing)
- ▶ -40 to +85°C industrial components with optional High-Reliability version.
- ▶ Production licenses available for high volumes.

### Portable Instrumentation

### Data Acquisition

### Industrial Automation

### Metering & Reporting

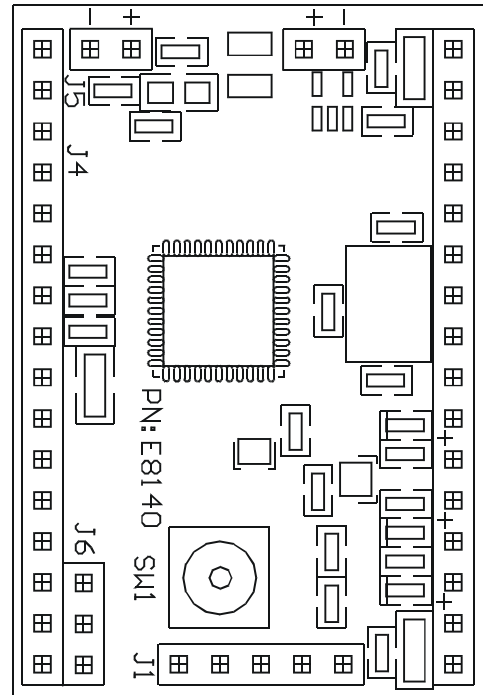
### Security Systems

### Medical Equipment

### Robotic Controls

# dsEDGE E8140

(Preliminary Specifications)



The dsEDGE E8140 is a low cost, highly flexible microcontroller solution, based on the **Microchip 18F4680 8-bit Microcontroller**. The E8140 is designed for use at the application edge and can be placed virtually anywhere to provide fully integrated, multi-purpose processing for a variety of tasks.

The E8160 includes quad analog input buffers, integrated RS-232 and CAN drivers. Innovative features minimize power consumption while retaining full functionality. A wide range on-board power regulator is ideal for industrial implementations.

Microchip's rich software support for the PIC18F line also eases integration of the 8140 into your product designs by streamlining code development.

The E8140 is fully developed solution ideal for immediate integration into a variety of product designs, especially those that are intended for industrial applications. As a design building block, the E8160 shortens product development cycles, simplifies designs, minimizes design risk, and accelerates time-to-market.

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*Sense*

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# dsEDGE 8140 Specifications (Preliminary)

## FUNCTIONAL

CPU:	Microchip 18F4680, DC-40MHz
FLASH/EEPROM:	64 Kbytes / 1024 bytes
RAM:	3328 bytes
Analog Inputs:	Available Configurations of 0, 2, or 4 Buffered Inputs; 5, 7 or 9 Un-Buffered (Depending on Configuration)
PWM Outputs:	4 (1 x ECCP)
Digital I/O:	26 (max. configuration)
Peripherals:	Programmable SPI or I2C
Communications:	Enhanced UART; TTL or RS-232 Driver (with MCU controlled power down) High-Speed (1.0 Mbps) CAN Transceiver
Comparators:	2 (maximum)
Timers:	Maximum 1 (8-Bit) / 3(16-Bit)
LED:	2 MCU Controlled General Purpose

## ELECTRICAL

Operating Voltage:	5.5 - 16 VDC
Power Consumption:	Operating (No I/O Loading) TBA

