



FiberLoop III™ is the most affordable, flexible fiberoptic communication system available today for distribution automation, secondary networks, substation networks, protection relays, RS-232 and RS-485 interfaces.

## Model 570 Features for IntelliTEAM® Controllers

- **SFP fiberoptic interface with dual LC connectors**
- **Up to 126 high-speed virtual channels**
- **4-8 serial ports**
- **Transceiver and controller features available in a single, powerful unit**
- **Highly reliable, fault-tolerant, redundant, self-healing ring and radial network designs**
- **Vastly superior noise immunity and electrical isolation**
- **Supports all byte protocols (e.g. DNP, UCA)**
- **Point-to-Point communication**
- **LED status indicators, non-volatile flash memory, and optical power meter**
- **8-character alphanumeric LED display for diagnostics and port information**
- **Integrated Network Management Software: FiberPanel™**

## Fiberoptic Transceivers The FiberLoop III System™ for IntelliTEAM II® Controllers (short case)

### Designed specifically for the S&C 5804 Controller.

This "short case" version of our Model 570 transceiver was developed for the dimensional and power requirements of the S&C 5804 IntelliTEAM II® Controllers. The controllers run on 12V, so our new slim, high-efficiency 9-36V power supply has what it takes!

### Overview of the Model 570

The FiberLoop III™ System includes the hardware and software you need to deliver the highest customer service and the most reliable communications. The Model 570 Fiberoptic transceiver combines the capabilities of a transceiver and a controller into a single unit. This means you can perform SCADA master, slave, and point-to-point communications within the same device, making it a highly flexible solution.

### Multiple Network Channels

The Model 570 Transceiver offers up to 126 high-speed (57.6Kbps) independent virtual network communication channels. You can assign a transceiver serial port to any virtual channel, which allows you to group Remote Terminal Units (RTUs) with common protocols, segregate different applications, allocate network bandwidth, and connect backup master stations. FiberLoop III™ supports multiple RTUs, Intelligent Electronic Devices (IEDs), and Programmable Logic Controllers (PLCs).

### Multiple Network Topologies

FiberLoop III™ permits both redundant ring and radial network designs with the same model of transceiver.

### Self-healing

Model 570 transceivers automatically correct for network failures, rerouting SCADA information within 8ms, without interruption of communications. The self-healing network converts dynamically to a radial network if any single transceiver fails, not just when fibers are severed.

### Protocol Transparent

FiberLoop III™ transparently carries all byte protocols, such as DNP, UCA, and MODBUS and can group RTUs with common protocols into common virtual communication channels without resorting to hard-coded serial port assignments.

### Multiple SCADA Masters

The design of FiberLoop III™ transceivers enables them to act as SCADA masters on some channels, while simultaneously acting as slave channels on other ports. FiberLoop III™ networks can consist of many SCADA master stations in multiple locations, where such configurations are optimum for water, electric, and gas utilities on a common network.

### Paired Point-to-Point

FiberLoop III™ can pair any transceiver port with another transceiver's port while continuing to use the remaining non-paired channels for conventional master/slave SCADA. The system accommodates up to 126 protective relay pairs, supports the use of SEL Mirrored Bits, and supports RS-422 64K synchronous communications.

Model 570 and  
S&C IntelliTEAM II® Version

## Remote Monitoring with Network Software

Differentiating itself from competitors, H&L also includes the FiberPanel™ Network Management Software with every FiberLoop III™ system. FiberPanel™ is specifically designed to work with the Model 570 transceivers. You configure and view the system with easy-to-use graphical windows that provide access to real-time network information.

