



# Unique Device Identifier Retrieval

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The Unique Device Identifier Retrieval feature provides the ability to retrieve and display the Unique Device Identifier (UDI) information from any Cisco product that has electronically stored such identity information.

## History for Unique Device Identifier Retrieval Feature

Release	Modification
12.3(4)T	This feature was introduced.
12.0(27)S	This feature was integrated into Cisco IOS Release 12.0(27)S.
12.2(25)S	This feature was integrated into Cisco IOS Release 12.2(25)S.
12.2(27)SBC	This feature was integrated into Cisco IOS Release 12.2(27)SBC.
12.2(18)SXE5	This feature was integrated into Cisco IOS Release 12.2(18)SXE5.

Software images for Cisco 12000 series Internet routers have been deferred to Cisco IOS Release 12.0(27)S1.

## Finding Support Information for Platforms and Cisco IOS Software Images

Use Cisco Feature Navigator to find information about platform support and Cisco IOS software image support. Access Cisco Feature Navigator at <http://www.cisco.com/go/fn>. You must have an account on Cisco.com. If you do not have an account or have forgotten your username or password, click **Cancel** at the login dialog box and follow the instructions that appear.

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# Prerequisites for Unique Device Identifier Retrieval

In order to use UDI retrieval, the Cisco product in use must be UDI-enabled. A UDI-enabled Cisco product supports five required Entity MIB objects. The five Entity MIB v2 (RFC-2737) objects are as follows:

- entPhysicalName
- entPhysicalDescr
- entPhysicalModelName
- entPhysicalHardwareRev
- entPhysicalSerialNum

Although the **show inventory** command may be available, using that command on devices that are not UDI-enabled will likely produce no output.

## Information About Unique Device Identifier Retrieval

Before using the UDI Retrieval feature, you should understand the following concepts:

- [Unique Device Identifier Overview, page 2](#)
- [Benefits of the Unique Device Identifier Retrieval Feature, page 3](#)

## Unique Device Identifier Overview

Each identifiable product is an entity, as defined by the Entity MIB (RFC-2737) and its supporting documents. Some entities, such as a chassis, will have subentities like slots. An Ethernet switch might be a member of a superentity like a stack. Most Cisco entities that are orderable products will leave the factory with an assigned UDI. The UDI information is printed on a label that is affixed to the physical hardware device, and it is also stored electronically on the device in order to facilitate remote retrieval.

A UDI consists of the following elements:

- Product identifier (PID)
- Version identifier (VID)
- Serial number (SN)

The PID is the name by which the product can be ordered; it has been historically called the “Product Name” or “Part Number.” This is the identifier that one would use to order an exact replacement part.

The VID is the version of the product. Whenever a product has been revised, the VID will be incremented. The VID is incremented according to a rigorous process derived from Telcordia GR-209-CORE, an industry guideline that governs product change notices.

The SN is the vendor-unique serialization of the product. Each manufactured product will carry a unique serial number assigned at the factory, which cannot be changed in the field. This is the means by which to identify an individual, specific instance of a product.

## Benefits of the Unique Device Identifier Retrieval Feature

- Identifies individual Cisco products in your networks.
- Reduces operating expenses for asset management through simple, cross-platform, consistent identification of Cisco products.
- Identifies PIDs for replaceable products.
- Facilitates discovery of products subject to recall or revision.
- Automates Cisco product inventory (capital and asset management).
- Provides a mechanism to determine the entitlement level of a Cisco product for repair and replacement service.

## How to Retrieve the Unique Device Identifier

This section contains the following task:

- [Retrieving the Unique Device Identifier, page 3](#) (required)

## Retrieving the Unique Device Identifier

Perform this task to retrieve and display identification information for a Cisco product.

### SUMMARY STEPS

1. **enable**
2. **show inventory [raw] [entity]**

### DETAILED STEPS

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**Step 1** **enable**

Enters privileged EXEC mode. Enter your password if prompted.

```
Router> enable
```

