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Tech Notes



Understanding Analog Modem Network Modules (NM-8AM / NM-16AM)

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Contents

[Introduction](#)[Prerequisites](#)[Requirements](#)[Components Used](#)[Conventions](#)[Overview](#)[Features](#)[Platform Support](#)[Firmware Upgrade](#)[Configuration](#)[Line Numbers](#)[Country Configuration](#)[Identifying the Japanese Version](#)[Related Information](#)

Introduction

This document provides an introduction to Cisco NM-8AM and NM-16AM analog modem network modules.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document is based on these software and hardware versions:

- NM-8AM - Network Module with Eight Analog Modems
- NM-16AM - Network Module with Sixteen Analog Modems
- NM-8AM-J - Network Module with Eight Analog Modems for Japan and Singapore
- NM-16AM-J - Network Module with Sixteen Analog Modems for Japan and Singapore

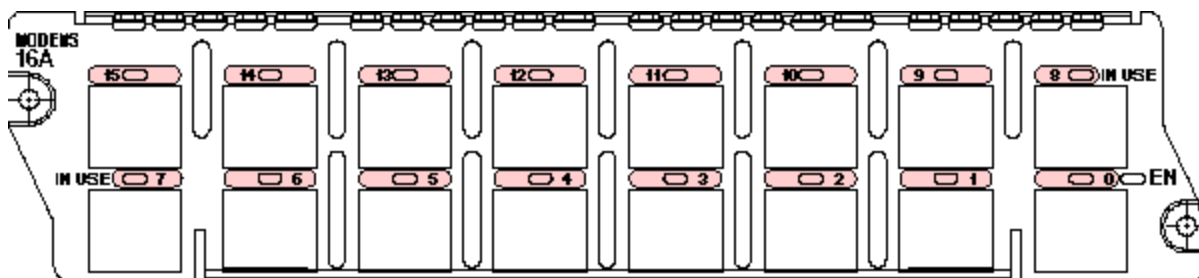
The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

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

Overview

The NM-8AM and NM-16AM analog modem network modules provide 8 or 16 internal V.34 analog modems. These Microcom modems support speeds up to 33.6 kbps. Each port is an RJ-11 jack and needs individual RJ-11 cables to connect to the telephone network.



Features

- Uses Microcom modems.
- Supports speeds up to 33.6 kbps (V.34bis). Supports the two wire [leased line](#) beginning in Cisco IOS® Version 12.1(5)T with firmware version 1.2.8.
- Supports fax-out utilizing the Cisco Dial-Out Client.
- All connectors are RJ-11. These modules ship with 8 or 16 pink RJ-11 cables (a bundle of 8 pink cables is available as CAB-NM-ANALOGMOD).
- Does not support 56 kbps (V.90). This is a limitation of V.90 technology and is not a hardware issue. Refer to [Overview of General Modem and NAS Line Quality](#) for further information.
- [Fast Step](#) software can be used for initial configuration on Cisco 2610 only.
- No caller ID support.

Platform Support

Module Click for full report	2600	2600XM	3620	3631	3640	36601	2691, 3725, 3745
NM-8AM	11.3 (4) T1, 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	11.3 (4) T1, 12.0 (1), 12.0 (1) T, 12.1 (1), 12.1 (1) T, 12.2 (1), 12.2 (2) T, 12.3 (1)	not supported	11.3 (4) T1, 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	12.1 (1), 12.1 (1)T, 12.2 (1), 12.2 (2)T, 12.2 (11) YT, 12.3 (1), 12.3 (2)T	12.2 (13) T, 12.2 (11) YT, 12.3 (1), 12.3 (2)T
NM-16AM	11.3 (4) T1, 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	11.3 (4) T1, 12.0 (1), 12.0 (1) T, 12.1 (1), 12.1 (1) T, 12.2 (1), 12.2 (2) T, 12.3 (1)	not supported	11.3 (4) T1, 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	12.1 (1), 12.1 (1)T, 12.2 (1), 12.2 (2)T, 12.2 (11) YT, 12.3 (1), 12.3 (2)T	12.2 (13) T, 12.2 (11) YT, 12.3 (1), 12.3 (2)T