## MECHANICAL

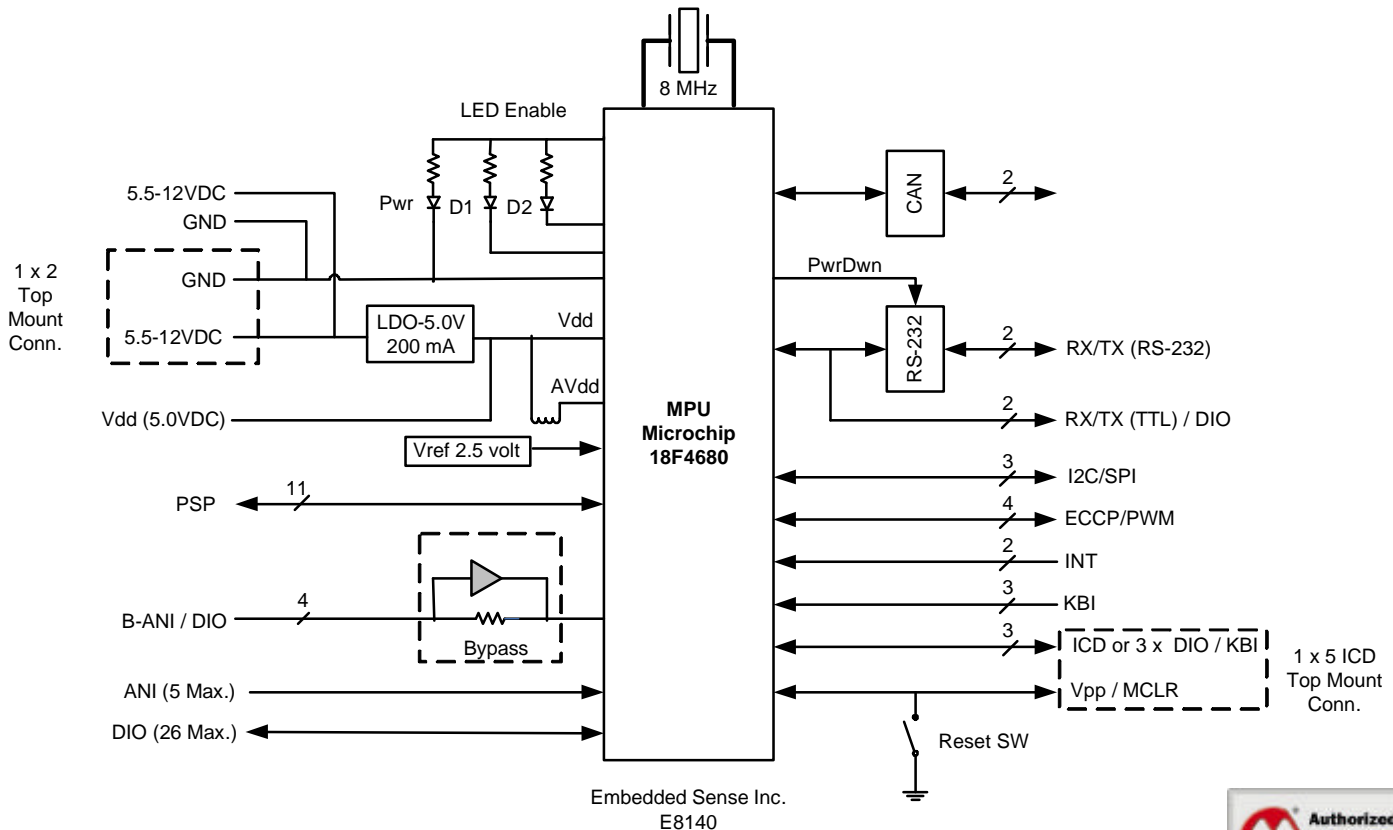
Dimensions:	1.152 W x 1.692 L x 0.725 H in. 29.26 W x 42.98 L x 18.4 H mm.
Top Clearance:	0.33 in ( 8.4 mm.)
Bottom Clearance:	0.33 in ( 8.4 mm.)
Connectors:	0.025 Dia. Header Pin, 0.100 Spacing

## ENVIRONMENTAL

Operating / Storage:	-25 to +85 °C
High Reliability Option:	95% Humidity (Non-Condensing) -40 to +85 °C, 100% Humidity Conformal Coated 100% Burn-In & Temperature Testing

## SOFTWARE TOOLS

- 100% compatible with Microchip Integrated Development Environments & Compilers, and all Software Libraries and Application Development Tools.
- In-circuit debug (ICD) and In-circuit serial programming (ICSP) supported through 1x5 header.
- Ships with Pre-Installed Embedded Sense boot loader.



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