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products

Mpthrill.com CATV Solutions - MPT-DOCSIS

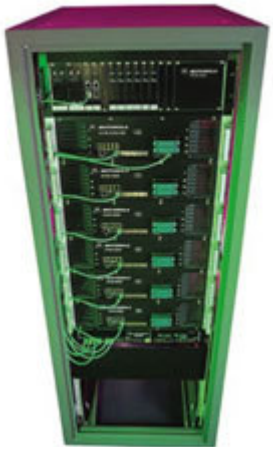
MPT-DOCSIS: A High Availability DOCSIS solution

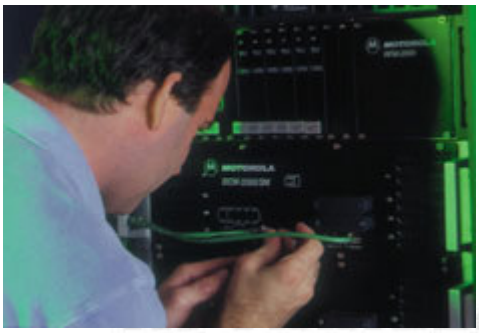
The MPT-DOCSIS is an exciting new addition to our broadband communications' product offering. It combines Mpthrill's proven expertise in RF technology with an experienced headend DOCSIS solution. With the MPT-DOCSIS, operators can deliver converged data, voice and video services over the HFC network with a scalable, cost effective system that provides 99.999% product reliability.

Higher Power

As technology continues to evolve, high-speed Internet users demand more dependable, secure service for data, video and voice applications. Mpthrill's MPT-DOCSIS was designed to meet the unyielding expectations of Internet users today, while providing cable operators with a wide range of custom configurations to meet today's network requirements, while offering a clear growth path to future services.

Mpthrill's MPT-DOCSIS stackable design enables custom configurations to meet virtually any system need. From small "data only" systems and nodes to large metropolitan VoIP telephony systems, the MPT-DOCSIS can provide the exact level of integration and operational support. The modular, scalable architecture permits cable operators to expand their HFC network as their subscriber base grows.





The MPT-DOCSIS introduces the Motorola DOCSIS Cable Module (DCM 2000), which acts as a DOCSIS compliant Cable Modem Termination System (CMTS) with N+1 (system redundant high availibility) capability. The DCM 2000 integrate with an advanced RF matrix switch (RFM 2000) and an IP Module (IPM 2000 to provide full system redundancy. To ensure optimal health of the MPT-DOCSIS, the CATV Management software (MPT-MNG) acts as the heart of the system and controls, manages, and monitors the performance of the entire network from a central or remote location.

Other key features of the MPT-DOCSIS system include a fully integrated management system and intelligent routing that provides a wide range of network interfaces.

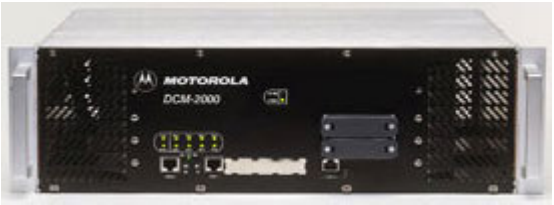
If you're interested in purchasing our MPT-DOCSIS system, please contact sales@mpthrill.com

The MPT-DOCSIS is a stackable array of functional modules consisting of:

- DOCSIS Cable Module (DCM 2000)
- RF Module (RFM 2000) (see below)
- IP Module (IPM 2000) (see below)
- CATV Management Module (MPT-MNG)

DOCSIS Cable Module: DCM 2000

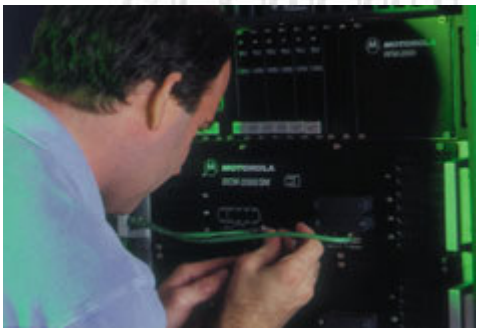
DCM 2000 features and benefits:



- DOCSIS 1.0 CableLabs qualified provides interoperability with all vendors' DOCSIS certified cable modems
- DOCSIS 1.1 compliance provides a seamless migration to DOCSIS 1.1 supporting additional voice and Quality of Service(QoS) features
- N+1 high availability provides 99.999% system availability to meet the growing demands of VoIP telephony and data applications
- Multiple ISP support
- Provides ability for operators to deliver carrier class reliability for support of lifetime telephony services
- Dynamic frequency agility optimizes system throughput by reducing cable plant disruptions

Targeted to meet the demands of today's service providers, the DCM 2000

provides a robust and flexible architecture. Based on a remote access server (RAS) model, the DCM 2000 offers anti-spoofing functions resulting in greater subscriber privacy and higher system availability. Support for SNMPv3 delivers enhanced authentication and system privacy, as well as standards based remote configuration. Some examples of the level of flexibility offered by the DCM 2000 are features such as per subscriber filters, per cable modem DHCP assignments and per cable modem maximum number of subscribers.

