

CLEARPath™ Integrated Module (CPIM)

ClearPath



Background

As cable operators increase the number of new services, the need to maintain a reliable and robust return path network, free of ingress or interference, is vital to subscriber retention.

Applications

That's where Electroline's CLEARPath™ Integrated Module (CPIM) comes in. The CPIM is a return path switch that can be installed in major brands of optical nodes, distribution amplifiers and line extenders to help manage ingress in the return path. Designed as a retrofit for existing nodes and amplifiers, it preserves the value of already installed equipment by not having to add a new line device in the cable plant.

The CPIM has all the functionality of Electroline's standalone field switching return path module, the CPM. However, its main advantage is that one CPIM contains up to four return path switches, thereby managing ingress in up to four distribution areas. To determine where the ingress is located, the CPIM selectively switches a 6 dB pad into the return path. In locations where ingress is severe, the CPIM can turn off the entire upstream band in a specific segment until the source is repaired.

The Electroline Advantage

The CPIM is part of Electroline's CLEARPath™ system, which provides a simple and intuitive solution to locate the source of ingress in the coaxial cable distribution plant of an HFC network. It is combined with CLEARPath's other components such as the Test Point Selector (TPS) for remote monitoring of test points in a headend or hub, any spectrum analyzer or noise-monitoring device, and the Locator software package.



This combination of equipment makes CLEARPath the most sophisticated and successful solution for ensuring network reliability by detecting, locating, and resolving ingress in a matter of minutes. In addition, the CPIM is also compatible with other major ingress monitoring systems.

Features

- One CPIM can control up to four return path segments
- Non-disruptive process that does not affect return path services
- Simple to install with no additional labor or connector costs Fast switching time 10 ms
- Isolates interfering ingress to a small portion of the network
- Single agile FSK receiver
- Works with all versions of LOCATOR ingress locating software– a unique Electroline solution

How It Works

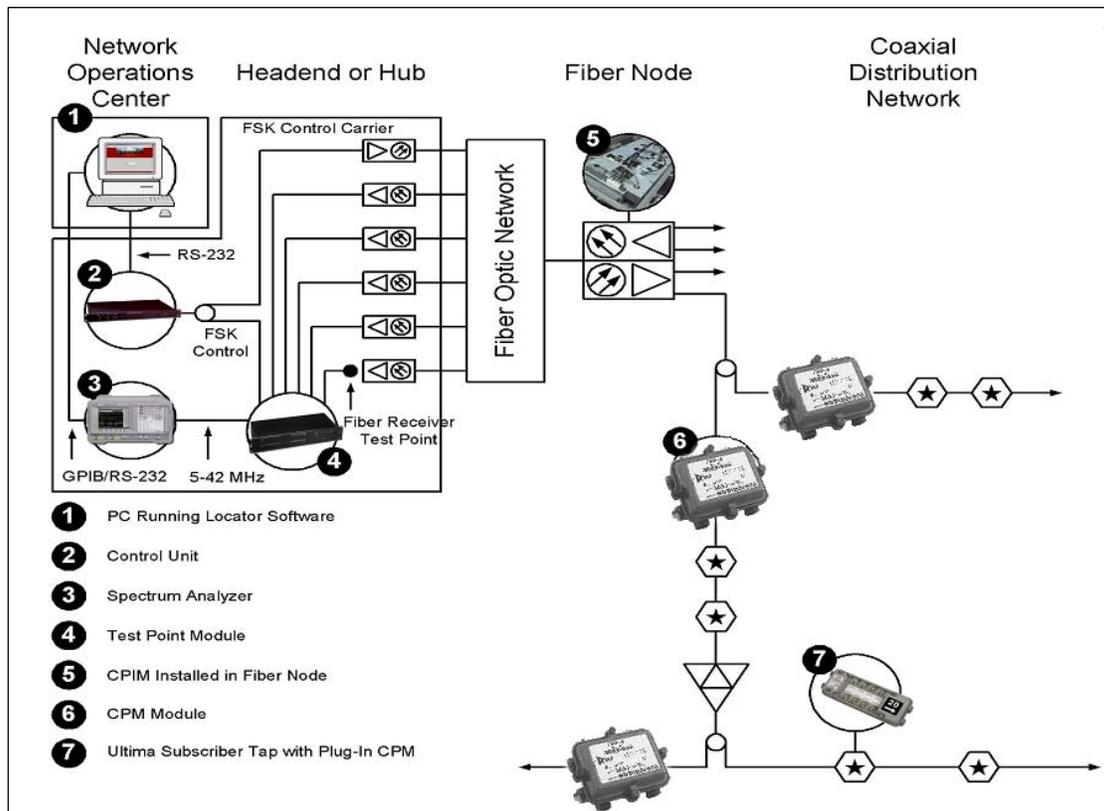
The CPIM utilizes a smooth switching transition that will not disrupt high-speed data services. The effect of the return path switching is displayed on a standalone spectrum analyzer or a return path monitoring system. If the ingress associated with the CPIM is reduced by 6 dB (or disappears when switched off), it indicates that the source of ingress must be further downstream from that location. It is then a matter of switching the CPIM units installed deeper in the cable distribution plant to localize the origin of the ingress. Once the source has been identified within a designated area, a technician can be dispatched to do the repair.

CLEARPath™ CPIM series Module Specifications*

Downstream (Receiver)	
Modulation Type	FSK
Channel Bandwidth	400 kHz
Frequency Ranges (agile in range)	46 to 78 MHz; 72 to 120 MHz; 85 to 120 MHz, 108 to 162 MHz
Step size for Actual Frequency	25 kHz
Dynamic Range	-27 dBmV to +10 dBmV
Ports and Connectors	
Surge Protection	IEEE C62.41-1991, cat B3 6KV 3KA
Impedance	75 ohms
Power	
Consumption at 24 Vdc	22-28 mA rms depending on model
RFI	
	100 dB
Operating Temperature Range	
	-20°C to +85°C

* Specifications are subject to change without notice.

CLEARPath™ Solution with CPIM series



For more information on our products, please visit: www.electroline.com or call: 800-461-3344

