



IQ 710

Intelligent Frame Relay Traffic Management

Product Features

- Layer 1-7 performance monitoring and shaping
- Automatic discovery of Application Layer protocols
- Modular network interface-56/64K, T1/FT1, and T1/FT1 with DSX-1
- Safe-T-Net dial backup support
- Embedded Java applet, N-Formant for GUI configuration and real time monitoring
- Complete N-Form network management software support
- Real-time measurement of throughput, bandwidth utilization, bursting, congestion, and network delay on each PVC
- Bandwidth utilization and response time by application
- End-to-end network roundtrip delay measurements for network optimization
- True non-intrusive in-band transmission of statistics
- Easy configuration from N-Form, Telnet, VT100, front panel, or Internet browser
- Industry-leading five-year North American warranty

The IQ™ Series from ADTRAN provides intelligent traffic management so users can make the most of existing bandwidth. This series includes features ranging from performance monitoring and traffic shaping to standard Frame Relay circuit management and troubleshooting. The IQ 710™ is a modular device with interface options for 56/64K, T1/FT1, and T1/FT1 with DSX-1 voice capability. It offers complete visibility from the Physical to the Application Layer, maintaining an extensive list of network statistics that aid in planning and troubleshooting.

The IQ 710 automatically identifies over 300 applications such as Citrix™, HTTP, Napster™, and AOL Instant Messenger™. Once network issues have been pinpointed, the IQ 710 traffic shaping feature can be used to limit bandwidth abusers and guarantee bandwidth for mission-critical applications. This intelligent solution for managed Frame Relay access allows you to enjoy the monetary savings of Frame Relay without giving up management visibility and control.

Optional dial backup functionality is available for network contingency planning using Safe-T-Net™. Safe-T-Net is ADTRAN's technology that provides dial backup for network recovery of Frame Relay Traffic.

The IQ 710 provides two expansion slots for network interface and dial backup cards and features a 10BaseT Ethernet port for management applications. This product provides up to a full T1 of access and gathers information from all seven layers of the network. The IQ 710 uses industry-leading technology to perform seven-layer monitoring and traffic shaping, and includes the necessary software to capture and report network information.

Application monitoring in the IQ 710 includes the usage examination of: FTP, Telnet, e-mail, databases, corporate-wide ERP systems, Real-Audio®, MPEG web traffic, and hundreds

more. These Layer 7 metrics are used to evaluate application utilization and through-put; top application bandwidth consumers; network efficiency due to packet retransmission; as well as individual application response times and delays.

Once network trends have been identified and analyzed, traffic shaping within the IQ 710 allows IT managers to control bandwidth consumption by application. Allocating bandwidth per application guarantees necessary bandwidth for business critical applications while allowing less critical applications to utilize the remaining bandwidth.

The measurement of these Layer 7 metrics, in addition to real time monitoring of the Frame Relay circuit, is crucial for pinpointing specific traffic demands and problem sources in the network. In addition, these metrics are also used to analyze traffic patterns and for general maintenance and troubleshooting. The IQ 710's Frame Relay metrics include statistics on throughput and utilization (per port and per PVC), availability, utilization by protocol, top talkers, lost packets, PVC state, excess bursting above CIR, network congestion (FECN, BECN, and DE), and end-to-end delay on any or all PVCs. N-Formant, an embedded web-based Java™ applet provides a GUI interface for Real-time monitoring and configuration

The IQ 710 is complemented by a network management software suite from ADTRAN called N-Form®. N-Form is a modular, Java-enabled, Windows-based platform combining the features of a complete SNMP management platform with a network trend analysis tool in one easy-to-use, cost-effective package. With N-Form, the IQ 710 can be remotely configured through a graphical interface. N-Form also allows the IQ 710 to monitor alarm conditions and report on both Frame Relay and application monitoring metrics in either graphical or tabular formats.





ADTRAN, Inc.

Attn: Enterprise Networks
901 Explorer Boulevard
Huntsville, AL 35806

P.O. Box 140000
Huntsville, AL 35814-4000

256 963-8000 voice
256 963-8699 fax
256 963-8200 fax back

General Information

800 9ADTRAN
info@adtran.com
www.adtran.com

Pre-Sales

Technical Support

800 615-1176 toll-free
application.engineer@adtran.com
www.adtran.com/support

Where to Buy

877 280-8416 toll-free
channel.sales@adtran.com
www.adtran.com/where2buy

Post-Sales

Technical Support

888 423-8726
support@adtran.com
www.adtran.com/support

ACES Installation & Maintenance Service

888 874-ACES
aces@adtran.com
www.adtran.com/support

International Inquiries

256 963 8000 voice
256 963-6300 fax
international@adtran.com
www.adtran.com/international

For the regional office nearest you, visit:

www.adtran.com/where2buy



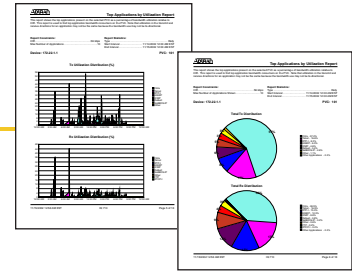
I.S. EN ISO 9001
ADTRAN is a
ISO 9001 registered company.



