



# Readme for Dial-Only Dial Feature Card

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This document describes the dial-only dial feature card (DFC) on the Cisco AS5350XM and Cisco AS5400XM universal gateways and contains the following sections:

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## Caution

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The dial-only DFC does *not* support voice or fax services. If you configure your universal gateway for voice or fax services, unpredictable results can occur if the dial-only DFC is installed in the chassis. Before installing the dial-only DFC in a universal gateway, see [Table 1 on page 2](#) for more information.

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## Overview

Two different types of digital signal processor (DSP) DFCs are available for Cisco AS5350XM and Cisco AS5400XM universal gateways.

- Universal port DFC—The existing universal port DFC is unchanged, and supports voice, fax, and dial services.
- Dial-only DFC—The new dial-only DFC supports 60 (DL-60) to 108 (DL-108) dial calls in a Cisco AS5350XM and Cisco AS5400XM universal gateway. It does not support voice or fax services. (See [Figure 1](#) and [Figure 2](#).)



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### Corporate Headquarters:

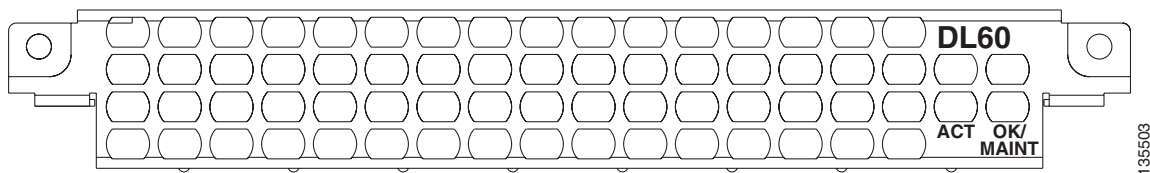
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**Note**

Dial services include modem calls (all modulations), ISDN digital calls, V.110 data calls, and V.120 data calls. Modem pass-through calls are not included in dial services.

**Figure 1** *Dial-Only DFC (DL-60) Front Panel*



**Figure 2** *Dial-Only DFC (DL-108) Front Panel*

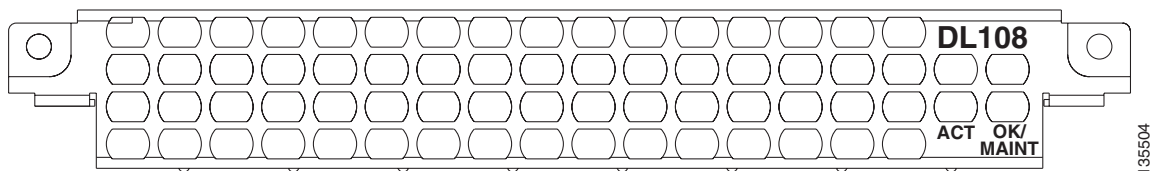


Table 1 describes the behavior of the Cisco AS5350XM and Cisco AS5400XM universal gateways with dial-only DFCs, universal port DFCs, or both installed in the chassis.

  
**Caution**

If a dial-only DFC is installed in a chassis with the universal port DFC, only dial services are supported. We do not recommend deploying dial-only DFCs in a chassis that supports voice and fax services, because voice or fax calls assigned to the dial-only DFC will fail.

**Table 1** *Dial-Only DFC and Universal Port DFC Supported Features*

DFCs Installed	Services Supported
Only dial-only DFCs installed	Dial services
Only universal port DFCs installed	Dial, voice, and fax services
Both dial-only and universal port DFCs installed	Dial services

## Viewing Dial-Only DFC Status Using the CLI

To view the status of the dial-only DFC, you can use the commands described in the table below in privileged EXEC mode.

