CHAPTER 9

Network Analysis Module

Catalyst 5000 family switches support the Network Analysis Module (WS-X5380), which provides extended remote monitoring (RMON) capability to the system. This chapter describes the Network Analysis Module.

For specifications on the Network Analysis Module, see Appendix A, “Specifications.”

For information on installing the Network Analysis Module, refer to Chapter 3, “Switching Module Installation.”

For information on configuring the Network Analysis Module, refer to the *Software Configuration Guide* for your switch.

Network Analysis Module (WS-X5380)

The Network Analysis Module, shown in Figure 9-1, provides RMON and RMON2 support for Ethernet VLANs to monitor applications and analyze traffic, which extends the RMON support provided by the supervisor engine module. The module acts as a network data-gathering agent and provides network traffic monitoring when used with a client equipped with network monitoring software.

Figure 9-1 Network Analysis Module (WS-X5380)

The Network Analysis Module supports the following:

- RMON groups defined in RFC 1757
  - Hosts (RMON group 4)
  - HostTopN (RMON group 5)
  - Matrix (RMON group 6)
  - Filter (RMON group 7)
  - Capture (RMON group 8)
- RMON2 groups defined in RFC 2021
  - ProtocolDirectory (RMON2 group 11)
  - ProtocolDistribution (RMON2 group 13)
  - AddressMap (RMON2 group 13)
  - N1Host (RMON2 group 14)
  - N1Matrix (RMON2 group 15)
  - A1Host (RMON2 group 16)
  - A1Matrix and n1MatrixTopN (RMON2 group 17)
  - UsrHistory (RMON2 group 18)

The Network Analysis Module contains specialized agent software that is designed to gather a wide variety of statistical information about network operation. The Network Analysis Module requires its own software image. The Network Analysis Module is managed and controlled from an SNMP management application.

The module gathers this information by examining every packet that is passed to it. The module can analyze Ethernet VLAN traffic from either or both:

- The Switched Port Analyzer (SPAN) source: one or more Ethernet ports or a Fast Ethernet port or a Fast Ethernet trunk port or an Ethernet VLAN
- NetFlow Data Export (NDE) from a NetFlow Feature Card (NFFC) or NFFC II

Note When monitoring a VLAN or a Fast Ethernet port or more than two Ethernet ports, use a Supervisor Engine III module in the system to ensure the most reliable SNMP access to the Network Analysis Module under heavy traffic conditions.

In addition to gathering statistics, the agent supports the filters and packet capture RMON-MIB groups so that individual packets or sequences of packets can be examined to identify and isolate network operational problems.

The Network Analysis Module can be installed in slots 2 through 5 in the Catalyst 5000 and Catalyst 5505 switches, slots 2 through 9 of the Catalyst 5509 switch, and slots 2 through 12 of the Catalyst 5500 switch. There is a limit of one Network Analysis Module per chassis.

Note You can install the Network Analysis Module in slot 2 of the Catalyst 5002 switch, but with the supervisor engine module occupying slot 1 of the two-slot chassis, you cannot install any other switching modules.

Each Network Analysis Module contains a STATUS LED which is described in Table 9-1.

Table 9-1 Network Analysis Module (WS-X5380) LED Descriptions

LED	State	Description
STATUS		Indicates a series of self-tests and diagnostic tests.
	Green	All the tests pass.
	Red	A test other than an individual port test failed.
	Orange	System boot, self-test diagnostics running, or the module is disabled.