kaval
WIRELESS TECHNOLOGIES

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Operational Description for LNKFIB-R01 & H01 SatelLink Fiber System
June 19, 2001

Theory Of Operation

The SatelLink RF to Fiber Modules provide a multi-band, multi-service link from a main distribution center to multiple local antennae. RF Signals are distributed in runs of three pairs of Single-Mode Fiber-Optic Distribution Lines, organized as...

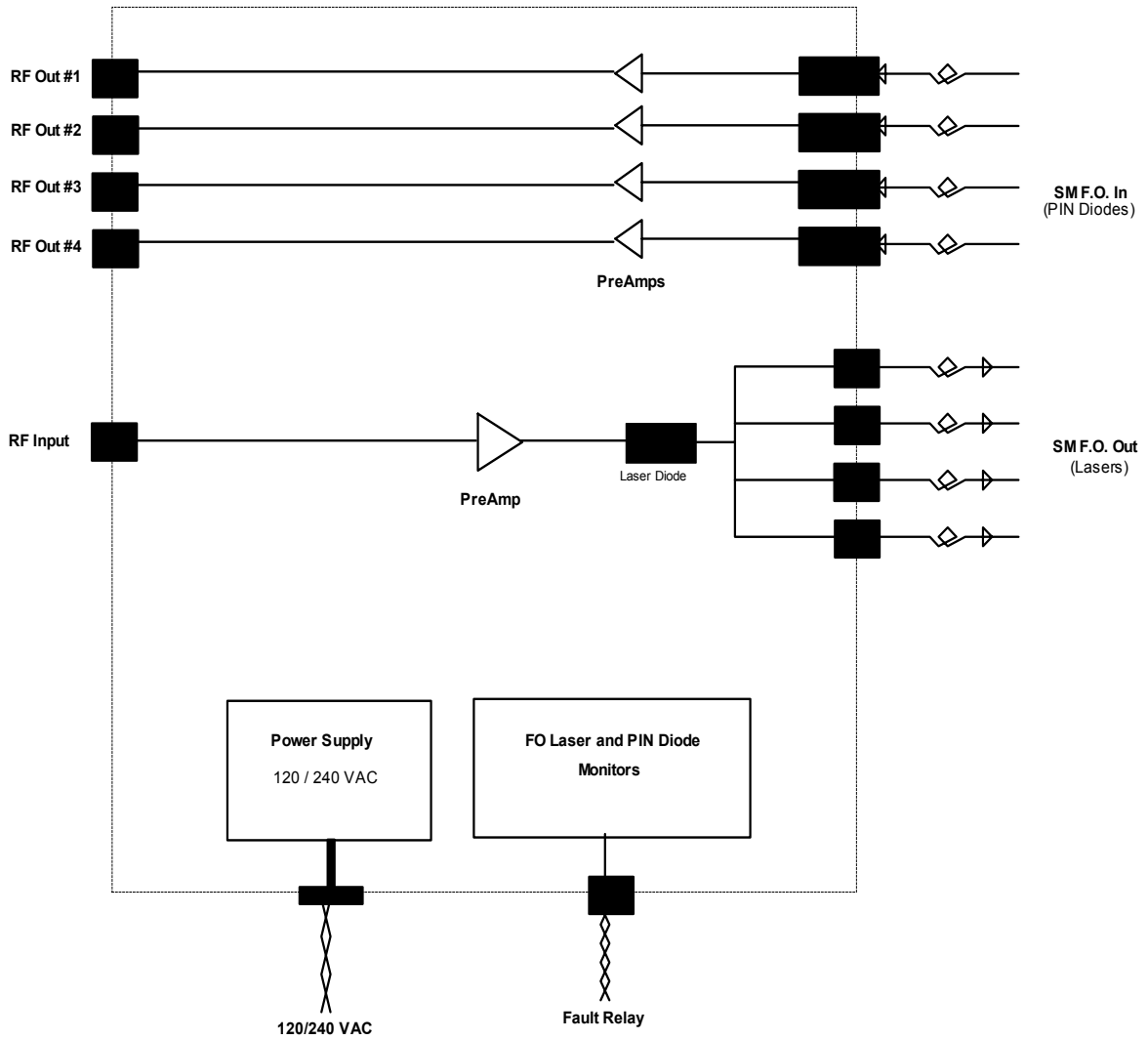|	
Fiber Pair #1:	1.9 GHz PCS Services
Fiber Pair #2:	800 MHz Cellular Services
Fiber Pair #3:	800 MHz iDEN & Paging Services

There are two models....

