



# Intraplex® NetXpress LX™

Digital Audio Transport System for IP Networks



## Unprecedented Flexibility in IP Audio Transport

Intraplex NetXpress LX™ IP audio multiplexer delivers a high-performance IP audio platform in a scaled-down, affordable package.

Supporting both unicast and multicast, and compatible with the existing NetXpress, the NetXpress LX system opens up new possibilities in IP audio network design.

### Existing T1/E1 Multiplexer Conversion to IP

Forget about retiring perfectly good Intraplex systems when moving from T1 or E1 to IP. The new NetXpress LX IP interface module, the CM-30, can replace the network interface module in existing Intraplex T1/E1 systems, converting them to IP while keeping the existing chassis with all of its audio, voice and data cards.

### Intraplex Reliability

When the mission is critical, broadcasters turn to Intraplex audio transport systems — the standard-bearer for dependable, great-sounding audio links for always-on applications.

Built upon the technology of the original NetXpress system, but with a form factor matching that of our T1/E1 systems, the NetXpress LX multiplexer provides the reliable and robust performance demanded by studio-to-transmitter link (STL) and other fixed, full-time inter-facility applications. Available in two sizes — a 3RU frame with capacity for up to 17 application modules and a compact 1RU frame that can hold five application modules — the NetXpress LX system can also work as an “edge” device along with the NetXpress multiplexer in large, multisite networks.

The NetXpress LX multiplexer provides the superior support and long-term value expected from Intraplex — broadcasting’s first choice for robust, full-time operation of IP audio, T1/E1 and 950 MHz audio and data links.

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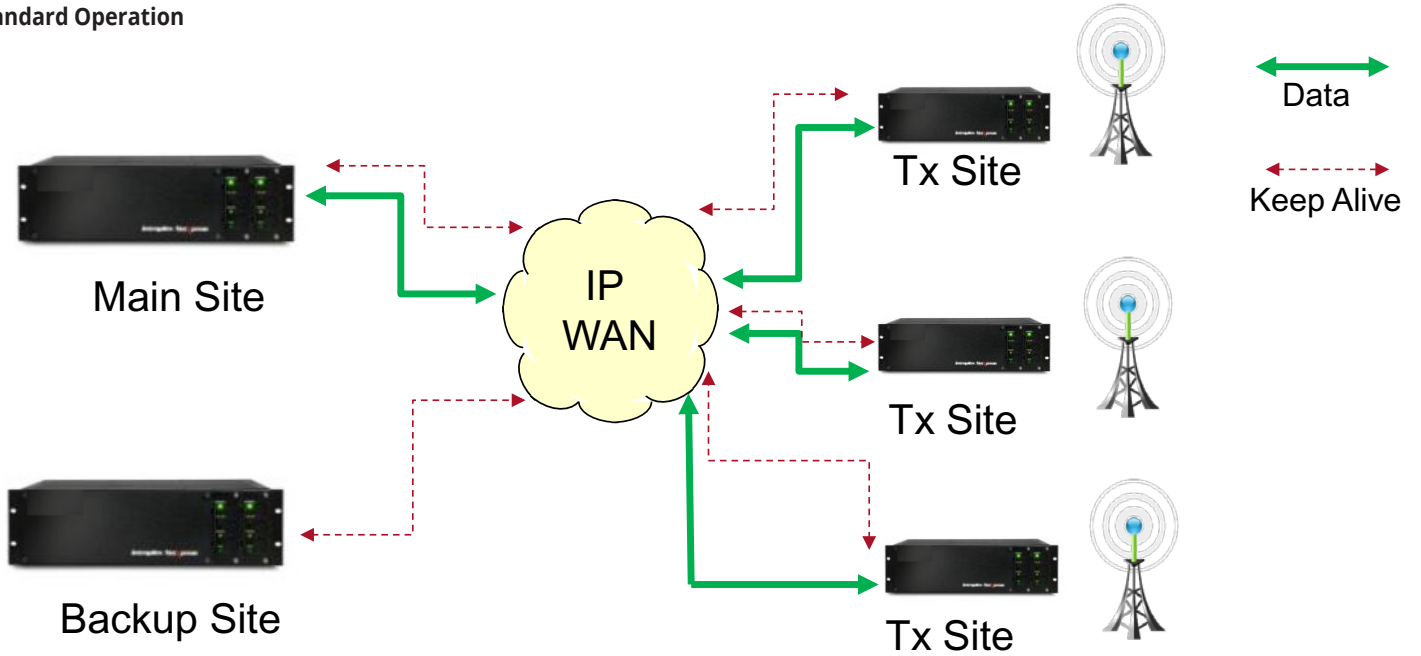
## Product Features