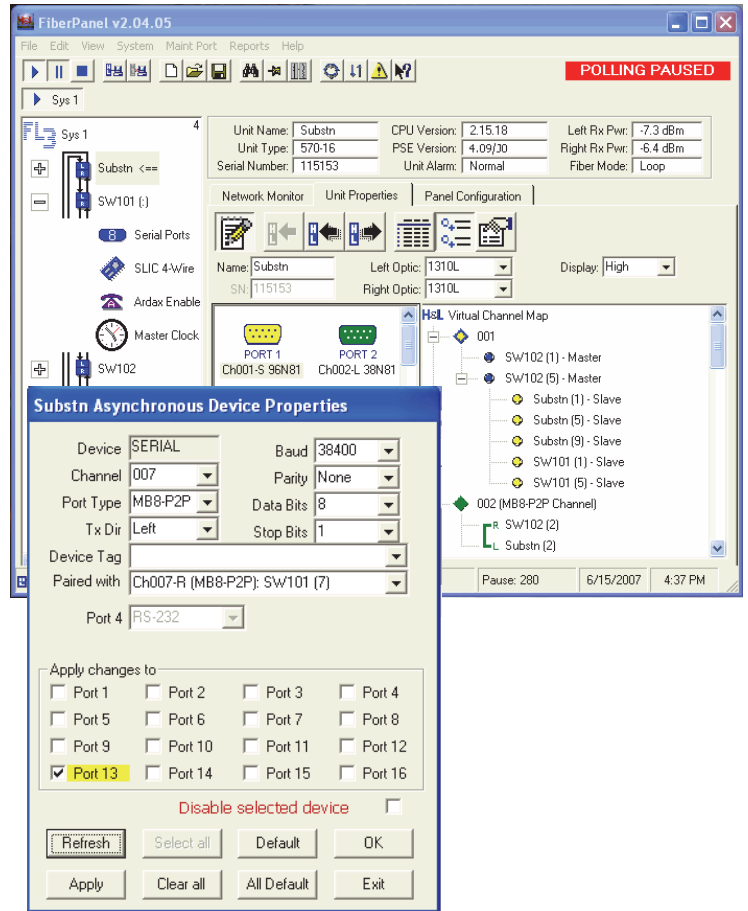
The software/PC connects directly to the transceiver and also supports remote connection to the fiberoptic network via a standard modem. Additionally, through TCP/IP connectivity, you can monitor and configure a FiberLoop III™ system via your Intranet or the Internet. Up to four users can monitor an active session.

Other fiberoptic solutions only allow you to catch problems after there is a break in the system. FiberPanel™ continuously displays alarms and records a history of all network events in a log file. If fiber problems occur, you can quickly identify and correct the issues. The complete FiberLoop III™ solution helps you proactively maintain control over your network and streamlines your maintenance tasks.

Using FiberPanel™, from the convenience of your office, you can:

- \* View a System Map of your entire set-up.
- \* Check fibers, locations, unit names, and serial numbers.
- \* Assign unit names and location tags.
- \* Configure parameters for your units.
- \* Allocate channels and decide channel speed.
- \* Selectively turn on ports to communicate with remote devices, such as relay maintenance ports (which do not have SCADA addresses) to download event data or upload new settings.
- \* Measure optical power.

- \* Isolate faults, turn off serial ports, and re-route signals.
- \* Print reports on system activity, including diagnostic reports showing mis-wired fibers, telemetry of unit voltages and temperature and malfunctioning units.



## Model 570 IntelliTEAM®-version Specifications

### Model 570-4:

4-DB-9F, full duplex, RS-232 ports

### Model 570-8:

4-DB-9F RS-232 connectors offer 8 ports: 3 ports each on connectors 1 & 2, one port on connector 3, and one port on connector 4

### Maintenance PORT:

RS-232 via PC-AT DB-9F port

### Virtual Channels:

Model 570s support 128 virtual channels. Any port can be assigned to any channel. Point-to-Point channels available.

### RS-485:

Opto-isolated transient-protected port

### Data Rates:

600, 1200, 2400, 4800, 9600, 19.2k, 38.4k, 57.6 kb/s

### Power Options (8 watts max):

9-36Vdc and 18-75Vdc

### Alarm Output:

Form 1A (N.O.) opto-isolated solid state relay

### Push-to-Talk:

Form 1A (N.O.) opto-isolated solid-state relay; PTT contacts on pins 1 & 9 of DB-9 Serial 3 (option)

### Environmental/Mechanical Specs:

Operating Temperature: -40°C to +85°C

5% to 95% RH

Net Weight: 3.25lbs

9"L X 6"W X 2.3"H

### Fiberoptic Connectors:

Dual LC

### Optical Output:

Laser > -8dBm @ 1310nm singlemode

Laser > -7dBm @ 1550nm singlemode

Class 1 (eye-safe) devices, SFP fiberoptic interface

### Optical Receiver Sensitivity:

> -28dBm

### Optical Budget:

20dB singlemode

### System Requirements for Fiber-Panel:

Microsoft® Windows NT4, 2000, XP, Vista, Windows 7



### Dimensions:

Depth: 2.3"

Width: 6.0"

Height:

8.0" (body)

9.5" (with mounting tabs)

PO Box 580  
34 Post Road  
North Hampton,  
New Hampshire 03862  
USA

Tel: 603.964.1818

www.hlinstruments.com