**Step 2** **show inventory [raw] [entity]**

Enter the **show inventory** command to retrieve and display information about all of the Cisco products installed in the networking device that are assigned a PID, VID, and SN. If a Cisco entity is not assigned a PID, that entity is not retrieved or displayed.

```
Router# show inventory
```

```
NAME: "Chassis", DESCR: "12008/GRP chassis"  
PID: GSR8/40 , VID: V01, SN: 63915640  
  
NAME: "slot 0", DESCR: "GRP"  
PID: GRP-B , VID: V01, SN: CAB021300R5  
  
NAME: "slot 1", DESCR: "4 port ATM OC3 multimode"  
PID: 4OC3/ATM-MM-SC , VID: V01, SN: CAB04036GT1
```

```

NAME: "slot 3", DESCR: "4 port 0C3 POS multimode"
PID: LC-4OC3/POS-MM      , VID: V01, SN: CAB014900GU

NAME: "slot 5", DESCR: "1 port Gigabit Ethernet"
PID: GE-GBIC-SC-B       , VID: V01, SN: CAB034251NX

NAME: "slot 7", DESCR: "GRP"
PID: GRP-B               , VID: V01, SN: CAB0428AN40

NAME: "slot 16", DESCR: "GSR 12008 Clock Scheduler Card"
PID: GSR8-CSC/ALRM      , VID: V01, SN: CAB0429AUYH

NAME: "sfslot 1", DESCR: "GSR 12008 Switch Fabric Card"
PID: GSR8-SFC           , VID: V01, SN: CAB0428ALOS

NAME: "sfslot 2", DESCR: "GSR 12008 Switch Fabric Card"
PID: GSR8-SFC           , VID: V01, SN: CAB0429AU0M

NAME: "sfslot 3", DESCR: "GSR 12008 Switch Fabric Card"
PID: GSR8-SFC           , VID: V01, SN: CAB0429ARD7

NAME: "PSSlot 1", DESCR: "GSR 12008 AC Power Supply"
PID: FWR-GSR8-AC-B      , VID: V01, SN: CAB041999CW

```

Enter the **show inventory** command with an *entity* argument value to display the UDI information for a specific type of Cisco entity installed in the networking device. In this example, a list of Cisco entities that match the sfslot argument string is displayed.

```

Router# show inventory sfslot

NAME: "sfslot 1", DESCR: "GSR 12008 Switch Fabric Card"
PID: GSR8-SFC           , VID: V01, SN: CAB0428ALOS

NAME: "sfslot 2", DESCR: "GSR 12008 Switch Fabric Card"
PID: GSR8-SFC           , VID: V01, SN: CAB0429AU0M

NAME: "sfslot 3", DESCR: "GSR 12008 Switch Fabric Card"
PID: GSR8-SFC           , VID: V01, SN: CAB0429ARD7

```

You can request even more specific UDI information using the **show inventory** command with an *entity* argument value that is enclosed in quotation marks. In this example, only the details for the entity that exactly matches the sfslot 1 argument string are displayed.

```

Router# show inventory "sfslot 1"

NAME: "sfslot 1", DESCR: "GSR 12008 Switch Fabric Card"
PID: GSR8-SFC           , VID: V01, SN: CAB0428ALOS

```

For diagnostic purposes, the **show inventory** command can be used with the **raw** keyword to display every RFC 2737 entity including those without a PID, UDI, or other physical identification.



#### Note

The **raw** keyword option is primarily intended for troubleshooting problems with the **show inventory** command itself.

```

Router# show inventory raw

NAME: "Chassis", DESCR: "12008/GRP chassis"
PID:           , VID: V01, SN: 63915640

NAME: "slot 0", DESCR: "GRP"
PID:           , VID: V01, SN: CAB021300R5

```

```
NAME: "slot 1", DESCR: "4 port ATM OC3 multimode"  
PID: 4OC3/ATM-MM-SC      , VID: V01, SN: CAB04036GT1  
  
NAME: "slot 3", DESCR: "4 port OC3 POS multimode"  
PID: LC-4OC3/POS-MM     , VID: V01, SN: CAB014900GU
```

Enter the **show inventory** command with the **raw** keyword and an *entity* argument value to display the UDI information for the Cisco entities that are installed in the networking device and that match the argument string, even if they do not contain an assigned PID.

```
Router# show inventory raw slot  
  
NAME: "slot 0", DESCR: "GRP"  
PID:           , VID: V01, SN: CAB021300R5  
  
NAME: "slot 1", DESCR: "4 port ATM OC3 multimode"  
PID: 4OC3/ATM-MM-SC      , VID: V01, SN: CAB04036GT1  
  
NAME: "slot 3", DESCR: "4 port OC3 POS multimode"  
PID: LC-4OC3/POS-MM     , VID: V01, SN: CAB014900GU
```

---

## Troubleshooting Tips

If any of the Cisco products do not have an assigned PID, the output may display incorrect PIDs and the VID and SN elements may be missing, as in the following example.

```
NAME: "Four Port High-Speed Serial", DESCR: "Four Port High-Speed Serial"  
PID: Four Port High-Speed Serial, VID: 1.1, SN: 17202570  
  
NAME: "Serial1/0", DESCR: "M4T"  
PID: M4T           , VID:     , SN:
```

In the sample output, the PID is exactly the same as the product description. The UDI is designed for use with new Cisco products that have a PID assigned. UDI information on older Cisco products is not always reliable.

