

# Cisco 1604–R Ethernet/ISDN–BRI Modular Router Cable Specifications

Document ID: 46787

---

## Introduction

### Prerequisites

Requirements

Components Used

Conventions

### Cabling Specifications

Console

Ethernet

ISDN BRI U Interface

ISDN BRI Cable Specifications

ISDN S/T Interface for a downstream ISDN phone or fax

WAN Interface Cards

Front Panel LEDs

Rear Panel LEDs

### Related Information

---

## Introduction

This document provides the cabling specifications for the Cisco 1604–R Ethernet/ISDN–BRI Modular router.

## Prerequisites

### Requirements

There are no specific requirements for this document.

### Components Used

The information in this document is based on the hardware version:

- Cisco 1604–R Router

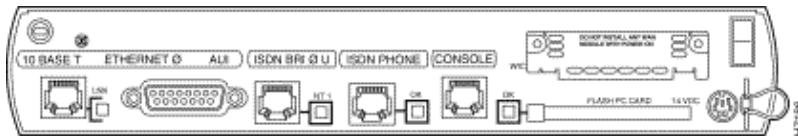
The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

### Conventions

For more information on document conventions, see the Cisco Technical Tips Conventions.

## Cabling Specifications

The Cisco 1604–R router has one Ethernet interface, one Integrated Services Digital Network (ISDN) interface, one ISDN phone port, and one ISDN–Basic Rate Interface (BRI) WAN interface card (WIC) slot.



The cabling details for the Cisco 1604-R are as follows:

## Console

The console cable is an RJ-45, the CAB-1600-CON=.

## Ethernet

On the 1604-R router, there is one functional port for either the 10Base-T (RJ-45) or AUI (DB-15). The cable details are:

- CAB-ETH-S-RJ45=
- Yellow Cable for Ethernet
- Straight-through
- RJ-45
- 6 ft.

The AUI adapter cable is a CAB-3CE18=.

## ISDN BRI U Interface

On the 1604-R router, there is one ISDN BRI U interface with integrated NT-1 which requires an RJ-45 straight-through cable.

The cable details are:

- CAB-U-RJ45=
- Red Color Cable for ISDN BRI U
- RJ-45
- 6 ft.

The table below shows the ISDN BRI U port pinouts for the RJ-45.

8-Pin <sup>1</sup>	Function
3	No connection
4	Signal — Tip or Ring
5	Signal — Tip or Ring
6	No connection

<sup>1</sup>Pins 1, 2, 7, and 8 are not used.

The table below shows the BRI Cable (RJ-45 to RJ-45) pintouts.

NT <sup>7</sup>		LT <sup>1</sup>
RJ-45 (8 Pin) <sup>8</sup>	Wire	

RJ-45 (8 Pin)

4	Tip	4
5	Ring	5

<sup>1</sup> LT refers to the line termination point (that is, at the wall jack).

## ISDN BRI Cable Specifications

The table below provides the cable specifications of the ISDN BRI cable.

Specification	High-capacity Cable	Low-capacity Cable
Resistance (at 96 kHz)	160 ohms/km	160 ohms/km
Capacity (at 1 kHz)	120 nF <sup>1</sup> /km	30 nF/km
Impedance (96 kHz)	75 ohms	150 ohms
Wire diameter	0.024" (0.6 mm)	0.024" (0.6 mm)
Distance limitation	32.8' (10 m)	32.8' (10 m)

<sup>1</sup> nF = nanoFarad.

## ISDN S/T Interface for a downstream ISDN phone or fax

The ISDN S/T interface requires an RJ-45 straight-through cable.

**Note:** You cannot connect the 1604-R to the ISDN network through the S/T port.

The table below provides the ISDN BRI S/T port pinouts for the RJ-45.

8 Pin <sup>1</sup>	TE <sup>2</sup>	NT <sup>3</sup>	Polarity
3	Transmit	Receive	+
4	Receive	Transmit	+
5	Receive	Transmit	-
6	Transmit	Receive	-

<sup>1</sup>Pins 1, 2, 7, and 8 are not used.

<sup>2</sup>TE refers to terminal equipment Layer 1 aspects of TE1, TA, and NT functional groups. This applies to the Cisco 1603 and the ISDN BRI S/T WAN interface card.

