

# Sensing Processor Module | sp130

## Applications

- Run custom data processing software in either Linux or Windows XP environment.
- Run ENLIGHT<sup>Pro</sup> Sensing Analysis Software.
- Manage power to sm130 field modules.
- Store and transmit sensor data.
- Trigger alarms or other external processes.

## Features

- Supports custom graphical user interfaces for virtually any application.
- Allows display, analysis, and storage of measurement data in appropriate engineering units.
- Supports ACPI power management.
- Supports USB, Ethernet, Serial and other communications interfaces and protocols.
- Has user configurable general purpose I/O capability (GPIO).
- Custom packaging mechanically interfaces with the sm130 Optical Sensing Interrogator.
- Supports Linux and Windows XP operating systems.
- Customizable processor and memory options allow for optimal price and performance for each application.

## Description

The sp130 is an industrial grade, high performance sensing processor module for use with Micron Optics sm130 Optical Sensing Interrogators. The sp130 is built on a fanless industrial PC, and facilitates communication and power control to the sm130 module. Custom software development and application management is easily made on the sp130 module, available with both Linux and Windows XP Professional operating systems. A host of ports and available peripherals ensure maximum flexibility for any application.

The data processing environment enabled by the sp130 helps engineers to bridge the gap between making measurements in the optical domain and reporting those results in the appropriate engineering units of strain, temperature, pressure, acceleration, etc.



sp130 Sensing Processor Module

Data can be saved locally to an on-board compact flash card or hard drive. Raw or processed data can also be exported to other processors via Ethernet, Serial, USB, etc. All of the features of a Linux or Windows environment can be focused on any particular application. For some remote applications, power management is critical. The sp130 provides power management through wake-on-LAN and wake-on-clock functions. Furthermore, the sp130 can support remote data transmission through most PC compatible protocols like TCP/IP, RS-232/422/485, Modbus, wireless LAN, etc.

Micron Optics ENLIGHT Sensing Analysis Software is compatible with "sp - Sensing Processors" running Windows XP. ENLIGHT provides a single suite of tools for data acquisition from Micron Optics interrogators. ENLIGHT combines the useful features of traditional sensor software with the specific tools needed to optimize optical properties during the design, implementation, and operations phases of an optical sensor system. Tables, graphs, and additional data visualization features make ENLIGHT easy to use. Learn more about ENLIGHT at [http://www.micronoptics.com/sensing\\_software.php](http://www.micronoptics.com/sensing_software.php).

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## Specifications

sp130-200

sp130-500

### Standard Configuration

Operating System	Linux	Windows XP Professional
Processor Type	Low Voltage Pentium (fanless)	Low Voltage Pentium (fanless)
Processor Speed	1.4 GHz	1.4 GHz
Memory	512 MB DDR	512 MB DDR
Storage Media	2 GB Compact Flash	100 GB 2.5" HDD

### Standard Included Features

Dual USB 2.0 Ports

Dual RS232 Serial Ports

Dual Ethernet Ports (1-100 Mbps, 1-1000 Mbps)

Intel Extreme Graphics 2 Video Interface (with flat panel monitor support)

User Configurable General Purpose I/O (GPIO), 3 Input, 3 Output

PS/2 Keyboard/Mouse Port

ACPI Power Management Support (Requires ACPI enabled OS)

Remote Micron Optics Sensing Module (sm130) Power Control

Micron Optics sm130 Hardware Mounting Kit and Instructions

### Mechanical, Environmental<sup>2</sup>, Electrical Properties

Dimensions; Weight	132 mm x 267 mm x 45.7 mm; 0.9 kg (2 lbs)
Operating Temperature; Humidity	0° to 50° C; 0 to 80%, non-condensing
Storage Temperature; Humidity	-20° to 70° C; 0 to 95%, non-condensing
Input Voltage	7-36 VDC (100~240 VAC, 47~63 Hz), AC/DC converter included
Power Consumption at 12V	20 W typ, 25 max

### Options

Compact Flash	4 GB	2 GB, 4 GB
Processor	Up to 1.8 GHz Pentium (fan cooled)	
Memory	1 GB DDR	1 GB DDR
RS (232/422/485) Serial Port	Upgrade one of the dual RS-232 serial ports	

#### Notes:

1. Beta product. For details see [www.micronoptics.com/products\\_designation.php](http://www.micronoptics.com/products_designation.php).
2. Environmental conditions may be limited by HDD operating and storage limits.