Command	Purpose
Router# <b>show chassis slot</b> <i>slot-number</i>	Displays basic information about the DFCs installed in the chassis, including operational status.
Router# <b>show diag</b> <i>slot-number</i>	Displays detailed hardware information about the DFCs installed in the chassis: <ul style="list-style-type: none"> <li>Operational status</li> <li>Number of bus or PCI errors</li> <li>Version and serial number</li> </ul>
Router# <b>show health-monitor</b>	Displays the status of multiple components at once: <ul style="list-style-type: none"> <li>Chassis—Power supply, temperature, and fans</li> <li>Memory—Processor and I/O memory</li> <li>Universal port DFC, dial-only DFC, and WAN DFCs</li> </ul>

## Examples

This section provides the following examples:

- [Sample Output for the show chassis slot Command on the Universal Gateway, page 3](#)
- [Sample Output for the show diag Command on the Universal Gateway, page 3](#)
- [Sample Output for the show health monitor Command on the Universal Gateway, page 4](#)

### Sample Output for the show chassis slot Command on the Universal Gateway

The following example shows basic information and operational status for the dial-only DFC installed in slot 6 of the chassis:

```
Router# show chassis slot 6
Slot 6:
DFC type is AS5400XM DL108 DFC

OIR events:
Number of insertions = 0, Number of removals = 0
DFC State is DFC_S_OPERATIONAL
```

### Sample Output for the show diag Command on the Universal Gateway

The following example shows operational status, error events, and version information for the dial-only DFC installed in slot 6 of the chassis:

```
Router# show diag 6
Slot 6:
DFC type is AS5400XM DL108 DFC

OIR events:
Number of insertions = 0, Number of removals = 0
DFC State is DFC_S_OPERATIONAL

Error events (Bus errors, PCI errors):
Number of errors recovered = 0

Carrier Card Cookie Info:
Manufacture Cookie Info:
Board ID : 0x4BE
```

```

Hardware Revision : 1.6
Part Number : 73-9527-01
Board Revision : 02
Fab Part Number : 28-6928-01
Product (FRU) Number :
PCB Serial Number :
RMA Test History : 00
RMA Number : 0-0-0-0
RMA History : 00
Version Identifier : VP1
EEPROM contents (hex):
0x00: 04 FF 40 04 BE 41 01 06 82 49 25 37 01 42 30 32
0x10: 85 1C 1B 10 01 CB 92 00 00 00 00 00 00 00 00 00
0x20: 00 00 00 00 00 00 00 00 00 00 00 00 C1 8B 00 00 00 00
0x30: 00 00 00 00 00 00 03 00 81 00 00 00 00 04 00 89
0x40: 56 50 31 20 FF FF FF FF FF FF FF FF FF FF FF FF
DFC Cookie Info:
Manufacture Cookie Info:
EEPROM Type 0x0001, EEPROM Version 0x01, Board ID 0x06,
Board Hardware Version 3.2, Item Number 73-3764-01,
Board Revision 21, Serial Number JAB99391621,
License Type: Dial Ports,
PLD/ISP Version 1.0, Manufacture Date 9-Oct-1999.
RMA Number1 <unset>, RMA Number2 <unset>
EEPROM format version 0x1
EEPROM contents (hex):
0x00: 00 01 01 06 03 02 00 49 00 0E B4 01 32 01 41 08
0x10: 4A 41 42 39 39 33 39 31 36 32 31 00 00 00 13 63
0x20: 0A 09 01 00 DC FF FF FF FF FF FF FF FF FF FF FF
0x30: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0x40: FF FF 00 00 FF FF FF FF FF FF FF FF FF FF FF FF
0x50: DC FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0x60: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0x70: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
FRU NUMBER : AS5XM-DIAL-108NP=
Carrier Card Master PLD/FPGA Rev 0x0006

```

**Sample Output for the show health monitor Command on the Universal Gateway**

The following example shows the operational status for any DFCs installed in the chassis:

```

Router# show health monitor
.
.
.
DFC's:
Slot 1 - Empty DFC                Not in operation
Slot 2 - NP108 DFC                 OK
Slot 3 - T1 8 PRI DFC             OK
Slot 4 - NP108 DFC                 OK
Slot 5 - Empty DFC                Not in operation
Slot 6 - DL108 DFC                OK
Slot 7 - Empty DFC                Not in operation

```

# Configuring the Dial-Only DFC

The dial-only DFC is configured in the same way as the universal port DFC. This allows the dial-only DFC to be used with your existing software configuration.

