Understanding 16- and 32-Port Async Network Modules

Contents

Introduction

The 16-port (NM-16A) and 32-port (NM-32A) asynchronous (async) network modules provide 16 or 32 EIA/TIA-232 (formerly know as RS-232) data terminal equipment (DTE) serial interfaces at speeds up to 134.4 kbps. These modules use the 68-pin OCTAL Cables such as the CAB-OCTAL-ASYNC= and CAB-OCTAL-MODEM=. The NM-16A and NM-32A modules are often used to provide out of band connectivity to the console ports of other devices in a comm/terminal server setup.

Prerequisites

Requirements

Please refer to the [Platform Support](#) section.

Components Used

Please refer to the [Platform Support](#) section.

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

Refer to [Cisco Technical Tips Conventions](#) for more information on document conventions.

Product Numbers

NM-16A - Sixteen Port Async Network Module

NM-32A - Thirty-two Port Async Network Module

Features

- 16 or 32 async ports.
- Uses 68-pin connectors: CAB-OCTAL-ASYNC= or CAB-OCTAL-MODEM=
- Supports 134 kbps async on all ports simultaneously.
- Supports a maximum of three modules per Cisco 3640, one per Cisco 3620, and one per Cisco 2600.

Platform Support

Platform	Cisco 2600	Cisco 2600 XM	Cisco 3620	Cisco 3631	Cisco 3640	Cisco 3660	Cisco 2691, 3725, 3745
NM-16A	11.3(3)T, 12.0(1), 12.0(1)T, 12.1(1), 12.1(1)T, 12.2(1), 12.2(2)T, 12.3(1)	12.1(14), 12.2(12), 12.2(8)T1, 12.2(11)YT, 12.3(1), 12.3(2)T	11.2(7)P, 11.3(1), 11.3(1)T, 12.0(1), 12.0(1)T, 12.1(1), 12.1(1)T, 12.2(1), 12.2(2)T, 12.3(1)	12.2(8)T1, 12.3(1), 12.3(2)T	11.2(7)P, 11.3(1), 11.3(1)T, 12.0(1), 12.0(1)T, 12.1(1), 12.1(1)T, 12.2(1), 12.2(2)T, 12.3(1), 12.3(2)T	12.0(5)T, 12.1(1), 12.1(1)T, 12.2(1), 12.2(2)T, 12.3(1), 12.3(2)T	12.2(13)T, 12.2(11)YT, 12.3(1), 12.3(2)T
NM-32A	11.3(3)T, 12.0(1), 12.0(1)T, 12.1(1	12.1(14), 12.2(12), 12.2(8)T1, 12.2(	11.2(7)P, 11.3(1), 11.3(1)T, 12.0(	12.2(8)T1, 12.3(1), 12.3(2)T	11.2(7)P, 11.3(1), 11.3(1)T, 12.0(1	12.0(5)T, 12.1(1), 12.1(1)T, 12.2(1	12.2(13)T, 12.2(11)YT, 12.3(1), 12.3(2

), 12.1(1)T, 12.2(1), 12.2(2)T, 12.3(1)	11)YT, 12.3(1), 12.3(2)T	1), 12.0(1)T, 12.1(1), 12.1(1)T, 12.2(1), 12.2(2)T, 12.3(1)		), 12.0(1)T, 12.1(1), 12.1(1)T, 12.2(1), 12.2(2)T, 12.3(1), 12.3(2)T	), 12.2(2)T, 12.2(11)YT, 12.3(1), 12.3(2)T	)T

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 NM-16A and NM-32A modules are often used to provide out of band connectivity to the console ports of other devices. In order to configure the router as a comm server, refer to these documents:

- Configuring a Terminal/Comm Server for Router Console Access
- Configuring a Comm/Terminal Server for Sun Console Access

For information on general modem configuration, refer to Configuring Dialout with the NM-8AM or NM-16AM Analog Modem Module. This document does not mention the NM-16A and NM-32A modules, however, the configuration concepts are applicable.

For more information, refer to the Access-Dial Technology Support Page.

On the 16- and 32-port async network modules, the interfaces are addressed as **interface async <line number>**.

Line Numbers

Previous releases of Cisco IOS software reserved 16 async line numbers per network module slot. This causes problems for a 32-port async network module. Thus, when the NM-16A or NM-32A module is installed in the Cisco 3600, Cisco IOS software will reserve 32 line numbers per slot. This will cause a problem if the NM-16A or NM-32A module is installed into a system that already had an async configuration based on 16 line numbers per slot. The aux port will now be line 65 on the Cisco 2600 and Cisco 3620, and line 129 on the Cisco 3640. You can use the **show line** command to check the line numbering on the chassis.

```
line number = (<slot> * 32) + <unit> + 1
```

For more information, refer to [How Async Lines are Numbered in Cisco 3600 Series Routers](#).

Field Notice

- [Field Notice: Terminal Server Break Character on Cisco Access Servers](#)

Related Information

- **[Access Product and Dial Technology Support Page](#)**
- **[Technical Support & Documentation - Cisco Systems](#)**