H&L instruments

The Fiberoptic Communications Specialists

# INCOM Communications Adapter

Model 570EN

## Overview

The H&L Instruments Model 570EN INCOM Communications Adapter translates Eaton Cutler-Hammer INCOM network signals to and from a 10-character ASCII encoded message format.


## Factory-Installed Option

The INCOM Communications Adapter is factory installed in the model 570 Transceiver. It translates daisy-chained signals from INCOM protocol devices to the H&L fiberoptic network. This option translates signals from devices such as MPCV relays, IQ analyzers and metering products, Advantage motor controls, metal enclosed switchgear, energy sentinels, and power managers.

## RS-232 or RS-485 Interfaces

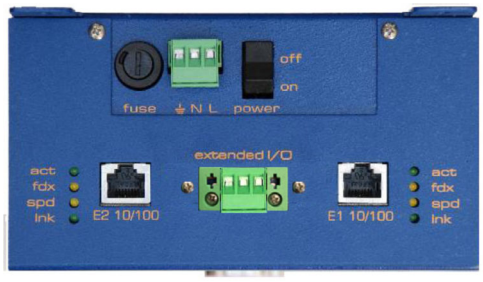
At a SCADA master computer, an a model 570 via an RS-232 or RS-485 interface, you remotely collect, view and interpret real-time data from a wide range of IMPACC devices.

## INCOM FSK network

IMPACC devices are connected, using Eaton's INCOM "Blue Hose" twisted pair cable 9600 bps FSK network, to the 570EN **extended I/O** connector at the top of the transceiver.

## Cost-Effective Solution

This exclusive, embedded low-cost solution was developed in cooperation with Eaton Cutler-Hammer, Greenwood, SC and Pittsburgh, PA. It is ideally suited for a variety of industrial, commercial applications and for energy companies that need to continually monitor and control electrical distribution systems in their facilities with Eaton's flexible and innovative IMPACC communications system.




**Model 570EN INCOM Communications Adapter**

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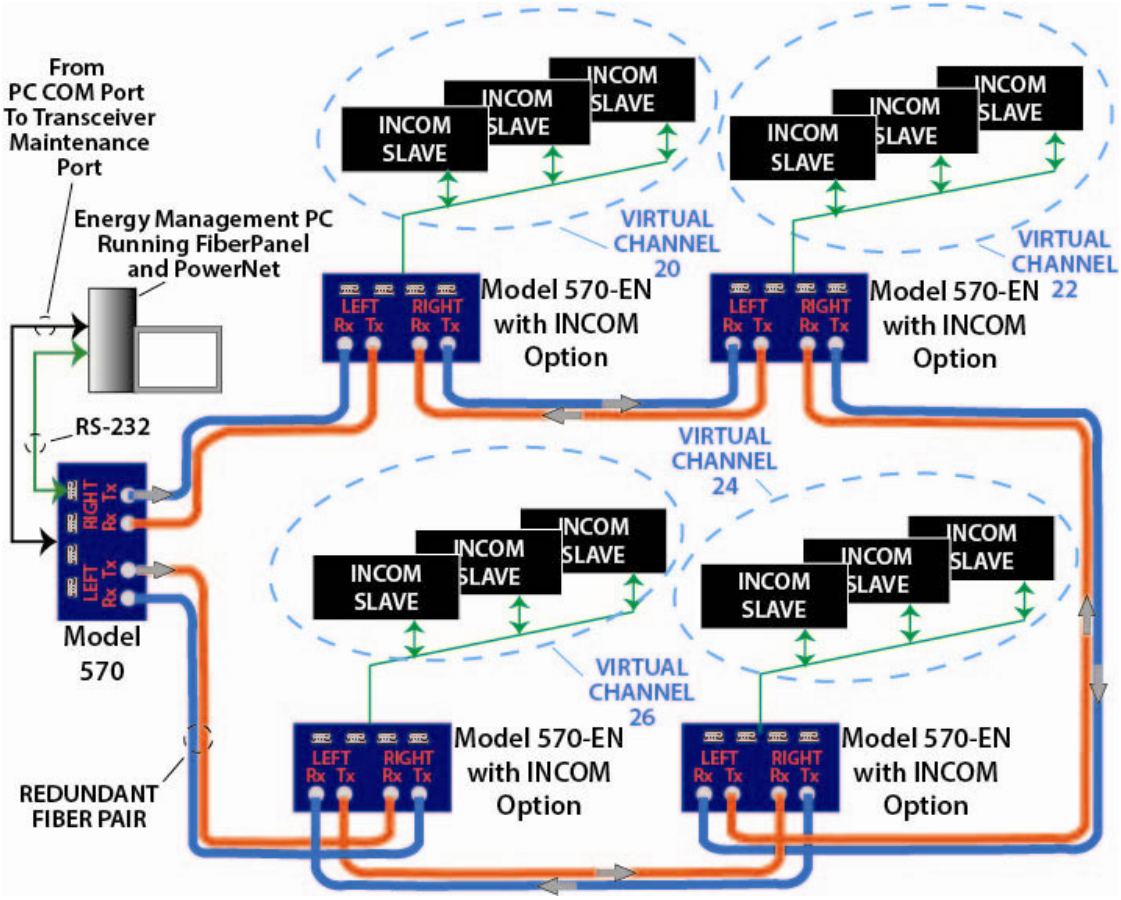
## Master to Remote Communication

The model 570EN transceiver with the INCOM option provides a loop-protected, fiberoptic-based MINT II interface. The energy management PC connects to a model 570 master port using an RS-232 connection. INCOM 10-byte data packets are transmitted to remote 570EN transceivers via one or more of the systems 126 virtual channels. The data packets are routed over fiber to INCOM slave devices by way of a slave port assigned to the virtual channel. An RS-232 connection is not required between the 570EN and an INCOM slave. The 570EN with INCOM interface translates the 10-byte packets to the INCOM 33-bit communication format and transmits the data over the two wire interface to the INCOM slaves.

## Remote to Master Communication

Each INCOM slave has a unique address. When a slave recognizes its address on the two-wire interface, it processes the request and replies to the master via the same two-wire port. The packet is received at the 570, translated from the 33-bit INCOM format to a 10-byte packet, and then transmitted via the slave port over fiber to the master port on the same virtual channel. The data is then transmitted to the energy management PC via the 570 RS-232 connection.

The following drawing shows a simple five-transceiver network configuration. Notice that each 570-EN node employs a separate virtual channel for communication between the INCOM slaves and the model 570 master. The 126 virtual channel capacity of the H&L Instruments network permits implementing very large networks.




Redundant Network Solution Implements Large Networks With INCOM Support

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