

ASTERISK COMPATIBLE TELCO-INTERFACE CARDS

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Types of cards

- Analog cards
 - Single FXO
 - Multiple FXO/FXS modular
- Digital cards
 - T1/E1/J1 - PRI/RBS
 - BRI

Card Interface Types

- ISA
 - Very old, first zaptel cards
 - Not in production
- PCI
 - Standard, most popular
 - Some compatibility issues
- PCIe
 - New, faster, less mature technology
 - Very new, still some compatibility issues

Manufacturers

(only companies with full digital and analog product offerings are covered)

- **Digium** - 2 year warranty on all cards
 - Caretaker of the Zaptel project and Asterisk
- **Sangoma** - 5 year warranty on all cards
 - Datacomm card maker for over 12 years
- **Rhino** – 5 year warranty on all cards
 - Started in Channelbanks, cards started last year
- Others not covered in this presentation:
 - Dialogic, Pika, Odin Telesystems, Voicetronix, Yeastar, Aculab, Eicon, Varion

Analog Cards

- PSTN (Public switched telephone network) or POTS (Plain Old Telephone Service)
 - Standard single copper pair
 - Pulse or Tone
 - Manufacturers
 - Digium, Sangoma, Rhinotech, Yeastar, Generic X100P

Digium Analog Cards: X100P

- Effectively a special modem
- Single FXO port
- PCI only, some issues
- Cheapest way of getting a zaptel hardware timer for meetme, IAX and MoH(music on hold)
- X100P.com now sells these for \$30
- Zaptel driver: wcfxo



Digium Analog Cards: TDM400P

- Modular 4-port PCI-only
- Any combination of FXO/FXS modules
- \$75-\$400 depending on number kind of modules
- Zaptel driver: wctdm
- Hardware echo cancellation not available



Digium Analog Cards: TDM800P

- Modular 8-port PCI-only
- Any combination of FXO/FXS modules
- \$200-\$700 depending on number kind of modules
- Zaptel driver: wctdm
- Hardware echo cancellation not available



Digium Analog Cards: TDM2400P

- Modular 24-port PCI-only, very big card
- Any combination of FXO/FXS modules
- \$300-\$2000 depending on number kind of modules
- Zaptel driver: wctdm24xxp
- Hardware Echo-Cancellation available



Sangoma Analog Cards: A200

- Modular 1-24 port PCI and PCIeexpress
- Any combination of FXO/FXS modules
- \$100-\$2000 depending on number kind of modules
- Zaptel driver: Wanpipe
- Hardware Echo-Cancellation available



Sangoma Analog Cards: A400

- Modular 1-48 port PCI and PCIeexpress
- Any combination of FXO/FXS modules
- \$200-\$4000 depending on number kind of modules
- Zaptel driver: Wanpipe
- Hardware Echo-Cancellation available



Rhino Analog Cards: R4FXO

- Fixed 4-port PCI-only
- 4 FXO ports
- \$300-\$420 depending on echo cancellation
- Zaptel driver: r4fxo
- Hardware Echo-Cancellation version available



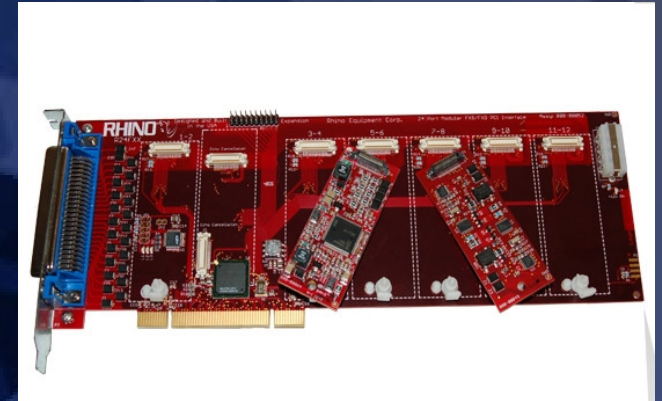
Rhino Analog Cards: R8FXX

- Modular 2-8 port PCI-only
- Any combination in pairs of FXO/FXS ports
- \$250-\$700 depending on module configuration and echo cancellation
- Zaptel driver: rcbfx
- Hardware Echo-Cancellation version available



Rhino Analog Cards: R24FXX

- Modular 2-24 port and fixed 24-port available, PCI-only
- Any combination in pairs of FXO/FXS ports, as well as fixed 24 port FXS or FXO
- \$300-\$1500 depending on module configuration and echo cancellation
- Zaptel driver: rcbfx
- Hardware Echo-Cancellation version available