TL 9000
ADTRAN is a
TL 9000 registered company.

Printed in the U.S.A.
64202801L1-81 April 2003
Copyright © 2003 ADTRAN, Inc.
All rights reserved.

IQ 710



Intelligent Frame Relay Traffic Management

Product Specifications

Operating Modes

- 100 DLCIs monitored
- 56/64K, T1/FT1, and T1/FT1 + DSX-1 Frame Relay
- Automatic LMI detection

Access Line Statistics

- T1 BPVs, CRCs, ES, SES, UAS, %AS, %EFSEC, Alarm, Errors
- Telco loop test in progress

PVC Statistics

- PVC state
- Bytes Tx/Rx; frame Tx/Rx
- Frames with BECN/FECN/DE
- Max/Min/Avg frame size
- Throughput/Bandwidth utilization per PVC
- Lost frames/sequence check
- Continuous PVC delay measurement
- Max/Min/Avg end-to-end PVC delay
- Burst rate
- Congested seconds

Port Statistics

- Byte Tx/Rx; frame Tx/Rx
- Throughput/Utilization
- Frame size violations (invalid frames)
- CRC errors/abort frames
- Non-octet aligned frames

LMI Statistics

- LMI state/state changes
- Polls in; Responses in
- Timeouts/Link integrity frames
- Polls with protocol error

Layer 3 Statistics

- Monitor protocols on port and PVC
- Protocols supported: IP/IPX, ARP, SNA, other
- Top talkers

Layer 7 Statistics

- Utilization/Throughput per application
- Application response time
- Visited URL addresses
- Overall network efficiency
- Top talkers and listeners
- Utilization histogram

Diagnostics

Frame Relay

- PVC loopback with test pattern/sequence check
- PVC round trip delay

Network/User

- CSU loopbacks

Network Interface Options

- 56/64K Network Interface Module
- T1/FT1 Network Interface Module
- T1/FT1 + DSX-1 Network Interface Module

DTE Interface

- V.35 Winchester M block female
- 56 to 1.536, Nx56 or Nx64 Kbps

Configuration

- ADTRAN N-Form web-based network management suite
- Local and remote VT100 terminal via the Control port
- Remote configuration via Frame Relay network connection
- Telnet
- Front panel
- Embedded Java-based web application

Management Options

- ADTRAN N-Form web-based network management suite
- In-band access through shared or dedicated PVC
- VT100 control port
- 10BaseT Ethernet interface

Environment

- **Operating Temperature:** 0° to 50° C, (32° to 122°F)
- **Storage Temperature:** -20° to 70° C, (-4° to 158°F)
- **Relative Humidity:** Up to 95%, non-condensing

Physical

- **Dimensions:** 10" D x 8" W x 2.75" H
- **Weight:** 4.5 lbs
- **Power:** 115 VAC, 60 Hz, 7W

Product Includes

- Two 8-pin to 8-pin modular cables
- CD

Ordering Information

| Equipment | Part # |
|--|-----------|
| IQ 710 with 56/64K and Shaping | 4202811L1 |
| IQ 710 with T1/FT1 and Shaping | 4202812L1 |
| IQ 710 with T1/FT1 & DSX-1 and Shaping | 4202813L1 |
| IQ 710 with 56/64K Network Interface | 4202801L1 |
| IQ 710 with T1/FT1 Network Interface | 4202802L1 |
| IQ 710 with T1/FT1 + DSX-1 Network Interface | 4202803L1 |
| T1/FT1 Network Interface Module | 1202802L1 |
| T1/FT1 + DSX-1 Network Interface Module | 1202803L1 |
| IQ 710 Traffic Shaping Upgrade | 1200810L1 |
| IQ 710 V.34 DBU Module | 1204002L3 |
| IQ 710 ISDN BRI DBU Module | 1204004L2 |
| IQ 710 ISDN PRI DBU Module | 1204008L2 |

Specifications subject to change without notice. N-Form is a registered trademark of ADTRAN, Inc. ADTRAN, Safe-T-Net and IQ 710 are trademarks of ADTRAN, Inc. All other registered trademarks and trademarks mentioned in this publication are the property of their respective owners.