- CM-30 IP interface module: can convert existing T1/E1 systems to IP
- Compatible with Intraplex NetXpress systems
- Wide variety of audio, voice and data interface modules
- Optional echo cancellation for two-wire voice circuits
- Transport of two contact closures in each direction
- Adjustable packet size
- Programmable jitter buffer depth
- Advanced Intraplex forward error correction
- Quality of service (QoS) priority tagging
- Unidirectional or bidirectional unicast streaming
- Unidirectional multicast streaming
- Web browser user interface
- SNMP-controllable
- Current and previous software revision storage
- Network statistics monitoring
- Event logging

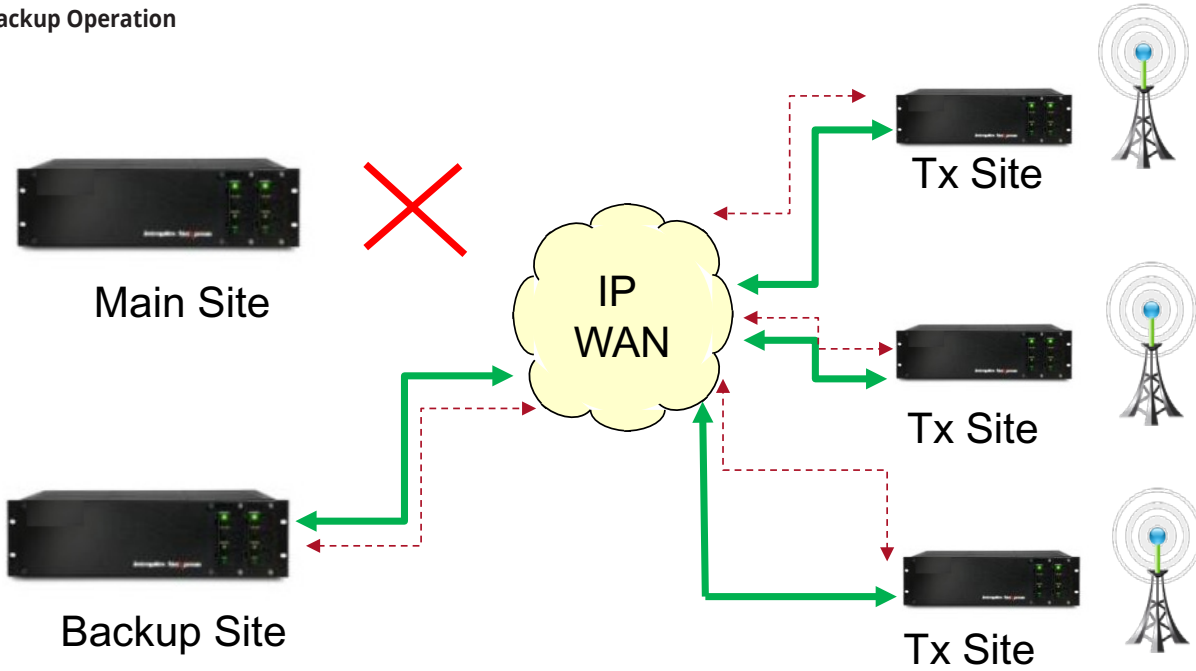
# Intraplex® NetXpress LX™

## Redundant Command System\*

### Standard Operation



### Backup Operation



\* Intraplex NetXpress shown in diagrams. Same redundancy features available in NetXpress LX.

