
Cablefree Solutions Limited

Secure High Performance Wireless Connectivity

Cablefree Management - Technical Overview

Management & Diagnostic Functions

All Cablefree systems contain an embedded management agent capable of providing remote configuration and diagnostic information. This agent monitors various system parameters and logs any error flags.

Cablefree systems also have a unique out-of-band telemetry stream running separately from the main data stream across the link at 1200bps, allowing status to be retrieved from the remote end of the link as well as the local end.

For systems using the optional indoor unit (IDU), parameters both from the outdoor head unit (ODU) and IDU can be gathered from a single connection at the IDU at one end.

Parameters monitored:

- Unit Serial Number
- Link Identifier (text string)
- Description (text string)
- Link Status
- Received signal strength, RSSI
- Power supply voltage
- Unit ambient temperature
- Output power
- Laser temperature
- Laser life monitor
- Alignment/Data mode
- TX muted
- Time since power-on
- Unavailable seconds
- Available seconds
- Errored seconds
- Severely errored seconds
- Link availability% ***
- Bit error rate ***
- Data interface flags - Input signal detect, PLL lock, Demultiplexer lock, Driver fail
- Current System Alarms

Alarms – current and also memory since last reset:

- Link Status
- Low RSSI alarm
- Low voltage alarm
- Data interface flags - Input signal detect, PLL lock, Demultiplexer lock, Driver fail

Parameters remotely settable:

- Link Identifier (text string)
- Alignment/Data mode
- E1 Loopback (per channel)
- TX mute
- Low RSSI alarm trigger level
- Low voltage alarm trigger level
- Reset alarms
- Reset statistics

Notes:

- Link Status indicates either: Working, Dead, One-way or Reflection.
- Link Identifier and Low RSSI alarm trigger level are stored in on-board non-volatile memory. Others are reset on power-up
- Link Availability and BER are calculated from the basic statistics by the external management software.
- Alarm memory latches occurrence of any alarm and retains unit reset.

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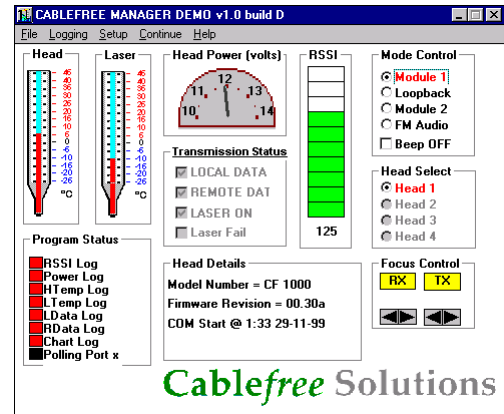
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RS232 Connection

Diagnostic information from a **Cablefree** link can be accessed directly by connecting a PC to one of the units using a 9-pin RS232 serial cable. This can be connected either directly to the head (at the power connector) or at the indoor unit (IDU) if used.

Cablefree offers a PC-based software package which gives direct indication of system status. This software will run on any PC with a free serial port, under Microsoft Windows 3.1, 3.11, 95, 98 or NT4.0.



In addition to giving an instant view of system performance, out-of-condition alarms, variations and long-term trends can be logged. It is ideal for monitoring of single links and use by field-service personnel.

GSM Modem Connection

Rather than a fixed connection, **Cablefree** systems can be connected via a wireless GSM modem to a central site, where a workstation running management software can provide management of remote links. It allows both instant view of system performance, and logging of out-of-condition alarms, variations and long-term trends.



This system is extremely powerful yet easy to deploy, in any region in the world with GSM 900 coverage.

SNMP & Web bridge

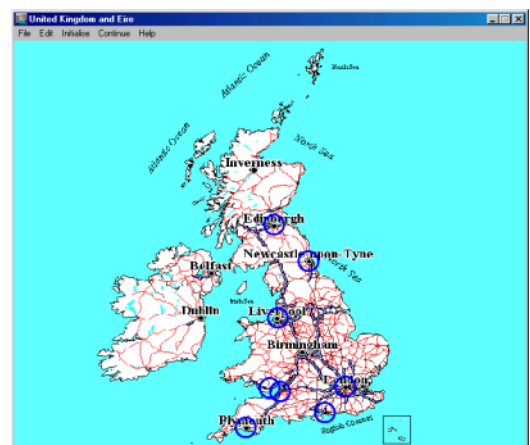
For advanced networks with standards-based management, **Cablefree** offers a powerful solution – a simple plug-in upgrade enables connection via 10BaseT Ethernet to SNMP management platforms such as HP Openview and, or using internet protocols to a Web browser such as Microsoft Internet Explorer or Netscape.



Cluster Manager

Large networks with central management can use the **Cablefree** cluster manager. This advanced piece of software uses dial-up modem technology (GSM or land-line) to connect to remote links.

Now for an entire network, users can get an instant view of system performance, also enables logging of out-of-condition alarms, variations and long-term trends.



For further information regarding **Cablefree** management systems please contact us.

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