



OmniFlex System

- Available with 1 to 512 channels
- Slide-in modules
- No gage factor or calibration
- Cryogenic range down to 0.86 Kelvin available
- Tested for aerospace use
- Voltage or current analog outputs
- Accuracy of $\pm 1^\circ\text{C}$
- Multiple chassis can be cascaded
- Transport case available
- Now with USB interface

Product Summary

Description: Multichannel fully upgradeable Fiber Optic Temperature Monitoring System. Field upgradable up to 512 channels

Application: The OmniFlex is the most versatile fiber optic temperature monitoring system available

Fibers by 

Easy slide-in modules

OmniFlex System is upgraded by simply sliding new modules called OmniModules. Any type of modules can be used in the chassis.

Modules are recognized by the chassis and the included software. Each module can be configured using the included OmniLink control and datalogging software.

Cascade up to 8 chassis together

Up to eight OmniFlex Systems can be cascaded together to form an array of up to 512 optical channel. Only one cable is required for connection to PC.



The Neoptix OmniFlex System is a fully upgradeable, multi-channel fiber-optic temperature monitoring system featuring up to 512 channels. It is designed with reliability, versatility and upgradability in mind

Flexible rack mounted enclosure

The OmniFlex starts with a standard 4U / 19-inch rackmount chassis that can accommodate up to eight single- or multi-channel fiber optic modules, providing up to 64 channels per chassis. Multiple chassis can be cascaded together to form an array of up to 512 optical channels. You can easily add modules yourself – just remove the blank panel at the location where you want to add the new module and slide the module into the chassis. Fasten the module in place and the back panel connector will do the rest. Now run the software module configurator, and the new module will be automatically recognized by the OmniLink™ software.

Wide range of modules to select from

The OmniFlex System allows using various types of modules in the same chassis. These modules can easily be swapped between chassis to match the needs of specific projects in your laboratory or testing facility. Measurements rates of up to 6 Hz per channel. Two parameters should dictate how you select your modules:

- Sampling speed
- Number of desired channels

Powerful yet simple OmniLink software

OmniLink is the perfect companion to the OmniFlex system. Indeed, it offers a seamless interface to any PC computer. It allows for displaying all channels at once, and provides a versatile logging facility to files that are directly readable by Microsoft Excel. OmniLink also includes a module configurator, that allows physical configuration of OmniModules with the software. And more...

Designed to address a large variety of applications

Since its introduction in 2006, the OmniFlex systems have been used in aerospace applications (flying in airplanes), R&D applications going from food packaging research to cryogenic research, medical applications, and much more. It has also been a tool of choice for monitoring temperatures during power transformer testing (heat run tests).

The ideal tool for monitoring during transformer heat run tests

The OmniFlex is the ideal tool for monitoring T2 probes during heat run tests. It gives the user a constant system to work with. No more quick learning of a new conditioner with the danger of missing the heat run test altogether! The OmniFlex allows you to work within a known environment, with guaranteed data consistency.

Now with a USB interface, with 2,000 V isolation

As the OmniFlex is mostly used as a laboratory instrument, we have upgraded its interface to USB. While making it easier to interface to modern PC computers, it offers full electrical isolation between the PC and the OmniFlex chassis. This is particularly important when working with high power devices, which could cause ground loops and large potential differences between electrical apparatus.

Accessories

Temperature probes

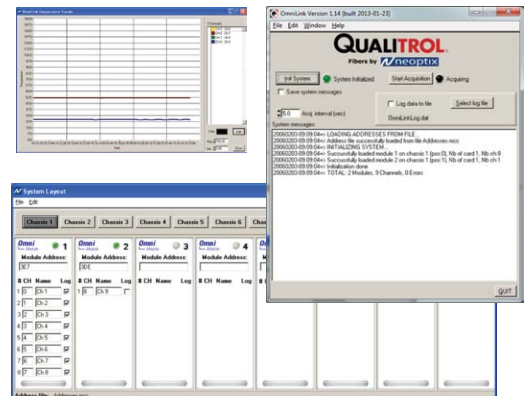
The OmniFlex is compatible with all Neoptix fiber optic probes, the T1 and T2 probes.



