The Model 570E Fiberoptic Network Solution

PO Box 580
34 Post Road
North Hampton,
New Hampshire 03862
USA
Tel: 603.964.1818

www.hlinstruments.com

H&L Instruments, LLC has been manufacturing optical instruments and communications equipment since 1979. We proudly serve the electric utility, aviation/power gas turbine, and medical research industries throughout the world.

The first fiberoptic product was the Model 542 multi-drop Fiberoptic Transceiver. It was developed in 1985 for Pacific Gas & Electric Company (where ~700 of them are working 24 hours a day, 7 days a week to help protect the underground network distribution system in San Francisco and Oakland California.)

Customers wanted a loop that was self-healing and did not require modifications to the SCADA master software. This resulted in the microprocessor-based fiberoptic system composed of Model 550 Fiberoptic Controllers and Model 552 Fiberoptic Transceivers which included a basic Window text-based alarm log. Some customers wanted more than one channel and wanted a better Windows network management program so a new fiber networking solution was created with 560 controllers and 562 transceivers. Later the two device functions were merged into one unit, which resulted in the Model 561 Fiberoptic Network Transceiver.

The 56X system featured many innovative features such as remote monitoring of received optical power levels at all network nodes, 16 independent communications channels, and up to 16 serial ports per node. Network configuration, administration, and network monitoring was provided by HLPanel3, a Windows based HMI program.

Many customers have chosen to upgrade their 542 systems to 56X, even though they are still in excellent condition, to take advantage of these useful features and a reasonable trade-up pricing policy. (H&L does not seek to obsolete its products.) One such customer who traded up is TXU (formerly Texas Utilities), which in 1999-2000 upgraded their Dallas/Fort Worth International Airport distribution automation system of ~175 units.

Time marches on, and so do our products. In response to numerous requests from our customers for a fully independent fiberoptic network, H&L Instruments proudly introduced the 570-based fiberoptic system. Comprised of Model 570E Fiberoptic Transceivers and the H&L Instruments FiberPanel software, which provide uncompromised flexibility and ease of use.

Like the previous fiberoptic networking solution, this latest 570-based system provides a highly reliable, redundant, protected loop fiberoptic network. Unlike previous solutions, this latest product is controller-less, meaning that each transceiver independently works with others to handle traffic within the network. Spares are simplified because one unit does it all. The 570-based system provides Master/Slave and Point-to-Point channel configurations. SCADA masters can be located at any unit in the system allowing multiple users to share the same fiber.

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Point-to-point channels give SEL protection relays, running Mirrored Bits™, dedicated communication paths, again sharing the same fiber as the SCADA system.

FiberPanel is H&L's fourth generation windows-based network configuration and administration program. Building on the graphical interface of HLPanel3, FiberPanel provides a highly visual user interface. Fiber network monitoring and port/channel configuration information is presented in a familiar Windows (2K, XP, Vista, Windows7) GUI environment. Network administrators can easily locate and correct fiber problems and configuration irregularities. FiberPanel Version 2 incorporates HLPanel3 and FiberPanel into a single program allowing users with 542- and 56x-based systems the ability to administer and monitor these systems from a single HMI. In addition, the ability to monitor up to 16 fiberoptic networks using direct, modem, and TCP/IP connections has been added.

H&L's fiberoptic transceivers have built-in flexibility and scalability, which is why they work successfully in a variety of different applications. Our products meet the requirements for a wide range of industries, including municipal utilities, university campuses, water and wastewater systems, airports, industrial campuses, amusement parks and intelligent transportation systems.

H&L builds its products to last. Our fiberoptic network controllers, transceivers, modems, and digital input/output units are known industry-wide to be the one of the most secure, highly reliable, and rugged communication solutions on the market.

H&L Instruments has always listened to its customers' needs and been committed to surpassing industry requirements. With its dedicated investment in research and technology, H&L Instruments offers a line of flexible, high-performance, fast-healing fiberoptic communications equipment

We have a long-standing reputation for superior products at a competitive price, with highly capable technical support through every phase of design, installation, configuration, and maintenance of our customers' SCADA networks. Please do not hesitate to call with questions and suggestions as to how we can better serve your needs. H&L Instruments can provide customizations of our software and equipment when needed to meet the special requirements of our customers.

After visiting our website, give us a call for more information or a quotation.