<sup>3</sup>NT refers to network terminating Layer 1 aspects of NT1 and NT2 functional groups. This applies to the Cisco 1604 ISDN S/T port.

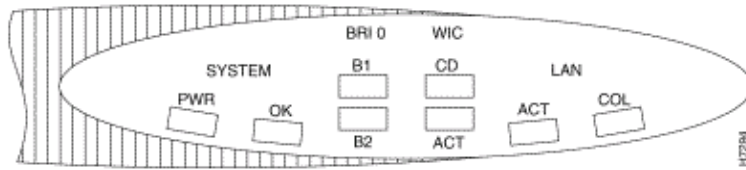
## WAN Interface Cards

WAN interface cards supported on the Cisco 1604-R consist of the following:

- WIC-1T: 1-port serial, async and sync (T1/E1)

- WIC-1DSU-56K4: 1 serial with integrated 56/64 Kbps 4-wire DSU/CSU
- WIC-1DSU-T1: 1 serial with integrated T1/Fractional T1 DSU/CSU

## Front Panel LEDs



The table below shows the front panel LED functions for the Cisco 1603 and Cisco 1604 routers.

LED	Color	Description
SYSTEM PWR	Green	The router is on, and DC power is being supplied.
SYSTEM OK	Green	The router has successfully booted. Blinks during the boot cycle.
LAN ACT	Green	Data is being sent to or received from the local Ethernet LAN.
LAN COL	Yellow	Flashing indicates packet collisions on the local Ethernet LAN.
BRI 0 B1	Green	<ul style="list-style-type: none"> <li>• An ISDN connection on B-channel 1.</li> <li>• Cisco 1604 only ---- If an ISDN device connected to the ISDN S/T port is using B-channel 1, the LED turns on.</li> </ul>
BRI 0 B2	Green	<ul style="list-style-type: none"> <li>• An ISDN connection on B-channel 2.</li> <li>• Cisco 1604 only ---- If an ISDN device connected to the ISDN S/T port is using B-channel 2, the LED turns on.</li> </ul>
WIC CD	Green	Active connection on the WAN interface card serial port.
WIC ACT	Green	Data is being sent over the WAN interface card serial port.

## Rear Panel LEDs

The table below explains the rear panel LED functions.

LED	Color	Description
<b>All Models</b>		
	Green	

LNK (next to ETHERNETØ 10BASET)		Indicates 10BaseT link integrity. This LED is not on when connected to an Ethernet network through the AUI port.  The Cisco 1605 has two LNK LEDs, one for each Ethernet 10BaseT port.
OK (next to FLASH PC CARD slot)	Green	The Flash PC card is correctly installed.
<b>Cisco 1601</b>		
RDY	Green	A serial port cable connection has been made to a modem or DSU/CSU.
<b>Cisco 1602</b>		
LOOPBACK	Yellow	The DSU/CSU is in DSU or CSU loopback mode.
ALARM	Yellow	An alarm condition exists on the DSU/CSU port.
CARRIER	Green	Indicates line synchronization or connection on the DSU/CSU port.
<b>Cisco 1603</b>		
OK (next to ISDN BRIØ S/T port)	Green	A physical connection has been established with the ISDN central office switch.
<b>Cisco 1604</b>		
NT1	Green	A physical connection has been established from the router internal NT1 to the ISDN central office switch.
OK (next to ISDN PHONE port)	Green	The device connected to the router ISDN S/T port has established a physical connection with the ISDN central office switch.
<b>Cisco 1605</b>		
LNK (next to ETHERNET1 10BASET)	Green	Indicates 10BaseT link integrity for the Ethernet 1 port.
OK (next to WIC slot)	Green	The WAN interface card is correctly installed in the router

# Related Information

- **Technical Support – Cisco Systems**
- 

[Contacts & Feedback](#) | [Help](#) | [Site Map](#)

© 2008 – 2009 Cisco Systems, Inc. All rights reserved. [Terms & Conditions](#) | [Privacy Statement](#) | [Cookie Policy](#) | [Trademarks of Cisco Systems, Inc.](#)

---

Updated: Jul 07, 2005

Document ID: 46787

---