## Configuration Examples for Unique Device Identifier Retrieval

There are no configuration examples for the UDI Retrieval feature. For sample display output from the **show inventory** command, see the [“Retrieving the Unique Device Identifier”](#) section on page 3.

## Additional References

This section provides references related to the UDI Retrieval feature.

### Related Documents

Related Topic	Document Title
Information about managing configuration files	<ul style="list-style-type: none"> <li>• <a href="#">Cisco IOS Configuration Fundamentals Configuration Guide</a>, Release 12.0</li> <li>• <a href="#">Cisco IOS Configuration Fundamentals Configuration Guide</a>, Release 12.2</li> <li>• <a href="#">Cisco IOS Configuration Fundamentals and Network Management Configuration Guide</a>, Release 12.3</li> </ul>
Commands for showing interface statistics	<ul style="list-style-type: none"> <li>• <a href="#">Cisco IOS Interface Command Reference</a>, Release 12.0</li> <li>• <a href="#">Cisco IOS Interface Command Reference</a>, Release 12.2</li> <li>• <a href="#">Cisco IOS Interface and Hardware Component Command Reference</a>, Release 12.3T</li> </ul>

### Standards

Standards	Title
No new or modified standards are supported by this feature, and support for existing standards has not been modified by this feature.	—

### MIBs

MIBs	MIBs Link
CISCO-ENTITY-ASSET-MIB	To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: <a href="http://www.cisco.com/go/mibs">http://www.cisco.com/go/mibs</a>

### RFCs

RFCs	Title
RFC 2737	<i>Entity MIB (Version 2)</i>

## Technical Assistance

Description	Link
The Cisco Technical Support website contains thousands of pages of searchable technical content, including links to products, technologies, solutions, technical tips, and tools. Registered Cisco.com users can log in from this page to access even more content.	<a href="http://www.cisco.com/techsupport">http://www.cisco.com/techsupport</a>

## Command Reference

This section documents one modified command only.

- [show inventory](#)

# show inventory

To display the product inventory listing of all Cisco products installed in the networking device, use the **show inventory** command in user EXEC or privileged EXEC mode.

```
show inventory [raw] [entity]
```

## Syntax Description

<b>raw</b>	(Optional) Retrieves information about all of the Cisco products—referred to as entities—installed in the Cisco networking device, even if the entities do not have a product ID (PID) value, a unique device identifier (UDI), or other physical identification.
<b>entity</b>	(Optional) Name of a Cisco entity (for example, chassis, backplane, module, or slot). A quoted string may be used to display very specific UDI information; for example “sfslot 1” will display the UDI information for slot 1 of an entity named sfslot.

## Command Modes

User EXEC  
Privileged EXEC

## Command History

Release	Modification
12.3(4)T	This command was introduced.
12.0(27)S	This command was integrated into Cisco IOS Release 12.0(27)S.
12.2(25)S	This command was integrated into Cisco IOS Release 12.2(25)S.
12.2(27)SBC	This command was integrated into Cisco IOS Release 12.2(27)SBC.
12.2(18)SXE5	This command was integrated into Cisco IOS Release 12.2(18)SXE5.

## Usage Guidelines

The **show inventory** command retrieves and displays inventory information about each Cisco product in the form of a UDI. The UDI is a combination of three separate data elements: a product identifier (PID), a version identifier (VID), and the serial number (SN).

The PID is the name by which the product can be ordered; it has been historically called the “Product Name” or “Part Number.” This is the identifier that one would use to order an exact replacement part.

The VID is the version of the product. Whenever a product has been revised, the VID will be incremented. The VID is incremented according to a rigorous process derived from Telcordia GR-209-CORE, an industry guideline that governs product change notices.

The SN is the vendor-unique serialization of the product. Each manufactured product will carry a unique serial number assigned at the factory, which cannot be changed in the field. This is the means by which to identify an individual, specific instance of a product.

The UDI refers to each product as an entity. Some entities, such as a chassis, will have subentities like slots. Each entity will display on a separate line in a logically ordered presentation that is arranged hierarchically by Cisco entities.

Use the **show inventory** command without options to display a list of Cisco entities installed in the networking device that are assigned a PID.

