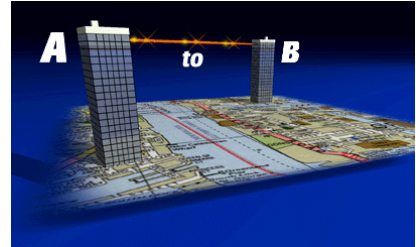


CableFree

Wireless Excellence



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Cablefree LinkManager™ - Datasheet

CableFree LinkManager™ is intended primarily as a diagnostic and management tool for managing a single CableFree link over an RS232, Ethernet or Dial-up connection. LinkManager™ interfaces with advanced firmware in the CableFree system, connecting either directly to the head units or to the optional IDU or SNMP Proxy Agent components. Only one end of an FSO link needs to be connected allowing full visibility of both ends, using CableFree's unique across-the-beam out-of-band telemetry channel.

Product Features

- Direct management of both ends of an operational link
- Easy-to-use Windows™ Management Interface
- Print-out and storage of operational status report, used for link commissioning
- User-programmable major and minor Alarm conditions
- View Serial numbers and Unit identifiers for asset management
- Interface hooks to **CableFree Cluster Manager™** and **CableFree Statistics Manager™**

Connections

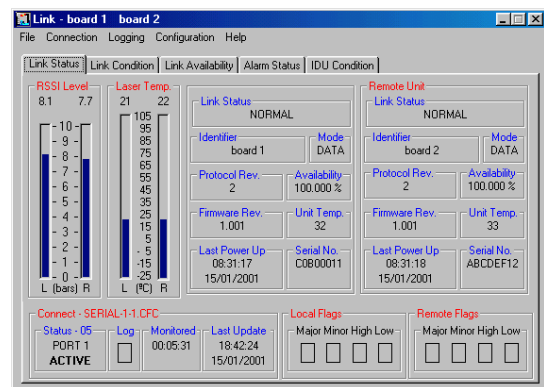
Connection from the Management workstation to the CableFree unit can be any of:

- Direct connection via RS232 connection either to PSU or optional IDU.
- Dial-up access over land-line or GSM modem
- Ethernet connection to IDU using proprietary format UDP protocols
- Ethernet connection to SNMP Proxy Agent using standards-based SNMP protocols

Views

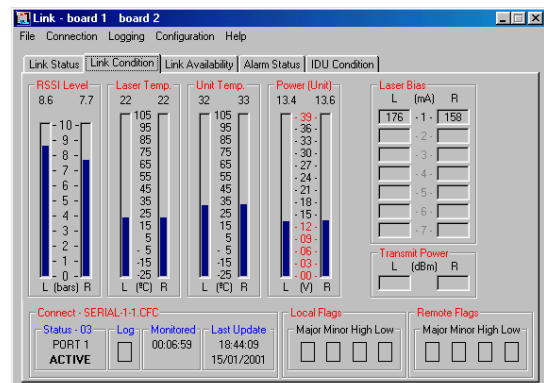
Link Status

- RSSI Local and Remote - Numeric & Bar graphs
- Availability % Local and Remote - Numeric
- Unit Temperature Local and Remote - Numeric
- Alarms - Red for current, Amber for flagged
- Connection interface - box indicates whether RS232, dial-up, UDP or SNMP is specified and whether the connection is active, inactive or failed. Failed indicates that 3 repeated attempts to poll were unsuccessful.
- Last Power up Time & Date, Local and Remote
- Firmware & Protocol Versions, Local and Remote
- Serial Number & Link Identifier, Local and Remote
- Link Operating mode (data or voice)



