

# Understanding the 1-Port 4-Wire 56/64 Kpbs CSU/DSU WAN Interface Card (WIC-1DSU-56K4)

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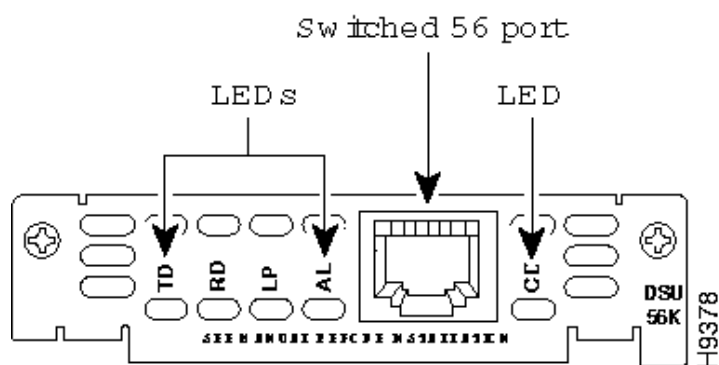
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## Introduction

The 1-port 4-wire 56/64 kbps Channel Service Unit/Data Service Unit (CSU/DSU) WAN interface card (WIC) (WIC-1DSU-56K4) is combined within a single WIC and performs the CSU/DSU functions for both DDS (dedicated) and 4-wire switched 56 kbps data networks. It also provides an all rate synchronous interface to any dedicated Digital Data Service (DDS) point-to-point or multi-point network compatible with AT&T Publication 62310. The WIC-1DSU-56K4 also supports 4-wire switched 56 data services such as AT&T's Accunet 56 or Sprint's VPN-56 plus many switched data services offered by local exchange carriers.



## Prerequisites

### Requirements

There are no specific requirements for this document.

Help us help you.

Please rate this document.

Excellent  
Good  
Average  
Fair  
Poor

This document solved my problem.

Yes  
No  
Just browsing

Suggestions for improvement:

(256 character limit)

## Components Used

Please refer to the [Platform Support](#) section below for detailed information.

The information presented in this document was created from devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If you are working in a live network, ensure that you understand the potential impact of any command before using it.

## Conventions

For more information on document conventions, see the [Cisco Technical Tips Conventions](#).

## Product Number

WIC-1DSU-56K4 - One Port Four Wire 56/64 Kbps CSU/DSU WAN Interface Card

## Features

This list details the features associated with the WIC-1DSU-56K4:

- Implements the switched 56 k and DDS (leased line) operation.
- Identical hardware feature set to the 4-wire 56/64 k CSU/DSU for the 2524-2525.
- Identical [Cisco IOS® software configuration](#).
- Supports the [DDS \(leased line\) operation](#) (AT&T Pub. 62310).
- Supports DDS loop rates 2.4, 4.8, 9.6, 19.2, 38.4, 56, and 64 kbps.
- Supports the [switched 56 operation](#) at 56 kbps (AT&T Pub. 41458, Sprint TS-0046).
- Receiver sensitivity is -45db at all loop rates.
- Uses the Self Test Function (at power on and [user initiated](#)) and Network line and data terminal equipment (DTE) loopbacks. User initiated [DTE, line](#), and [remote V.54](#) loopbacks diagnostic functions.
- Compliant with UL 1950, UL 1459, CSA 22.2-950, CSA 22.2-255, FCC part 15J Class A, and FCC part 68.

## Platform Support

Platform	Cisco 1600	Cisco 1720	Cisco 2600, 2600XM		Cisco 3620, 3640		Cisco 3631	Cisco 3660		Cisco 2691, 3725, 3745	
Carrier Module	Not Required	Not Required	on-board	<a href="#">NM-2W</a>	<a href="#">NM-1E2W</a> , <a href="#">NM-1E1R2W</a> , <a href="#">NM-2E2W</a>	<a href="#">NM-1FE2W</a> , <a href="#">NM-1FE1R2W</a> , <a href="#">NM-2FE2W</a> , <a href="#">NM-2W</a>	Not Required	<a href="#">NM-1E2W</a> , <a href="#">NM-1E1R2W</a>	<a href="#">NM-1FE2W</a> , <a href="#">NM-1FE1R2W</a> , <a href="#">NM-2FE2W</a> , <a href="#">NM-2W</a>	on-board	<a href="#">NM-1FE2W</a> , <a href="#">NM-1FE1R2W</a> , <a href="#">NM-2FE2W</a> , <a href="#">NM-2W</a>

<b>Cisco IOS Software Support</b>	Cisco IOS Versions 11.2(9)P, 11.3(3)T, and all 12.x	All Cisco IOS versions	All Cisco IOS versions	Cisco IOS Versions 11.2(4)XA, 11.2(5)P, all 11.3, 11.3T, and all 12.x	All Cisco IOS versions	All Cisco IOS versions	All Cisco IOS versions
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**Note:** The Cisco IOS software releases provided are typically the minimum version required to support the platform, module, or feature in question. Use the [Software Advisor](#) ( [registered](#) customers only) to choose appropriate software for your network device: match software features to Cisco IOS and CatOS releases, compare IOS releases, or find out which software releases support your hardware.

## Configuration

The WIC-IDSU-56K4 interface card uses **service-module** commands. Below is a sample configuration.

**Note:** There are no **framing** or **linecode** commands. This is because the 56 k card is not a T1 and does not relate to timeslots. There are 24 timeslots in a T1: 24 x 64 DS0s=1.544m

This card is strictly 56 k and timeslots are not relevant.

```
interface serial 0/0
service-module 56k clock rate 56
service-module 56k clock source internal
ip address 10.1.1.1 255.255.255.0
encapsulation ppp
no shut
```

For a list of commands available, refer to [Configuring Cisco Integrated Data Service Unit/Channel Service Unit \(DSU/CSU\) Modules and WAN Interface Cards](#).

To perform a loopback test refer to [Loopback Tests for T1/56 K Lines](#).

## Connector Pinout

The WIC-IDSU-56K4 module uses a standard straight through RJ-45 cable to connect from the RJ-48S jack on the CSU/DSU to the wall jack.

RJ-48S pin	Signal
1	receive ring
2	receive tip
7	ring
8	tip

## LED Definitions

Label	Signal	Definition
DCD	Data Carrier Detect	Settings normal or on all the time. Normal /DDS: Illuminated when data characters are being received. Normal/SW56: Illuminated when a valid connection is established.
RD	Receive Data	Illuminates when receive data characters are being clocked from the DSU module into the router.
TB	Transmit Data	Illuminates when transmit data characters are being clocked from the router into the DSU module.
LB	Loopback	Solid illumination any time a loopback is active.
AL	Alarm	Illuminates any time an unmasked alarm condition exists: <ul style="list-style-type: none"> <li>• OOS/OOF from network</li> <li>• no receive signal</li> <li>• no sealing current</li> <li>• no frame sync for 64 K</li> <li>• attempting to rate adapt</li> <li>• RT (DSU Loopback), LL (CSU Loopback), from Telco</li> <li>• Remote Digital Loopback (RDL) from remote DSU</li> </ul>

## Related Information

- [1-Port, 4-Wire, 56/64 kpbs DSU/CSU WAN Interface Card](#)
- [Configuring Cisco Integrated Data Service Unit/Channel Service Unit \(DSU/CSU\) Modules and WAN Interface Cards](#)
- [Overview of Cisco Network Modules and Service Modules for Cisco Access Routers](#)
- [Dial and Access Technology Support Page](#)
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