

Sensing Processor Module | sp125

Applications

- Civil Structures/Civionics (bridges, dams, tunnels, buildings, etc.)
- Energy (wind turbines, pipelines, nuclear reactors, etc.)
- Aerospace Vehicles (composite structures, wind tunnels, dynamic tests, etc.)
- Oil & Gas (well reservoir management, platform structural health monitoring, etc.)
- Marine Vessels (hull, mast, rudder, submarine pressure tests, etc.)
- Transportation (railways, roadways, etc.)
- Homeland Security (perimeter intrusion, shipping container integrity, etc.)
- And others such as medical devices, military armor, chemical sensing, etc.

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, RS-232, Modbus and other communications interfaces and protocols
- Has user configurable I/O capability (GPIO)
- Integrates custom packaging with the sm125 Optical Sensing Interrogator
- Supports Linux, Windows XP, and other operating systems
- Customizable processor and memory options allow for optimal price for each application

Description

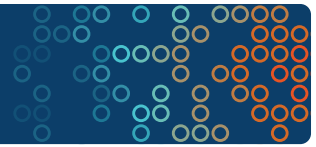
The sp125 is an industrial grade, high performance sensor processing module for use with Micron Optics sm125 Optical Sensing Interrogators. The sp125 is built on a fanless industrial PC, and it facilitates communication and power control to the sm125 module. Custom software development and application management is easily made on the sp125 module, available with both Linux and Windows XP 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.



ENLIGHT^{Pro} 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^{Pro} 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^{Pro} easy to use.

Data can be saved locally on-board in compact flash or on a hard drive. Raw or processed data can also be exported to other processors via Ethernet, RS-232/422/485, 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/UDP, RS-232/422/485, Modbus, wireless LAN, etc.



Specifications ^β 1

sp125-200

sp125-500

Standard Configuration

Operating System	Linux	Windows XP (Includes ENLIGHT ^{Pro})
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 Serial Ports (RS232/422/485)
- 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 Properties

Dimensions	132 mm x 230 mm x 45.7 mm
Weight	0.9 kg (2 lbs)

Environmental Properties ²

Operating Temperature	0° to 50° C
Operating Humidity	0 to 80%, non-condensing
Storage Temperature	-20° to 70° C
Storage Humidity	0 to 95%, non-condensing

Electrical Properties

Power Consumption	20 W typ., 25 max
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Available Options/Upgrade

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

Notes:

- Denotes Beta product. For details see www.micronoptics.com/product_designation.php.
- Environmental conditions may be limited by HDD operating and storage limits.