**Examples**

The following is sample output from the **show inventory** command without any keywords or arguments. This sample output displays a list of Cisco entities installed in a router that are assigned a PID.

```
Router# show inventory

NAME: "Chassis", DESCR: "12008/GRP chassis"
PID: GSR8/40          , VID: V01, SN: 63915640

NAME: "slot 0", DESCR: "GRP"
PID: GRP-B           , VID: V01, SN: CAB021300R5

NAME: "slot 1", DESCR: "4 port ATM OC3 multimode"
PID: 4OC3/ATM-MM-SC  , VID: V01, SN: CAB04036GT1

NAME: "slot 3", DESCR: "4 port OC3 POS multimode"
PID: LC-4OC3/POS-MM  , VID: V01, SN: CAB014900G0

NAME: "slot 5", DESCR: "1 port Gigabit Ethernet"
PID: GE-GBIC-SC-B    , VID: V01, SN: CAB034251NX

NAME: "slot 7", DESCR: "GRP"
PID: GRP-B           , VID: V01, SN: CAB0428AN40

NAME: "slot 16", DESCR: "GSR 12008 Clock Scheduler Card"
PID: GSR8-CSC/ALRM   , VID: V01, SN: CAB0429AUYH

NAME: "sfslot 1", DESCR: "GSR 12008 Switch Fabric Card"
PID: GSR8-SFC        , VID: V01, SN: CAB0428ALOS

NAME: "sfslot 2", DESCR: "GSR 12008 Switch Fabric Card"
PID: GSR8-SFC        , VID: V01, SN: CAB0429AU0M

NAME: "sfslot 3", DESCR: "GSR 12008 Switch Fabric Card"
PID: GSR8-SFC        , VID: V01, SN: CAB0429ARD7

NAME: "PSslot 1", DESCR: "GSR 12008 AC Power Supply"
PID: FWR-GSR8-AC-B   , VID: V01, SN: CAB041999CW
```

[Table 1](#) describes the fields shown in the display.

**Table 1** *show inventory Field Descriptions*

Field	Description
NAME	Physical name (text string) assigned to the Cisco entity. For example, console or a simple component number (port or module number), such as "1," depending on the physical component naming syntax of the device.
DESCR	Physical description of the Cisco entity that characterizes the object. The physical description includes the hardware serial number and the hardware revision.
PID	Entity product identifier. Equivalent to the entPhysicalModelName MIB variable in RFC 2737.
VID	Entity version identifier. Equivalent to the entPhysicalHardwareRev MIB variable in RFC 2737.
SN	Entity serial number. Equivalent to the entPhysicalSerialNum MIB variable in RFC 2737.

For diagnostic purposes, the **show inventory** command can be used with the **raw** keyword to display every RFC 2737 entity including those without a PID, UDI, or other physical identification.

**Note**

The **raw** keyword option is primarily intended for troubleshooting problems with the **show inventory** command itself.

```
Router# show inventory raw

NAME: "Chassis", DESCR: "12008/GRP chassis"
PID:                , VID: V01, SN: 63915640

NAME: "slot 0", DESCR: "GRP"
PID:                , VID: V01, SN: CAB021300R5

NAME: "slot 1", DESCR: "4 port ATM OC3 multimode"
PID: 4OC3/ATM-MM-SC , VID: V01, SN: CAB04036GT1

NAME: "slot 3", DESCR: "4 port OC3 POS multimode"
PID: LC-4OC3/POS-MM , VID: V01, SN: CAB014900GU
```

Enter the **show inventory** command with an *entity* argument value to display the UDI information for a specific type of Cisco entity installed in the networking device. In this example, a list of Cisco entities that match the sfslot argument string is displayed.

```
Router# show inventory sfslot

NAME: "sfslot 1", DESCR: "GSR 12008 Switch Fabric Card"
PID: GSR8-SFC      , VID: V01, SN: CAB0428ALOS

NAME: "sfslot 2", DESCR: "GSR 12008 Switch Fabric Card"
PID: GSR8-SFC      , VID: V01, SN: CAB0429AU0M

NAME: "sfslot 3", DESCR: "GSR 12008 Switch Fabric Card"
PID: GSR8-SFC      , VID: V01, SN: CAB0429ARD7
```

You can request even more specific UDI information using the **show inventory** command with an *entity* argument value that is enclosed in quotation marks. In this example, only the details for the entity that exactly matches the sfslot 1 argument string are displayed.

```
Router# show inventory "sfslot 1"

NAME: "sfslot 1", DESCR: "GSR 12008 Switch Fabric Card"
PID: GSR8-SFC      , VID: V01, SN: CAB0428ALOS
```

**Related Commands**

Command	Description
<b>show diag</b>	Displays diagnostic information about the controller, interface processor, and port adapters for a networking device.
<b>show tech-support</b>	Displays general information about the router when it reports a problem.

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■ show inventory