For information about configuring the dial-only DFC, see the “Managing and Troubleshooting the Universal Port Card” chapter of the *Cisco AS5350XM and Cisco AS5400XM Universal Gateways Software Configuration Guide* at this URL:

[http://www.cisco.com/en/US/docs/routers/access/as5350xm/software/configuration/guide/12\\_4\\_24T/12\\_4\\_24t\\_book.html](http://www.cisco.com/en/US/docs/routers/access/as5350xm/software/configuration/guide/12_4_24T/12_4_24t_book.html)

## Related Documentation

Related documentation includes the following:

- *Cisco AS5350XM and Cisco AS5400XM Universal Gateways Software Configuration Guide*
- *Cisco AS5350XM and Cisco AS5400XM Universal Gateways Quick Start Guide*
- *Cisco AS5350XM Universal Gateway Chassis Installation Guide*
- *Cisco AS5400XM Universal Gateway Chassis Installation Guide*
- *Cisco AS5350XM and Cisco AS5400XM Universal Gateways Card Installation Guide*
- *Regulatory Compliance and Safety Information for the Cisco AS5350 and Cisco AS5350XM Universal Gateways*
- *Regulatory Compliance and Safety Information for the Cisco AS5400 and Cisco AS5400XM Universal Gateways*

## Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

### Cisco.com

You can access the most current Cisco documentation at this URL:

<http://www.cisco.com/techsupport>

You can access the Cisco website at this URL:

<http://www.cisco.com>

You can access international Cisco websites at this URL:

[http://www.cisco.com/public/countries\\_languages.shtml](http://www.cisco.com/public/countries_languages.shtml)

## Product Documentation DVD

Cisco documentation and additional literature are available in the Product Documentation DVD package, which may have shipped with your product. The Product Documentation DVD is updated regularly and may be more current than printed documentation.

The Product Documentation DVD is a comprehensive library of technical product documentation on portable media. The DVD enables you to access multiple versions of hardware and software installation, configuration, and command guides for Cisco products and to view technical documentation in HTML. With the DVD, you have access to the same documentation that is found on the Cisco website without being connected to the Internet. Certain products also have pdf versions of the documentation available.

The Product Documentation DVD is available as a single unit or as a subscription. Registered Cisco.com users (Cisco direct customers) can order a Product Documentation DVD (product number DOC-DOCDVD=) from the Ordering tool or Cisco Marketplace.

Cisco Ordering tool:

<http://www.cisco.com/en/US/partner/ordering/>

Cisco Marketplace:

<http://www.cisco.com/go/marketplace/>

## Ordering Documentation

Beginning June 30, 2005, registered Cisco.com users may order Cisco documentation at the Product Documentation Store in the Cisco Marketplace at this URL:

<http://www.cisco.com/go/marketplace/>

Cisco will continue to support documentation orders using the Ordering tool:

- Registered Cisco.com users (Cisco direct customers) can order documentation from the Ordering tool:

<http://www.cisco.com/en/US/partner/ordering/>

- Instructions for ordering documentation using the Ordering tool are at this URL:

[http://www.cisco.com/univercd/cc/td/doc/es\\_inpck/pdi.htm](http://www.cisco.com/univercd/cc/td/doc/es_inpck/pdi.htm)

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 1 800 553-NETS (6387).

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You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems  
Attn: Customer Document Ordering  
170 West Tasman Drive  
San Jose, CA 95134-9883

We appreciate your comments.

# Cisco Product Security Overview

Cisco provides a free online Security Vulnerability Policy portal at this URL:

[http://www.cisco.com/en/US/products/products\\_security\\_vulnerability\\_policy.html](http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html)

From this site, you can perform these tasks:

- Report security vulnerabilities in Cisco products.
- Obtain assistance with security incidents that involve Cisco products.
- Register to receive security information from Cisco.

A current list of security advisories and notices for Cisco products is available at this URL:

<http://www.cisco.com/go/psirt>

If you prefer to see advisories and notices as they are updated in real time, you can access a Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed from this URL:

[http://www.cisco.com/en/US/products/products\\_psirt\\_rss\\_feed.html](http://www.cisco.com/en/US/products/products_psirt_rss_feed.html)

## Reporting Security Problems in Cisco Products

Cisco is committed to delivering secure products. We test our products internally before we release them, and we strive to correct all vulnerabilities quickly. If you think that you might have identified a vulnerability in a Cisco product, contact PSIRT:

- Emergencies—[security-alert@cisco.com](mailto:security-alert@cisco.com)

An emergency is either a condition in which a system is under active attack or a condition for which a severe and urgent security vulnerability should be reported. All other conditions are considered nonemergencies.