# Intraplex® NetXpress LX™

## Specifications

Specifications and designs are subject to change without notice

| General                        |   |
|--------------------------------|---|
| Shelf Configurations           | <ul style="list-style-type: none"> <li>LX-100: 1RU shelf with 5 card slots for audio, voice and data modules</li> <li>LX-300: 3RU shelf with 17 card slots for audio, voice and data modules</li> <li>Each shelf comprises 1 chassis, 1 power supply, 1 CM-30 IP interface module and 1 MA-230 module adapter; the LX-100 contains a single AC power supply; the LX-300 contains 1 AC or 1 DC supply and can be equipped with a second power supply for hot-standby redundancy; audio, voice and data modules optional</li> </ul> |
| Module Compatibility           | <ul style="list-style-type: none"> <li>Accepts Intraplex plug-in audio, voice, data and video modules</li> <li>See individual module specifications for details and applications</li> </ul>   |
| Contact Closures               | <ul style="list-style-type: none"> <li>2 contact closures in each direction</li> <li>Opto-isolated inputs and normally open relay outputs</li> </ul>  |
| Network Interface              |   |
| Ethernet Data Rate             | <ul style="list-style-type: none"> <li>10/100Base-T (10 or 100 Mb/s)</li> <li>Full duplex</li> <li>Auto-negotiation with network</li> </ul>   |
| Network Connections            | <ul style="list-style-type: none"> <li>Port 1: management, RJ45</li> <li>Port 2: WAN, RJ45</li> </ul>   |
| Circuit Connection             | <ul style="list-style-type: none"> <li>Up to 32 streams/connections</li> <li>Point-to-point unidirectional</li> <li>Point-to-point bidirectional</li> <li>Point-to-point multipoint</li> <li>Unidirectional multicast per IGMP v2</li> </ul>  |
| Network Protocols Supported    | IP, TCP, UDP, RTP, DHCP, HTTP (on port 80), FTP (on port 21), Telnet, NTP, SNMP v1/SNMP v2 (requests on port 161 and traps on port 162), RTCP, ARP, ICMP, IGMP v2   |
| Timing                         | <ul style="list-style-type: none"> <li>Internal</li> <li>External, RS-422 clock input</li> <li>Adaptive to incoming program stream</li> <li>Timing out, RS-422 clock output</li> </ul>  |
| Stream Parameters (per stream) |   |
| Forward Error Correction       | High, low, off; user-adjustable   |
| Packet Optimization            | <ul style="list-style-type: none"> <li>Packet size/rate, allows control over the inherent tradeoff between overhead and delay</li> <li>Jitter buffer depth to 128 packets, provides compensation in excess of one second of network jitter</li> <li>User-adjustable</li> </ul>  |
| Quality of Service             | <ul style="list-style-type: none"> <li>IPv4 Type of service (ToS) tagging</li> <li>Differentiated service (DiffServ)</li> </ul>   |
| Status and Diagnostics         |   |
| LED Indicators                 | <ul style="list-style-type: none"> <li>Power, normal, alert, alarm</li> <li>Network performance</li> </ul>  |
| Statistics (per stream)        | Packet loss, packets received, packets sent, packets dropped, packet count and delay variation  |
| Loopbacks                      | <ul style="list-style-type: none"> <li>Received stream loopback</li> <li>Equipment loopback</li> </ul>  |
| Remote Management              | <ul style="list-style-type: none"> <li>Web browser user interface</li> <li>SNMP network management interface</li> </ul>   |
| Physical and Environmental     |   |
| Power Requirement              | <ul style="list-style-type: none"> <li>Universal AC 90 to 240 VAC, 50/60 Hz, 48 VDC or 24 VDC</li> <li>LX-300 only: optional 48 VDC or 24 VDC</li> </ul>  |
| Power Supply                   | <ul style="list-style-type: none"> <li>LX-100: single 60 W AC</li> <li>LX-300: single or optional dual 60 W AC, 100 W AC, 50 W, 48 VDC, 50 W, 24 VDC</li> </ul>   |

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|                        |  |
|------------------------|--|
| Power Consumption      | Depends on number and type of channel modules installed: <ul style="list-style-type: none"><li>• LX-100: less than 15 W typical</li><li>• LX-300: less than 40 W typical</li></ul>   |
| Temperature            | 32° to 122° F (0° to 50° C) operating (AC powered)   |
| Humidity               | 10% to 90% non-condensing  |
| Dimensions (H x W x D) | <ul style="list-style-type: none"><li>• LX-100: 1RU, 1.75 x 19 x 14.25 in. (4.45 x 48.3 x 36.2 cm) EIA rack mountable</li><li>• LX-300: 3RU, 5.25 x 19 x 14.25 in. (13.4 x 48.3 x 36.2 cm) EIA rack mountable</li><li>• Standard LX-100 shipping carton (contains one 1RU shelf): 4 x 20 7/8 x 18 in. (10 x 53 x 46 cm)</li><li>• Standard LX-300 shipping carton (contains one 3RU shelf): 15 x 22 x 20 in. (38 cm x 56 cm x 50 cm)</li></ul> |
| Shipping Weight        | Depends on number and type of channel modules installed: <ul style="list-style-type: none"><li>• LX-100: Less than 20 lbs (7.5 kg) typical</li><li>• LX-300: Less than 25 lbs (11.4 kg) typical</li></ul>  |
| Regulatory Compliance  | CE-compliant, FCC Part 15 Class A, UL 1950, RoHS-compliant   |