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Tech Notes

# CAB-X21MT and CAB-X21FC Serial Cable Specifications

## Contents

# Introduction

This document explains the technical and cable specifications of the CAB-X21MT and CAB-X21FC serial cables.

# Prerequisites

## Requirements

There are no specific requirements for this document.

## Components Used

This document is not restricted to specific software and hardware versions.

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](#).
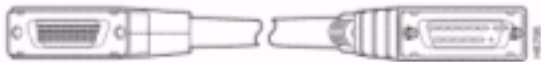
# X.21 Speed and Distance Limitations

The table below lists the different X.21 speed and distance limitations.

| Data Rate (Baud) | Distance (Feet) | Distance (Meters) |
|---|---|---|
| 2400 | 4,100 | 1,250 |
| 4800 | 2,050 | 625 |
| 9600 | 1,025 | 312 |
| 19200 | 513 | 156 |
| 38400 | 256 | 78 |
| 56000 | 102 | 31 |
| T1 | 50 | 15 |

# CAB-X21MT Serial Cable and Assembly

The cable gender for the CAB-X21MT serial cable (part number 72-0789-01) is Male DB-60 to Male DB-15, mode - DTE.
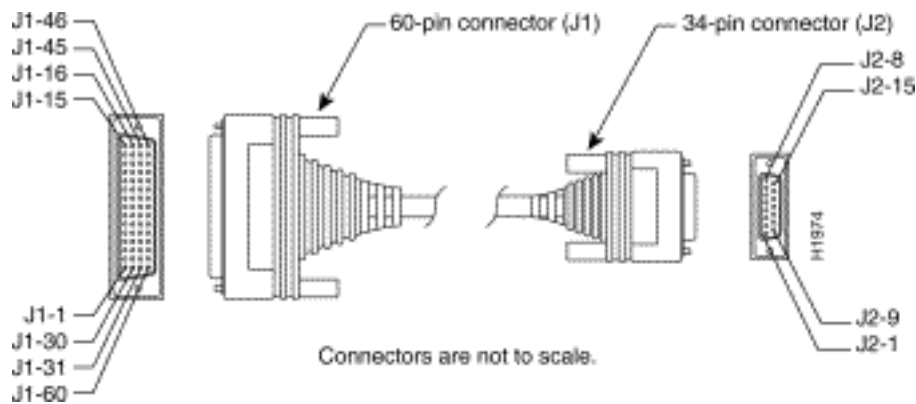
**Note:** The cable itself identifies the Cisco router as a DTE or DCE device to other devices in the network; for this reason, it is important to select the correct product number from the table below.

Router: Male DB-60    Network: Male DB-15

The CAB-X21MT serial cable is used in the Cisco 7000 family, Cisco 4000 series, Cisco 3600 series, Cisco 2500 series, Cisco 1600 series, Cisco access servers, and AccessPro PC cards. This cable has a male DB-60 connector on the Cisco end and a male DB-15 connector on the network end.

Connectors are not to scale.

# X.21 DTE Cable Pinouts (DB-60 to DB-15)

The table below shows the X.21 **DTE** cable pinouts (DB-60 to DB-15).

**Note:** The arrows indicate signal direction:

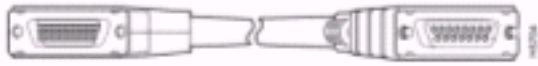- ---> indicates DTE to DCE

- <--- indicates DCE to DTE

| 60 Pin[1] | Signal | Description | Direction | 15 Pin | Signal |
|---|---|---|---|---|---|
| J1-48 | GND | Shorting Group | -- | -- | -- |
| J1-47 | MODE_2 | | | | |
| J1-51 | GND | Shorting Group | -- | -- | -- |
| J1-52 | MODE_DCE | | | | |
| J1-46 | Shield_GND | Single | -- | J2-1 | Shield GND |
| J1-11 | TxD/RxD+ | Twisted pair no. 3 | ---> | J2-2 | Transmit+ |
| J1-12 | TxD/RxD- | | ---> | J2-9 | Transmit- |
| J1-9 | RTS/CTS+ | Twisted pair no. 2 | ---> | J2-3 | Control+ |
| J1-10 | RTS/CTS- | | ---> | J2-10 | Control- |
| J1-28 | RxD/TxD+ | Twisted pair no. 6 | <--- | J2-4 | Receive+ |
| J1-27 | RxD/TxD- | | <--- | J2-11 | Receive- |
| J1-1 | CTS/RTS+ | Twisted pair no. 1 | <--- | J2-5 | Indication+ |
| J1-2 | CTS/RTS- | | <--- | J2-12 | Indication- |
| J1-26 | RxC/TxCE+ | Twisted pair no. 5 | <--- | J2-6 | Timing+ |
| J1-25 | RxC/TxCE- | | <--- | J2-13 | Timing- |

| J1-15 | Control_GND | Twisted pair no. 4 | -- | J2-8 | Control_GND |
|-------|-------------|--------------------|----|------|-------------|
| Shield | -- | | -- | Shield | -- |

[1]Any pin not referenced is not connected.

# CAB-X21FC Serial Cable and Assembly

The cable gender for the CAB-X21FC serial cable (part number 72-0790-01) is Male DB-60 to Female DB-15, mode - DCE.



Router: Male DB-60    Network: Female DB-15

The CAB-X21FC serial cable is used in the Cisco 7000 family, Cisco 4000 series, Cisco 3600 series, Cisco 2500 series, Cisco 1600 series, Cisco access servers, and AccessPro PC cards. This cable has a male DB-60 connector on the Cisco end and a female DB-15 connector on the network end.

# X.21 DCE Cable Pinouts (DB-60 to DB-15)

The table below shows the X.21 **DCE** cable pinouts (DB-60 to DB-15).

**Note:** The arrows indicate signal direction:

- ---> indicates DTE to DCE

- <--- indicates DCE to DTE

| 60 Pin[1] | Signal | Description | Direction | 15 Pin | Signal |
|-----------|--------|-------------|-----------|--------|--------|
| J1-48 | GND | Shorting Group | -- | -- | -- |
| J1-47 | MODE_2 | | | | |
| J1-46 | Shield_GND | Single | -- | J2-1 | Shield GND |
| J1-28 | RxD/TxD+ | Twisted pair no. 6 | <--- | J2-2 | Transmit+ |
| J1-27 | RxD/TxD- | | <--- | J2-9 | Transmit- |
| J1-1 | CTS/RTS+ | Twisted pair no. 1 | <--- | J2-3 | Control+ |
| J1-2 | CTS/RTS- | | <--- | J2-10 | Control- |
| J1-11 | TxD/RxD+ | Twisted pair no. 3 | ---> | J2-4 | Receive+ |
| J1-12 | TxD/RxD- | | ---> | J2-11 | Receive- |

| J1-9 | RTS/CTS+ | Twisted pair no. 2 | ---> | J2-5 | Indication+ |
| J1-10 | RTS/CTS- | | ---> | J2-12 | Indication- |
| J1-24 | TxC/RxC+ | Twisted pair no. 4 | ---> | J2-6 | Timing+ |
| J1-23 | TxC/RxC- | | ---> | J2-13 | Timing- |
| J1-15 | Control_GND | Twisted pair no. 5 | -- | J2-8 | Control_GND |
| Shield | -- | | -- | Shield | -- |

[1]Any pin not referenced is not connected.

# Related Information

- **Technical Support - Cisco Systems**