- Nonemergencies—[psirt@cisco.com](mailto:psirt@cisco.com)

In an emergency, you can also reach PSIRT by telephone:

- 1 877 228-7302
- 1 408 525-6532



**Tip**

We encourage you to use Pretty Good Privacy (PGP) or a compatible product to encrypt any sensitive information that you send to Cisco. PSIRT can work from encrypted information that is compatible with PGP versions 2.x through 8.x.

Never use a revoked or an expired encryption key. The correct public key to use in your correspondence with PSIRT is the one linked in the Contact Summary section of the Security Vulnerability Policy page at this URL:

[http://www.cisco.com/en/US/products/products\\_security\\_vulnerability\\_policy.html](http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html)

The link on this page has the current PGP key ID in use.

# Obtaining Technical Assistance

Cisco Technical Support provides 24-hour-a-day award-winning technical assistance. The Cisco Technical Support & Documentation website on Cisco.com features extensive online support resources. In addition, if you have a valid Cisco service contract, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not have a valid Cisco service contract, contact your reseller.

## Cisco Technical Support & Documentation Website

The Cisco Technical Support & Documentation website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The website is available 24 hours a day, at this URL:

<http://www.cisco.com/techsupport>

Access to all tools on the Cisco Technical Support & Documentation website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

<http://tools.cisco.com/RPF/register/register.do>

**Note**

Use the Cisco Product Identification (CPI) tool to locate your product serial number before submitting a web or phone request for service. You can access the CPI tool from the Cisco Technical Support & Documentation website by clicking the **Tools & Resources** link under Documentation & Tools. Choose **Cisco Product Identification Tool** from the Alphabetical Index drop-down list, or click the **Cisco Product Identification Tool** link under Alerts & RMAs. The CPI tool offers three search options: by product ID or model name; by tree view; or for certain products, by copying and pasting **show** command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.

## Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool provides recommended solutions. If your issue is not resolved using the recommended resources, your service request is assigned to a Cisco engineer. The TAC Service Request Tool is located at this URL:

<http://www.cisco.com/techsupport/servicerequest>

For S1 or S2 service requests or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.



To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553-2447

For a complete list of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/techsupport/contacts>

## Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

Severity 1 (S1)—Your network is “down,” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Severity 2 (S2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Severity 3 (S3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Severity 4 (S4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

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- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press at this URL:

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- *Packet* magazine is the Cisco Systems technical user magazine for maximizing Internet and networking investments. Each quarter, Packet delivers coverage of the latest industry trends, technology breakthroughs, and Cisco products and solutions, as well as network deployment and troubleshooting tips, configuration examples, customer case studies, certification and training information, and links to scores of in-depth online resources. You can access Packet magazine at this URL:

<http://www.cisco.com/packet>

- *iQ Magazine* is the quarterly publication from Cisco Systems designed to help growing companies learn how they can use technology to increase revenue, streamline their business, and expand services. The publication identifies the challenges facing these companies and the technologies to help solve them, using real-world case studies and business strategies to help readers make sound technology investment decisions. You can access *iQ Magazine* at this URL:

[http://www.ilmc.com/iq\\_magazine](http://www.ilmc.com/iq_magazine)

or view the digital edition at this URL:

<http://ciscoiq.texterity.com/ciscoiq/sample/>

- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the *Internet Protocol Journal* at this URL:

<http://www.cisco.com/ipj>

- Networking products offered by Cisco Systems, as well as customer support services, can be obtained at this URL:

<http://www.cisco.com/en/US/products/index.html>

- Networking Professionals Connection is an interactive website for networking professionals to share questions, suggestions, and information about networking products and technologies with Cisco experts and other networking professionals. Join a discussion at this URL:

<http://www.cisco.com/discuss/networking>

- World-class networking training is available from Cisco. You can view current offerings at this URL:

<http://www.cisco.com/en/US/learning/index.html>

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