Models

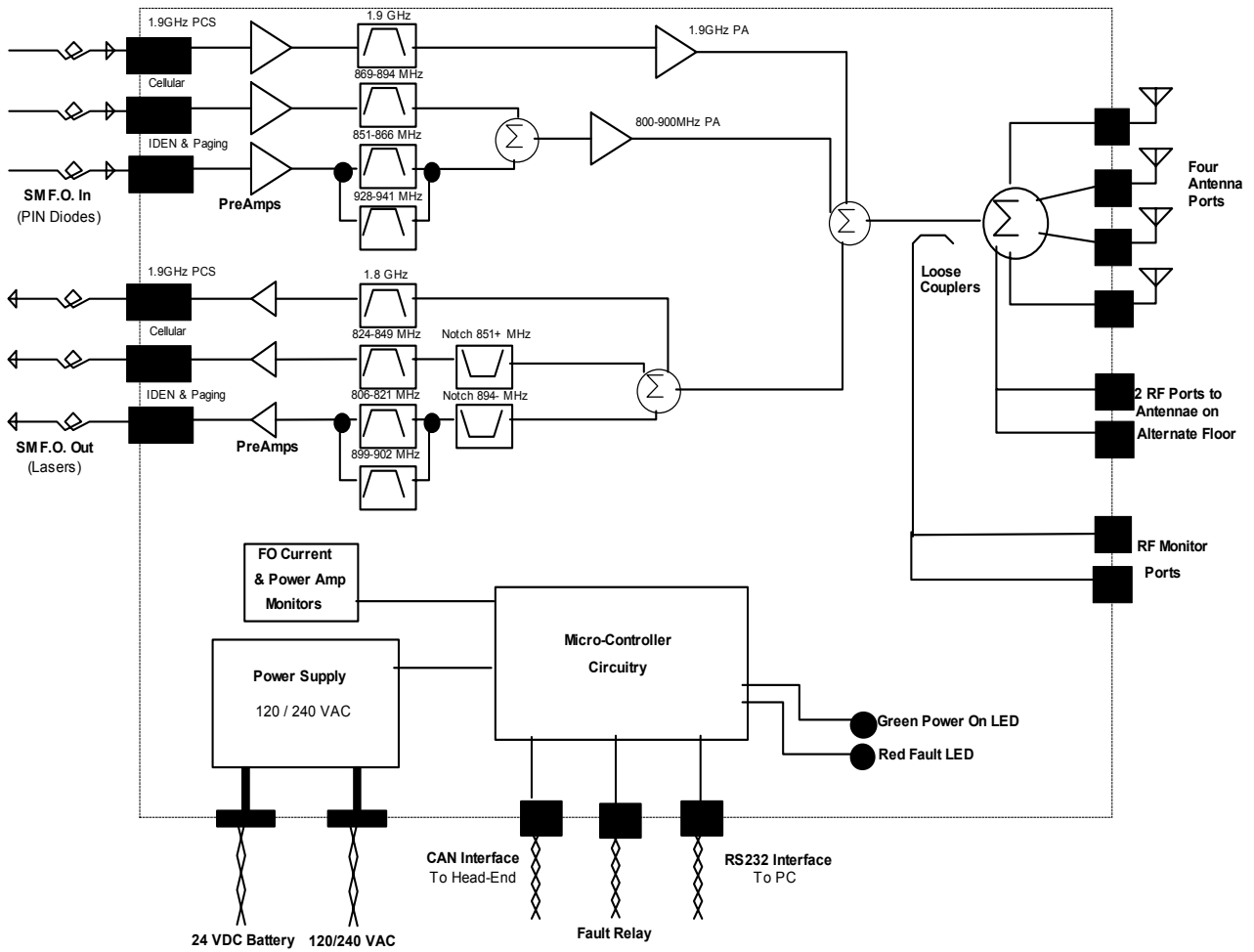| SatelLink MODEL	DESCRIPTION
LNKFIB-H01	This is a 1U high, 19" Rack-Mount Module providing low signal level interfacing between Head-End RF Modules and Single-Mode Fiber-Optic Distribution Lines. One is used for each of the three Fiber Pair Groups, and can service up to four Remote Modules.
LNKFIB-R01	This is a Wall-Mounted Remote Module that connects to the Single-Mode Fiber-Optic Distribution Lines and provides eight local Distribution Antennae for Signal Extension.