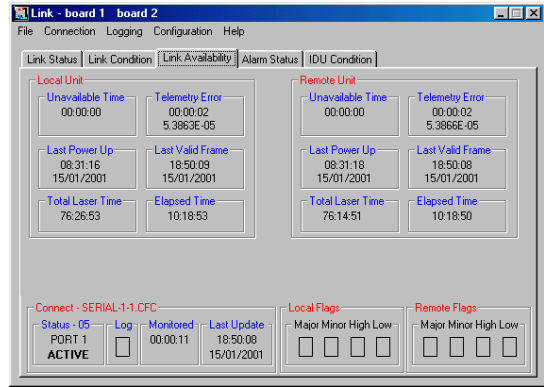
Link Condition

- Unit Temperature Local and Remote - Bar graphs and numeric readout
- Laser Temperature Local and Remote - Bar graphs and numeric readout
- DC Head Power Local and Remote - Bar graphs and numeric readout
- DC IDU Power Local and Remote - Bar graphs and numeric readout (optional, detect)
- Laser Condition Local and Remote - Numeric
- TX Power in dBm Local and Remote - Numeric



Link Availability

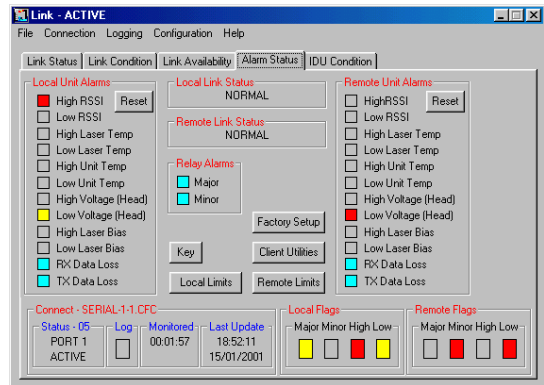
- Last Power up Time Local and Remote
- Total Operating Time Local and Remote
- Monitored Time Local and Remote (with button to reset)
- Unavailable Seconds Local and Remote (resets with monitored time)
- Availability % Local and Remote numeric readout
- Errored Seconds Local and Remote (resets with monitored time)
- Bit Error Rate Local and Remote (resets with monitored time)
- Last Valid Data Time& Date, Local and Remote



Alarm Status

All of these should register 'current' or 'flagged' status

- Link Status (working, one-way, dead or reflection)
- Low RSSI
- Low Voltage
- Laser Life
- Loss of Data
- Reset button for Alarms (initially, only offer this on RS232 or dial-up connection)

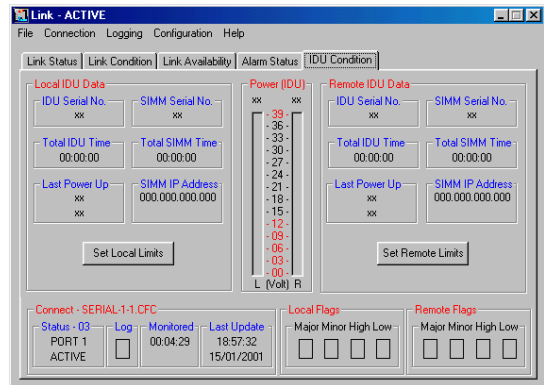


Alarm thresholds

- Show threshold values of all just as above
- Set button(s) to program thresholds

IDU Condition

- IDU Serial Number Local and Remote
- SIMM Serial Number Local and Remote
- IDU Power Voltage Local and Remote
- SIMM IP addresses Local and Remote
- IDU Last Power-up time Local and Remote



Overall Software Specifications

O/S Platform Microsoft Windows™
 Compatibility NT4.0, 2000, 98, ME, XP

Microsoft Windows™ is a trademark of Microsoft Corporation

Management Connections

RS232 Local user interface
 10BaseT Ethernet LAN/WAN connection
 Dry Contact alarms 8 or 16 inputs (optional)
 Protocols UDP, Proprietary

| Product Code | License Terms | Description |
|--------------|-------------------------------|--|
| CF LINK | Single site, Up to 5 Links | CableFree LinkManager™ for use with CableFree FSO systems. Operates as stand-alone package, or can be integrated as part of Advanced LinkManager™ or ClusterManager™ (see Cluster Manager datasheet) |