

RICi-E3, RICi-T3

Fast Ethernet over E3/T3 Intelligent Converters



- Transparent user traffic and secure management, via double VLAN tagging
- Three levels of QoS, based on VLAN priority queues as per IEEE 802.1p
- Inband and out-of-band management
- Monitoring and statistics collection of TDM and Ethernet ports
- Fault propagation of E3 or T3 error conditions to the Ethernet port

RICi-E3 and RICi-T3 are intelligent converters connecting Fast Ethernet LANs over E3 or T3 circuits. They enable service providers and ISPs to supply transparent Ethernet services, without interfering with user traffic.

RICi-E3 and RICi-T3 have one unframed E3 or one framed T3 port, and one 10/100BaseTx port. Packets are forwarded from the Ethernet network to the E3 or T3 network at wire-speed, fully utilizing the expensive E3 or T3 circuit.

RICi-E3 and RICi-T3 are available with temperature-hardened enclosures that extend the operating temperature range.

ETHERNET

Internal Bridge

The internal bridge handles 1536-byte frames supporting VLAN applications. In filter mode, the bridge learns MAC addresses and filters local traffic, and in transparent mode it forwards any received packet.

QoS

The priority scheme (IEEE 802.1p) enables users to define three different QoS levels, according to the application requirements.

The DHCP client automatically obtains the IP address, IP mask, and default gateway, minimizing installation time.

Separating Ethernet Traffic

VLAN stacking transports user traffic transparently, keeping the user LAN settings intact. In addition, the management traffic may be tagged with a different VLAN tag, fully separating user traffic from management data.

RESILIENCY

The units feature fault propagation. When RICi-E3 or RICi-T3 detects a link failure, it shuts down the user port.

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MANAGEMENT AND SECURITY

RADview, RAD's SNMP-based system provides fault management and monitoring.

The devices can also be managed via an ASCII terminal or Telnet.

Inband management is performed from the Fast Ethernet user port or via the E3 or T3 port. Management traffic and user Ethernet traffic are transported together on the same Ethernet flow, separated by different VLAN tags to ensure traffic security.

MONITORING AND DIAGNOSTICS

Remote and local loopbacks are used for problem isolation at the physical layer.

A built-in ping utility allows checking IP connectivity by pinging remote IP hosts.

A trace route application quickly maps a route from RICi-E3 or RICi-T3 to any other network device.

The units feature fault propagation. When RICi-E3 or RICi-T3 detects a link failure, it shuts down the user port.