					(2)T		
NM-8AM-J	11.3 (4) T1, 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	11.3 (4) T1, 12.0 (1), 12.0 (1) T, 12.1 (1), 12.1 (1) T, 12.2 (1), 12.2 (2) T, 12.3 (1)	not supported	11.3 (4) T1, 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	12.1 (1), 12.1 (1)T, 12.2 (1), 12.2 (2)T, 12.2 (11) YT, 12.3 (1), 12.3 (2)T	12.2 (13) T, 12.2 (11) YT, 12.3 (1), 12.3 (2)T
NM-16AM-J	11.3 (4) T1, 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	11.3 (4) T1, 12.0 (1), 12.0 (1) T, 12.1 (1), 12.1 (1) T, 12.2 (1), 12.2 (2) T, 12.3 (1)	not supported	11.3 (4) T1, 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	12.1 (1), 12.1 (1)T, 12.2 (1), 12.2 (2)T, 12.2 (11) YT, 12.3 (1), 12.3 (2)T	12.2 (13) T, 12.2 (11) YT, 12.3 (1), 12.3 (2)T

Note: European (TBR21) support requires Cisco IOS Version 11.3(5)T or 12.0(1)T.

Note: On-line insertion and removal (hot swap) requires Cisco IOS Version 12.1(1)T.

Use in Europe (TBR21 certification) requires modem firmware 1.0.1 and Cisco IOS Version 11.3(5)T or 12.0(1)T. You must load the modem microcode in addition to the Cisco IOS software.

For European countries, configure **modem country microcom europe** (this selects TBR21 operation). Country code "europe" requires Cisco IOS Version 11.3(5)T or 12.0(1)T.

Firmware Upgrade

- [Cisco 2600 Series and Cisco 3600 Series Analog Modem Firmware Upgrades](#)
- [Download Analog Modem Firmware from CCO](#)
- [Current Recommended Portware Version](#)

Configuration

On the NM-8AM and NM-16AM analog modem network modules, the interfaces are addressed as **interface async <line number>**.

For sample configurations utilizing the NM-xAM module refer to the [Dial Technology Support Pages](#) and [Access Product Support Pages](#).

Line Numbers

Cisco IOS software reserves 32 line numbers per slot. The aux port is 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**.

Refer to [How Async Lines are Numbered in Cisco 3600 Series Routers](#) for more information.

Country Configuration

Configure the country with the global configuration command **modem country microcom <country>** . Use "europe" as the country code for all TBR21 countries.

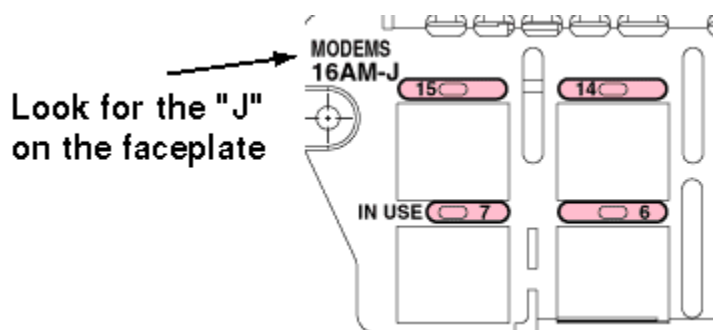
Note: Country code "europe" requires Cisco IOS Versions 11.3(5)T or 12.0(1)T and firmware 1.0.1 or higher.

Refer to [Cisco 2600 Series and Cisco 3600 Series Analog Modem Firmware Upgrade Configuration Note](#) for more information on support for various countries.

For a sample configuration, refer to [Configuring Dialout with the NM-8AM or NM-16AM Analog Modem Module](#).

Identifying the Japanese Version

Cisco IOS software does not know the difference between the standard analog modem network module and the Japanese version. You can identify the network modules in one of the following two ways:



Use the show diag command to identify the analog modem network module's part number. The letter 'J' at the end of a part number indicates the Japanese version.

Related Information

- [Analog Modem Network Modules](#)
- [Connecting Analog Modem Network Modules](#)
- [Download Analog Modem Firmware from CCO](#)
- [Router-to-Router Async Multilink PPP](#)
- [Leased Line Support for Cisco 2600/3600 Series Analog Modems](#)
- [Configuring Client Modems to Work with Cisco Access Servers](#)
- [Update to Network Modules Hardware Installation and Configuration Guide](#)
- [OIR Support for Analog and Digital Modem Network Modules](#)
- [Access Products Support Page](#)
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Updated: Nov 09, 2004

Document ID: 7262
