

The FCW-IA System

Digital Loop Carrier Line Extender

Flexible, Reliable Voice Transport

LTI DataComm's **Fiber Copper Wireless Integrated Access (FCW-IA) System** enables the rapid, economic installation of fiber based voice and data applications with a capacity of 384 lines in increments of 32 lines. The FCW-IA System can connect POTS and data services to your Central Office (CO) up to 75 miles away. Data circuits from 128 Kbps (BRI) to 1.5 Mbps or 6 Mbps can be connected over the FCW-IA System.

The FCW-IA System is most adaptive in moderate to low density settings where Optical Network Units (ONUs) can be connected over fiber to the centralized Host Digital Terminal (HDT). Up to 96 POTS lines can be supported per ONU. The FCW-IA System provides maximum protection for your voice and data connections using a unique counter rotating ring architecture. Signals sent in both directions of a dual-fiber, counter-rotating ring provide un-interruptible connection of all traffic. In case of a severed fiber, all traffic will be switched from one ring to the other within 20 milliseconds. In areas where fiber is not yet available, T1 circuits can be used to connect up to 96 DSOs per ONU. Most industry standard telephone services are supported.

Architecture

The FCW-IA HDT shelf, located in a CO, feeds multiple ONUs while connecting to the CO switch through a universal interface. The HDT provides all of the functions of a CO terminal and multiplexer, while simultaneously supporting fiber, T1 and HDSL interfaces. All system operations can be controlled locally so that external software is not required for operations or alarm retrieval. Two HDT shelves, supporting up to 384 DSOs and 4 DS1s, can be shared by a common fiber transport, providing the most cost effective fiber solution today.

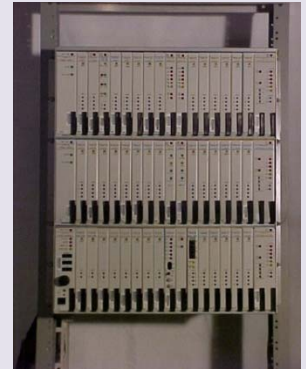
The FCW-IA ONUs are designed to provide services to subscriber densities which are moderate to low. The ONUs are available with a variety of cabling and power options and will provide voice and data service for up to 96 lines per ONU. The ONUs are connected to the HDT in the CO via fiber in a counter rotating ring configuration, or via fiber, T1 or HDSL in a point-to-point configuration. T1 or HDSL fed ONUs can be easily upgrade to fiber with a card change at the HDT and ONU.

Benefits:

- **Ultimate Transport Flexibility** – the system will operate on fiber or copper or both simultaneously
- **Eliminates "Midnight" Maintenance** – a self healing fiber network, redundant electronics, and an intelligent reporting system ensures full protection against fiber breaks or board failures.
- **Simplifies Network Planning** – when configured in the protect mode, each ONU can be added or removed from the fiber transport without disrupting service to existing ONUs.
- **Elegant Migration Path** – start with T1-based or HDSL-based systems and migrate to full fiber deployment when required.

Product Overview

192
Line
HDT



96L
ONU



Benefits:

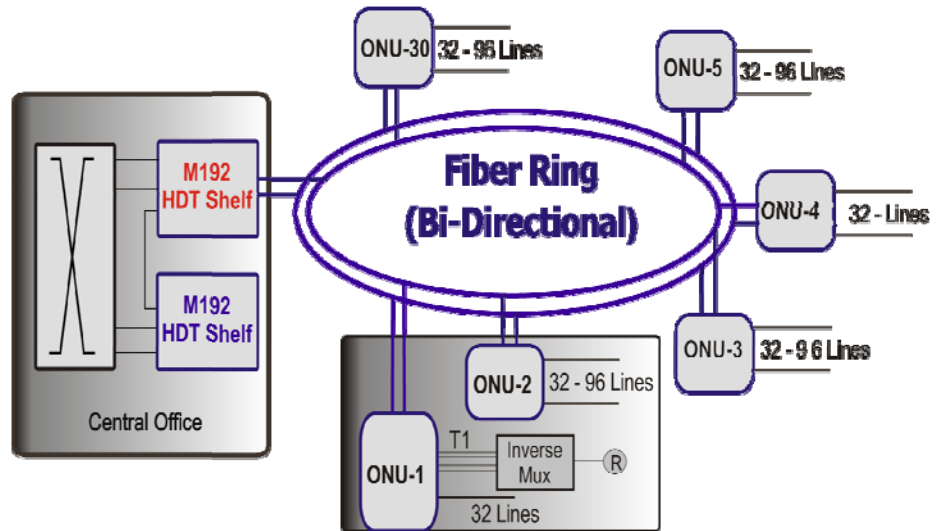
- System is **technician friendly**, easy to maintain and is not software driven
- **Supports two HDTs** with up to 384 DSOs and 4 DS1s
- Additional DS1s can be added with a reduction of 32 DSOs per added DS1
- **Supports up to 30 ONUs** at distances of 75 miles (120 Km) from the CO
- Supports fiber ring, fiber point-to-point and copper point-to-point architecture

Product Overview

Features:

- Built-in craft interface provides **full system diagnostics**.
- **Administration Terminal access** via the optional SAT (Systems Administration Terminal) software
- Supports common equipment redundancy
- **Delivers full bandwidth to every ONU**
- Meets industry standards for CO deployment through the Bellcore OSMINE process
- **NEBS compliant**

Specifications	
Operating Environment	HDT Equipment, 32°F to +122°F (0°C to +50°C) ONU Equipment, -40°F to +149°F (-40°C to +65°C) Relative Humidity, 95%, Non-condensing
Size	96 Line ONU Shelves 19 x 21 x 12 RMS HDT Shelf, 19 x 21 x 12 RMS
Weight	ONU, 25 lbs. Approx. Rack mounts on 19 or 23 in rack or cabinet. Standby Batteries (4 ea.), 140 lbs. HDT Shelf, empty, 15 lbs. Approx. Plug-in Cards, ea., 10 oz., (except approx. 16 oz. for power supplies)
Interfaces	Optical Interface 1310 nm, Single Mode T1 copper Transport Interface HDSL copper Transport Interface (requires two pairs)
Switched Services	POTS, NORTEL DMS-100 P-Phone, DDS (all rates), ISDN BRI, Class Services, and others



LTI DataComm
 23020 Eaglewood Ct. #100
 Sterling, VA 20166
 www.ltidata.com
 800-677-5050