Applications

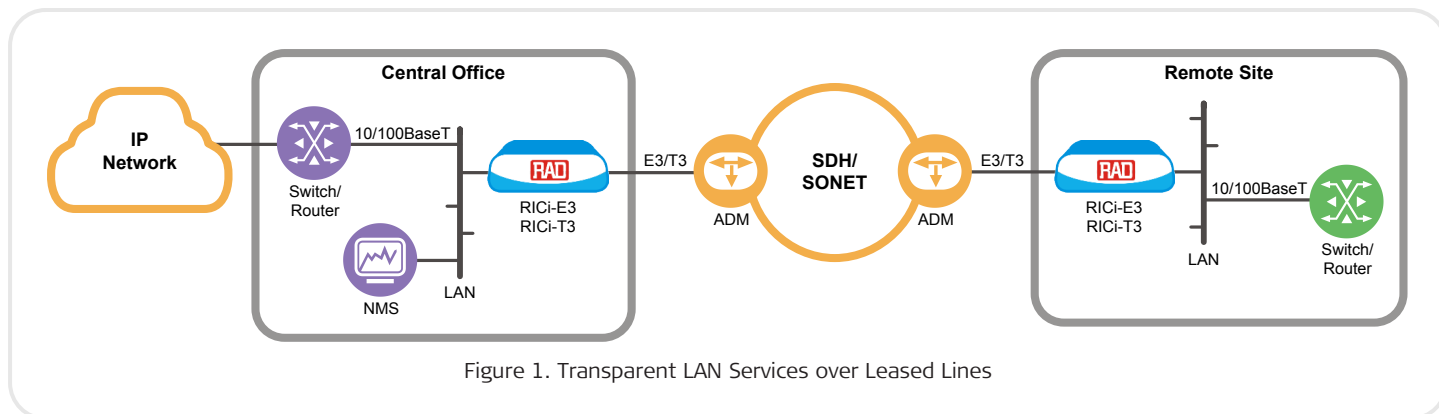


Figure 1. Transparent LAN Services over Leased Lines

Specifications

CAPACITY

WAN protocol:

Type: HDLC-like framing (native HDLC compatible)

with RAD products)

X.86 (LAPS)

MTU Size: 64- 1536 Bytes

E3 INTERFACE

Number of Ports

One

Compliance

G.703

Data Rate

34.368 Mbps

Line Code

HDB3

Framing

Unframed

Line Impedance

75Ω, unbalanced

System Clock

Internal or loopback

Diagnostics

Remote and local loopback

Connector

BNC, coaxial

T3 INTERFACE

Number of Ports

One

Compliance

GR-499-CORE

ANSI T1.107

ANSI T1.102

Data Rate

44.736 Mbps

Line Code

B3ZS

Framing

M23, C-bit parity

Line Impedance

75Ω, unbalanced

System Clock

Internal or loopback

Diagnostics

Remote and local loopback

Connector

BNC, coaxial

ETHERNET INTERFACE

Number of Ports

One

Type

10/100 Mbps autonegotiation, full/half duplex, flow control

Max Frame Size

1536 bytes

Compliance

Conforms to the relevant sections of IEEE 802.3 and 802.3u

Connector

RJ-45

BRIDGE

LAN Table

Up to 512 MAC addresses (learned)

Operation Mode

VLAN-aware, VLAN-unaware

Filtering and Forwarding

Transparent or filtered

MANAGEMENT

Terminal Control Port

Type

V.24 /RS-232 (DCE asynchronous)

Data Rate

9.6, 19.2, 115.2 kbps

Connector

9-pin, D-type, female

GENERAL

Indicators

PWR (green) – Power status

TST (yellow) – Test status

ALM (red) – Alarm status

LOS (red) – Loss of signal

ETH LINK (green) – Ethernet link status

Power

AC: 100 to 240 VAC, 50 to 60 Hz

DC: 48/60 VDC nominal (40 to 72 VDC)

Power Consumption

8W

Physical

Height: 43.7 mm (1.7 in)

Width: 220 mm (8.6 in)

Depth: 170 mm (6.7 in)

Weight: 0.5 kg (1.1 lb)

Environment

Temperature:

Standard enclosure:

0–50°C (32–122°F)

Temperature-hardened enclosure:

-22–70°C (-7.6–158°F)

Humidity: Up to 90%, non-condensing

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Ordering

RECOMMENDED CONFIGURATIONS

RICi-E3

Fast Ethernet over E3 intelligent NTU

RICi-T3

Fast Ethernet over T3 intelligent NTU

SPECIAL CONFIGURATIONS

Please contact your local RAD partner for additional configuration options

SUPPLIED ACCESSORIES

AC power cord

DC power adapter

OPTIONAL ACCESSORIES

RM-33-2

Hardware kit for mounting one or two units in a 19-inch rack

CBL-DB9F-DB9M-STR

Control port cable

International Headquarters

24 Raoul Wallenberg Street
Tel Aviv 69719, Israel
Tel. 972-3-6458181
Fax 972-3-6498250, 6474436
E-mail market@rad.com



12 avenue des prés
78059 St Quentin en Yvelines

Tel: 33 (0)1 77 55 03 00

Fax: 33 (0)1 30 44 11 95

E-mail: sales@cbnetworks.fr