NOTE:

With these Modules, there is always a grouping of three (3) of LNKFIB-H01's to every four (4) LNKFIB-R01's.

SatelLink Head-End Module

RF Out #1
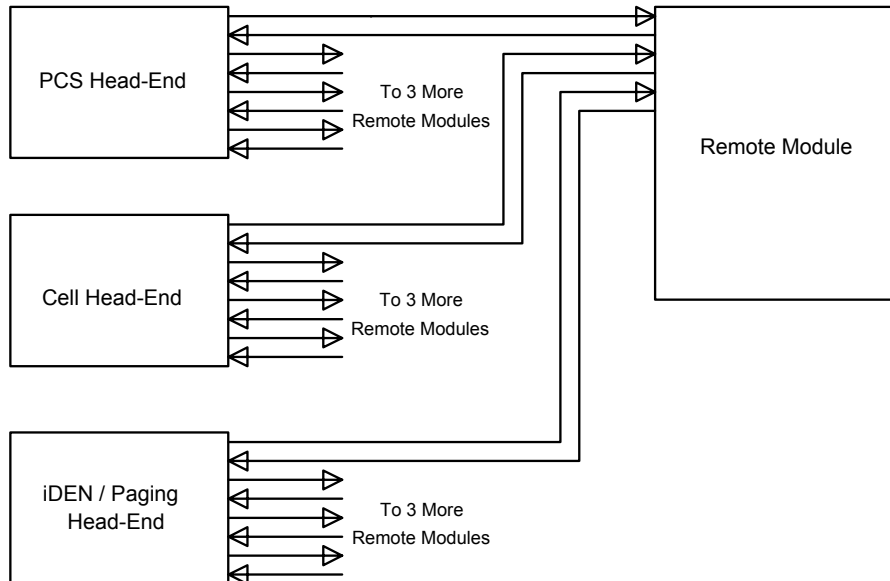
RF Out #2

RF Out #3

RF Out #4

PreAmps

SM F.O. In
(PIN Diodes)

RF Input

PreAmp

Laser Diode

SM F.O. Out
(Lasers)

| Power Supply |
| FO Laser and PIN Diode |
| 120 / 240 VAC | Monitors |

120/240 VAC

Fault Relay

SatelLink Remote Module

1.9GHz PCS

Cellular

IDEN & Paging

SM F.O. In
(PIN Diodes)

PreAmps

1.9 GHz

869-894 MHz

851-866 MHz

928-941 MHz

1.9GHz PA

800-900MHz PA

1.9GHz PCS

Cellular

IDEN & Paging

SM F.O. Out
(Lasers)

PreAmps

1.8 GHz

824-849 MHz

806-821 MHz

899-902 MHz

Notch 851+ MHz

Notch 894- MHz

**Loose
Couplers**

**Four
Antenna
Ports**

**2 RF Ports to
Antennae on
Alternate Floor**

RF Monitor

Ports

**FO Current
& Power Amp
Monitors**

Power Supply

120 / 240 VAC

**Micro-Controller
Circuitry**

● **Green Power On LED**

● **Red Fault LED**

CAN Interface
To Head-End

Fault Relay

RS232 Interface
To PC

24 VDC Battery   **120/240 VAC**

Head-End to Remote Fiber-Optic Connections

Groupings of 3 Head-Ends to every 4 Remotes

The Single-Mode Fiber-Optic interconnections between the Head-End and Remote Modules are based upon the Head-Ends being organized on a "per Fiber-Pair" system. This fundamentally means that an installation requires three Head-Ends for every four Remote Modules. It also means that if you have a fully optimized system with all Head-End ports in use, and you add one more Remote Module, then another three Head-End Modules are required.