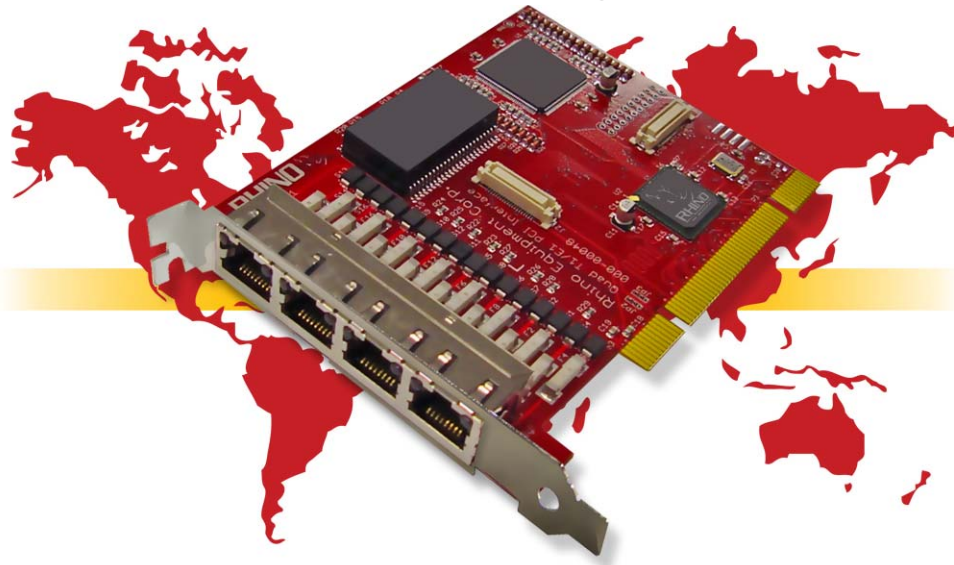


# Linux Open Source Telephony Quad T1 PCI Plug-In Card

**Providing reliable, flexible, and leading-edge solutions for a demanding telecommunications industry, including the Asterisk\* community.**



Managing your open source telecommunication needs has never been easier than with Rhino products. Rhino PCI plug-in cards satisfy the needs of Open Source Telephony (OST) applications, no matter how stringent the requirement. Rhino Open Source Telephony PCI cards feature Asterisk and Linux tested software. Knowing that Rhino products are ready to perform right out of the box means that you can spend more time developing important customer relationships.

Rhino Equipment Corp. offers you a complete line of low cost PCI plug-in cards including Single T1/E1, Dual T1/E1, Quad T1/E1, Quad FXO analog, Octal FXS/FXO and 24-port analog mixed mode analog interfaces. And don't forget the full line of Rhino Channel Bank products, for large scale analog FXS or FXO applications.

Using Asterisk? Rhino Open Source Telephony PCI products allow you to utilize analog phones and wiring in conjunction with leading-edge Asterisk technology -- without having to buy expensive IP telephones. Why go IP when you can save on installations by using your proven existing wiring? With Rhino you can use lower cost analog phones with digital features and get guaranteed T1 voice quality, all while enjoying Asterisk VoIP technology for off-premise connectivity.

Rhino products are tough. In the rare case of trouble, our technical support staff is ready to give you the support you need, when you need it. Our 5-year, limited warranty means that you can be confident that Rhino will always work hard in your Open Source Telephony application.

\* Asterisk is a registered trademark of Digium

# Rhino Equipment Corp. Quad T1/E1 PCI Plug-In Card Specifications



## PCI Card Features

- Asterisk soft PBX tested and ready
- Zaptel-compliant open source Linux module source code
- Quad T1/E1 embedded CSU
- Line buildout software selectable
- Custom Rhino PCI interface chip means no excess CPU overhead
- Fractional voice and data capable
- Field software upgradable
- T1 crossover cables included
- Alarm and Link status LEDs visible from the rear bracket for each individual port
- All major signaling modes supported (E&M, PRI, Loop, Ground, Kewl, etc.)
- Loop start signaling for advanced features such as Caller ID and Distinctive Ring
- 5-year limited warranty

## Benefits

Rhino Equipment Corp. provides a flexible and reliable product line to satisfy all T1, E1 and analog needs. Our products will beat your expectations, or your money back - guaranteed.

Our limited 5-year warranty means that you do not have to worry about your investment while it is in use - we do that for you.

## CSU Features

All Rhino PCI T1/E1 cards feature a single chip integrated CSU with both LIU and Framer, that is software controlled and software programmable - no jumpers

- Complete T1/DS1/ISDN-PRI/BRI transceiver functionality
- Complete E1 (CEPT) PCM-30/ISDN-PRI/BRI transceiver functionality
- Long-haul and short-haul line interface for clock/data recovery and waveshaping
- Crystal-less jitter attenuator
- Fully independent transmit and receive functionality
- Single chip line interface unit (LIU) and Framer

## Zaptel Selections

- Per channel programmability
- T1 or E1
- T1: D4 or ESF, AMI or B8ZS
- E1: CAS or CCS, AMI or HDB3
- Line buildouts selections: 0-133 feet or 0db, 133-266 feet, 266-399 feet, 399-533 feet, 533-655 feet, -7.5db, -15db, -22.5db
- Loopback configurable using Zaptel tools (i.e. zttool)

## Mechanical Data

**Size:** 3.5" tall, 4.75" wide

**Form Factor:** Single PCI slot

**Shipping Weight:** 1.5 pounds with all included components maximum

## Compatible Rhino Channel Bank Models

- **CB24-FXS-110V** - T1, 24 FXS analog channels, 110VAC
- **CB24-FXS-220V** - T1, 24 FXS analog channels, 220VAC
- **CB24-FXS-48V** - T1, 24 FXS analog channels, -48VDC
  
- **CB24-FXO-110V** - T1, 24 FXO analog channels, 110VAC
- **CB24-FXO-220V** - T1, 24 FXO analog channels, 220VAC
- **CB24-FXO-48V** - T1, 24 FXO analog channels, -48VDC
  
- **CB24-MOD-110V** - T1, 4-24 FXS/FXO analog channels, 110VAC
- **CB24-MOD-220V** - T1, 4-24 FXS/FXO analog channels, 220VAC
- **CB24-MOD-48V** - T1, 4-24 FXS/FXO analog channels, -48VDC

All Rhino channel banks come in 110VAC, 220VAC and -48V DC models. The -48V can be used to power the Rhino, or for external battery backup to AC power.

Rhino Equipment Corp. is proud to manufacture our products in the U.S.A..

Specifications are subject to change without notice.

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