

# Sensing Processor Module | sp125

## Applications

- Run custom data processing software in either Linux or Windows XP environment.
- Run ENLIGHT<sup>Pro</sup> Sensing Analysis Software.
- Manage power to sm1xx field modules.
- Store and transmit sensor data.
- Trigger alarms or other external process.

## Features

- Supports custom graphical user interfaces for virtually any application
- Allows display, analysis, and storage of measurement data in appropriate engineering unit
- Provides power management through wake-on-LAN and wake-on-clock functions
- Supports USB, Ethernet, Serial, Modbus and other communications interfaces and protocols
- Has user configurable general purpose I/O capability (GPIO)
- Custom packaging mechanically interfaces with the sm125 Optical Sensing Interrogator
- Supports Linux, Windows XP, and other operating systems
- Customizable processor and memory options allow for optimal price and performance for each application

## Description

The sp125 is an industrial grade, high performance sensing processor module for use with Micron Optics sm125 Optical Sensing Interrogators. The sp125 is built on a fanless industrial PC, and it facilitates communication and power control to the sm125 module. Custom software development and application management is easily made on the sp125 module, available with both Linux and Windows XP Professional operating systems. A host of ports and available peripherals ensure maximum flexibility for any application.

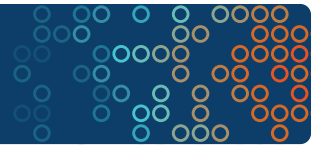
The data processing environment enabled by the sp125 helps engineers to bridge the gap between making measurements in the optical domain and reporting those results in the appropriate engineering units of strain, temperature, pressure, acceleration, etc.



sp125 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 sp125 provides power management through wake-on-LAN and wake-on-clock functions. Furthermore, the sp125 can support remote data transmission through most PC compatible protocols like TCP/IP, RS-232/422/485, Modbus, wireless LAN, etc.

ENLIGHT<sup>Pro</sup> Sensing Analysis Software is included with Micron Optics sensing interrogator systems and provides a single suite of tools for data acquisition, computation, and analysis of optical sensor networks. ENLIGHT<sup>Pro</sup> combines the useful features of traditional sensor software with the specific needs of the optical sensor system, making it easy to optimize optical properties during the design and implementation phase of an optical sensor system. Intuitive data display and additional graphing and data visualization features make ENLIGHT<sup>Pro</sup> easy to use. Learn more about ENLIGHT<sup>Pro</sup> at: [http://www.micronoptics.com/sensing\\_software.php](http://www.micronoptics.com/sensing_software.php).



## Specifications <sup>B</sup> 1

sp125-200

sp125-500

### Standard Configuration

Operating System	Linux	Windows XP Professional
Processor Type	Low Voltage Celeron (fanless)	Low Voltage Pentium (fanless)
Processor Speed	800 MHz	1.4 GHz
Memory	256 MB DDR	512 MB DDR
Storage Media	1 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 Mbs, 1-1000 Mbs)

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

Remote Micron Optics Sensing Module (sm125) Power Control

Micron Optics sm125 Hardware Mounting Kit and Instructions

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

Dimensions; Weight	132 mm x 230 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	2 GB, 4 GB	1 GB, 2 GB, 4 GB
Processor	Up to 1 GHz Celeron (fanless) or Up to 1.8 GHz Pentium (fan cooled)	
Memory	512 MB, 1 GB DDR	1 GB DDR
RS (232/422/485) Serial Port	Upgrade one of the dual RS-232 serial ports	

Notes:

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