OmniLink software

OmniLink is available to interface to a PC computer via a USB port (serial port emulation). OmniLink adds the following capabilities to your OmniFlex system:

- Includes a powerful module configurator to simplify the management of a large number of temperature channels
- Displays and graphs up to 64 channels in real time on your PC screen
- Does data logging, with easy file export to Excel
- Includes a Console to manage all acquisition and operation optimization parameters





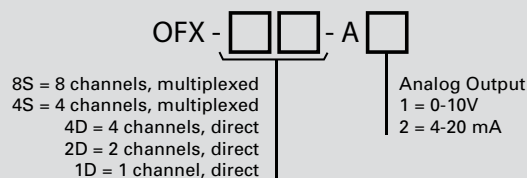
CHASSIS — TECHNICAL SPECIFICATIONS

Specifications	Model name	OmniFlex System
	Number of channels per chassis	Up to 64 optical channels per chassis. Or 32 direct channels
	Maximum number of channels per system	Chassis can be linked to form an array of 512 optical channels
	Number of modules per chassis	Up to 8 modules (OmniModules) per chassis
	Upgradability	Upgradable by user with slide-in optical modules
Communication and I/O	Operating Mode	Neoptix™ OmniLink™ PC Software
	Communication (hardware)	USB, b-type connector (serial port emulation)
	Analog outputs	Standard: 0-10 V on each channel (-A1) Optional: 4-20 mA on each channel (-A2) Note: Must be specified at time of order
Mechanical and Environmental	Operating temperature	0 to 50 °C (32 to 122 °F), non-condensing
	Storage temperature	-30 to 60 °C (-4 to 140 °F)
	Form factor	19 inch / 4U rackmount
	Connectors	USB b-type on front panel Analog output: Screw connection plug with screw flange, 3.81 mm pitch, Power and chassis connectivity: DIN7 or Miniature cylindrical MIL-C-83723 connector
	Dimensions	Width: 482.6 mm (19 in) ; Height: 177 mm; Depth: 310.4 mm
	Weight of chassis	2.2 kg
	Power	Power requirements
Power consumption		1.6 A maximum (if eight 8-channel sequential modules in chassis). See each OmniModule for power consumption
Power connection		Chassis can be linked together to share power and communication

Ordering Code

Chassis OFX-CHA-USB

OmniModules





Available slide-in OmniModules:



OmniModule Model:	OFX-8S	OFX-4S	OFX-4D	OFX-2D	OFX-1D
Number of channels:	8 optical channels	4 optical channels	4 optical channels	2 optical channels	1 optical channel
Sampling method:	Multiplexed	Multiplexed	Direct	Direct	Direct
Sampling rate:	250 ms switching between each channel	250 ms switching between each channel	6 Hz per channel	6 Hz per channel	6 Hz per channel
Display:	Status LEDs	Status LEDs	Status LEDs	Status LEDs	Status LEDs
Operating Mode:	Through OmniFlex	Through OmniFlex	Through OmniFlex	Through OmniFlex	Through OmniFlex
Analog outputs:	0-10 V or 4-20 mA	0-10 V or 4-20 mA	0-10 V or 4-20 mA	0-10 V or 4-20 mA	0-10 V or 4-20 mA
Probe compatibility:	All Neoptix probes	All Neoptix probes	All Neoptix probes	All Neoptix probes	All Neoptix probes

OMNIMODULES — TECHNICAL SPECIFICATIONS

Module name	OFX-1D	OFX-2D	OFX-4D	OFX-4S	OFX-8S
Number of channels	1	2	4	4	8
Sampling method	Direct measurement at 6 Hz per channel			Multiplexing	
Sampling Rate	6 Hz per channel			250 ms switching between each channel	
Analog output	One output per optical channel (-A1: 0-10 V ; -A2 : 4-20 mA)				
Upgradability	Flash ROM firmware upgradable				
Display	Status LEDs (Power, Link and Sensor)				
Data logging	Available through chassis and OmniLink software (PC required)				
Units	User selectable; Metric or Imperial				
Temperature range	-80 to 300 °C (-112 to 572 °F), Cryogenic range available (down to 4.2 Kelvin)				
Communication and I/O					
Operating Mode	Through Neoptix OmniFlex chassis				
Analog outputs	Yes, through Neoptix OmniFlex chassis; Standard: 0-10 V on each channel, Optional: 4-20 mA				
Mechanical and Environmental					
Operating temperature	0 to 50 °C (32 to 122 °F)				
Storage temperature	-20 to 60 °C (-4 to 140 °F), non-condensing				
Form factor	Independent and totally enclosed module				
Dimensions	Width: 50.6 mm; Height: 174 mm; Length: 231 mm				
Weight	0.82 kg	1.2 kg	1.6 kg	0.9 kg	0.98 kg
Power					
Power requirement	18 to 28 VDC through chassis				
Power consumption	100 mA	200 mA	400 mA	160 mA	200 mA
Power connection	Through Neoptix OmniFlex chassis. Each chassis has its own 24 VDC isolated power supply.				

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