Other Analog Cards

- Fixed and Modular PCI-only
- Any combination in pairs of FXO/FXS ports
- \$9-\$400 depending on module configuration sales channel(several are China-direct or ebay)
- Zaptel driver: custom



Digital Cards

- PRI(Primary Rate Interface) or RBS(Robbed Bit Service)
 - Time Division Multiplexing or a digital circuit
 - Manufactures: Digium, Sangoma, Rhinotech
- BRI(Basic Rate Interface)
 - Usually 1 or 2 lines with data channel
 - Common for non-USA residential service
 - Manufacturers: Digium, Odin, Junghanns, AVM, Beronet, Sirrix, Eicon, Gazel

Digium Digital Cards: TE120P

- Single T1/E1/J1 port
PCI-only
- Price: \$500
- Zaptel driver: wcte12xp
- Hardware Echo
Cancellation not
available



Digium Digital Cards: TE205P

- Dual T1/E1/J1 ports
PCI-only
- Available in 3v and 5v versions
- Price: \$850-\$2000
- Zaptel driver: wct4xxp
- Hardware Echo Cancellation available



Digium Digital Cards: TE405P

- Four T1/E1/J1 ports
PCI-only
- Available in 3v and 5v versions
- Price: \$1350-\$2250
- Zaptel driver: wct4xxp
- Hardware Echo Cancellation available



Digium Digital Cards: TE220P

- Two T1/E1 ports
PClexpress-only
- Price: \$1150-\$1550
- Zaptel driver: wct4xxp
- Hardware Echo
Cancellation standard



Digium Digital Cards: TE420P

- Four T1/E1 ports
PClexpress-only
- Price: \$1950-\$2450
- Zaptel driver: wct4xxp
- Hardware Echo
Cancellation standard



Digium Digital Cards: B410P

- Four BRI ports PCI-only
- Works outside of North America only
- Price: \$850-\$950
- Zaptel driver: b410p
- Hardware Echo Cancellation standard



Sangoma Digital Cards: a101

- Single T1/E1/J1 port
PCI or PClexpress
- Price: \$460-\$1200
- Zaptel driver: Wanpipe
- Hardware Echo
Cancellation available



Sangoma Digital Cards: a102

- Dual T1/E1/J1 ports PCI or PCIeexpress
- Price: \$800-\$1500
- Zaptel driver: Wanpipe
- Hardware Echo Cancellation available



Sangoma Digital Cards: a104

- Four T1/E1/J1 ports PCI or PCIeexpress
- Price: \$1350-\$2600
- Zaptel driver: Wanpipe
- Hardware Echo Cancellation available



Sangoma Digital Cards: a108

- Eight T1/E1/J1 ports
PCI or PCIeexpress
- Price: \$2400-\$4500
- Zaptel driver: Wanpipe
- Hardware Echo
Cancellation available
- Requires special cable
adapters for 8 T1s
(included)



Rhino Digital Cards: R1T1

- Single T1/E1/J1 port
PCI-only
- Price: \$500
- Zaptel driver: r1t1
- Hardware Echo
Cancellation not
available



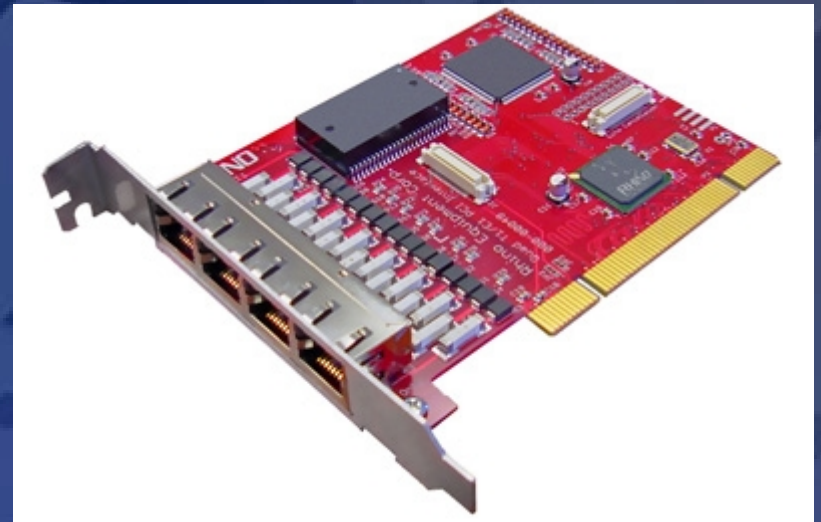
Rhino Digital Cards: R2T1

- Dual T1/E1/J1 ports
PCI-only
- Price: \$800
- Zaptel driver: rxt1
- Hardware Echo
Cancellation not
available



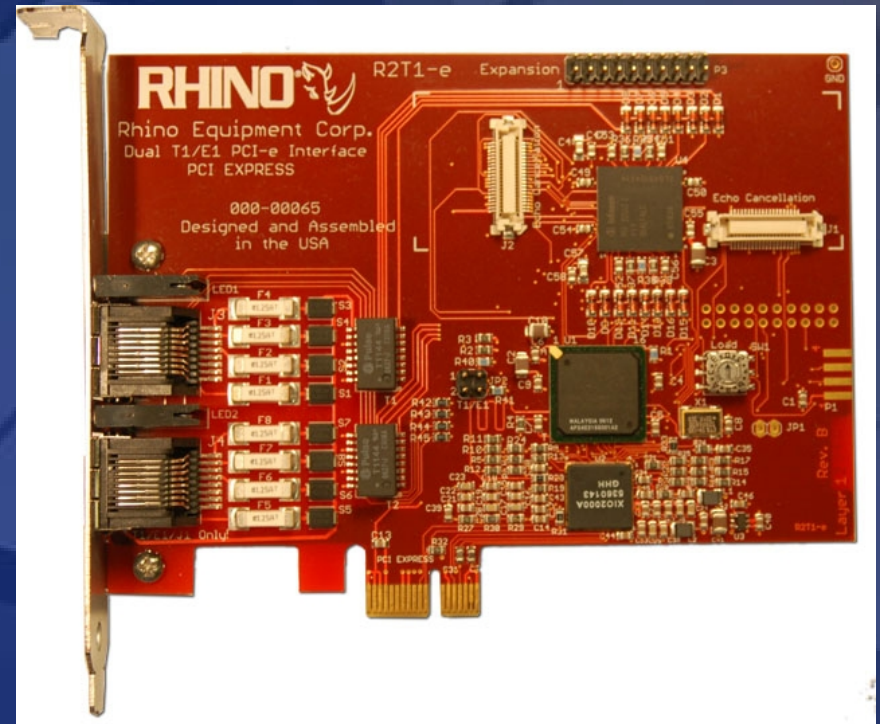
Rhino Digital Cards: R4T1

- Four T1/E1/J1 ports
PCI-only
- Price: \$1400
- Zaptel driver: rxt1
- Hardware Echo
Cancellation not
available



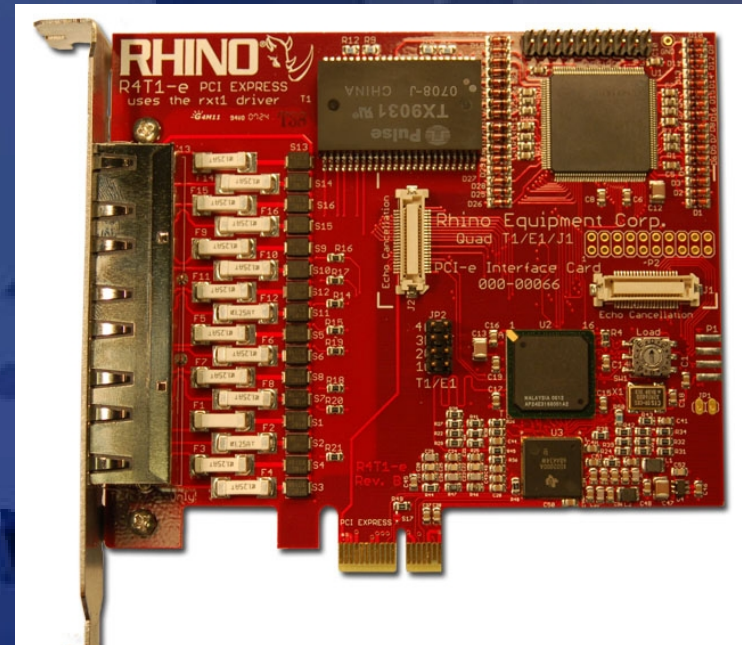
Rhino Digital Cards: R2T1-e

- Two T1/E1/J1 ports
PClexpress-only
- Price: \$800
- Zaptel driver: rxt1
- Hardware Echo Cancellation not available



Rhino Digital Cards: R4T1-e

- Four T1/E1/J1 ports
PClexpress-only
- Price: \$1400
- Zaptel driver: rxt1
- Hardware Echo
Cancellation not
available



For More Information:

- <http://www.digium.com>
- <http://www.sangoma.com>
- <http://www.rhinoequipment.com>
- <http://www.voip-info.org>
- <http://www.asterisk.org>