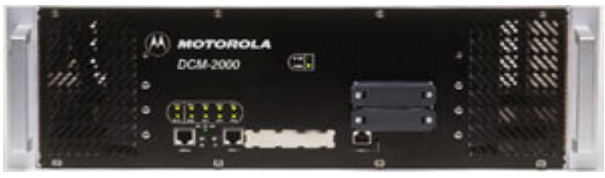


Designed as a scalable, cost-effective, compact solution, the Motorola DCM 2000 is able to operate as a stand-alone DOCSIS CMTS or reside in a cluster of up to five (5) active DCMs with a back-up DCM that serves as a spare for system redundancy. The spare DCM 2000 is responsible for certifying optimal system performance, and continuously surveys each primary DCM for a point of failure. If a failure is detected, the DCM will alert the RF Module(RFM 2000) to execute a switch over. The MSO has the capability to invest only in equipment that meets their current subscriber base, and permits network expansion based on increased subscriber demand.

CableLabs® Qualified CMTS

As part of the Mpthrill MPT-DOCSIS System, the DCM 2000 integrates with an advanced RF switch module (RFM 2000) and an IP Module (IPM 2000) to provide full system redundancy.

A single Motorola DCM 2000 provides one (1) transmitter, eight (8) receivers, and dual 100BaseT ports. Additionally, the DCM provides an embedded state-of-the-art CPU that generates superior levels of Motorola Advanced Provisioning System per second and wire speed forwarding of 64 byte packets, even with BPI and access lists enabled. A flash card, utilized to optimize system reliability, is housed within each DCM and serves as a storage device for system software, configuration and log files. Designed for space efficiency, an integrated upconverter also enhances system availability and eliminates the need for an external upconverter.



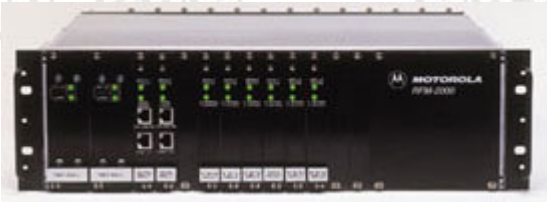
Motorola’s DCM 2000 provides 99.999% system reliability to meet the growing demands of VoIP telephony and data applications. The DCM 2000 is designed with a full range of QoS enhancements to support multiple service offerings. As data, voice and video converge, new classes of entertainment and business services will emerge. Mpthrill offers proven access solutions to meet the changing needs of the business market.

Since Motorola's DCM 2000 is DOCSIS 1.0 qualified and DOCSIS 1.1 compliant, this provides interoperability for all certified vendors' DOCSIS cable modems, and provides a seamless migration to DOCSIS 1.1 -

eliminating subscriber downtime.

RF Module: RFM 2000

Benefits of the RFM 2000:



- Foundation to N+1 high availability system by providing a fully redundant, hot-swappable solution to RF switching that eliminates system downtime supporting 99.999% product availability
- Compatible with DOCSIS standards
- Fail-safe design to avoid any single points of failure
- Allows one spare DCM 2000 to back up to five DCM 2000s or providing a cost effective system redundant solution
- Supports cable management system for ease of installation and replacement

The Motorola RF module(RFM 2000) is the foundation for system redundancy. With dual redundant controllers, dual redundant power supplies and advanced switching circuitry, combined with six 9-port RF connections. The RF Module is one of the most technically advanced RF switches on the market today.

The Motorola RFM 2000, designed to connect a cluster of up to five active DOCSIS Cable Modules (DCMs) and one spare DCM, provides a high availability DOCSIS solution that is not only cost effective for cable operators, but also proves to be space efficient. The N+1 high availability feature of the RF Module eliminates system downtime by providing 99.999% product reliability, which becomes a fully redundant, hot swappable solution to RF switching.

The RFM 2000 is controlled by the spare DCM, and when instructed, will switch a failed primary HFC RF connections between modules. Switch-over from a failed DCM to a backup DCM occurs in milliseconds ensuring that all voice and data connections are maintained with no loss of service.

IP Module: IPM 2000

Features and benefits of the IPM 2000:

- Full routing capability:

  RIPv1, RIPv2, OSPF, and
  Layer 2/3/4 Switching

- Redundant power supplies
- Compact 2U form factor
- Provides multiple configurations to support all network architecture requirements
- Scalable, modular design
- Supports multiple DCM 2000 clusters

Our MPT-DOCSIS delivers a complete high availability CMTS solution when combined with the IP Module. A single Motorola IPM 2000, when connected to the dual 100BaseT ports located on the DCM 2000, provides a fully redundant, high availability router network. Traffic from these ports can be shared between two IPM 2000's providing a fully redundant, high availability router network.

The IPM 2000 extends full Layer 2,3, and 4 switching functionality. With 128 MB of memory, the IPM 2000 provides high density, wire-speed 10/100/1000 Mbps switching and routing with throughput in excess of 6.0 million packets per second.

The Motorola IPM 2000, designed as a compact 2U form factor, provides 16 10/100BaseT ports and built-in redundant power supplies. The IPM 2000 also provides two expansion slots, which may be used to support additional 10/100BaseT interfaces bringing the total number of 10/100BaseT ports to 32. With the single port 1000BaseLX 70 km expansion module, the IPM 2000 can connect to your fiber optic backbone using high performance Gigabit Ethernet interfaces providing a very cost effective solution.

Layer 3 switches are meeting market demands for delivering a complete Quality of Service (QoS) and DOCSIS 1.1 solution that offers wire-speed performance and Gigabit uplinks. Network environments, requirements and demands have evolved to wire-speed forwarding with Layer 2 and 3 switching functionality.

The IPM 2000, with Layer 2, 3 and 4 switching capability, meets the demands of today’s state-of-the-art cable networks. Combined with flexible expansion modules, including Gigabit Ethernet, the IPM 2000 delivers wire-speed connectivity to the backbone network. With Layer 4 switching, application level control can be extended allowing operators to apply QoS and Access Control Lists to manage applications.

CATV Management Module: MPT-MNG

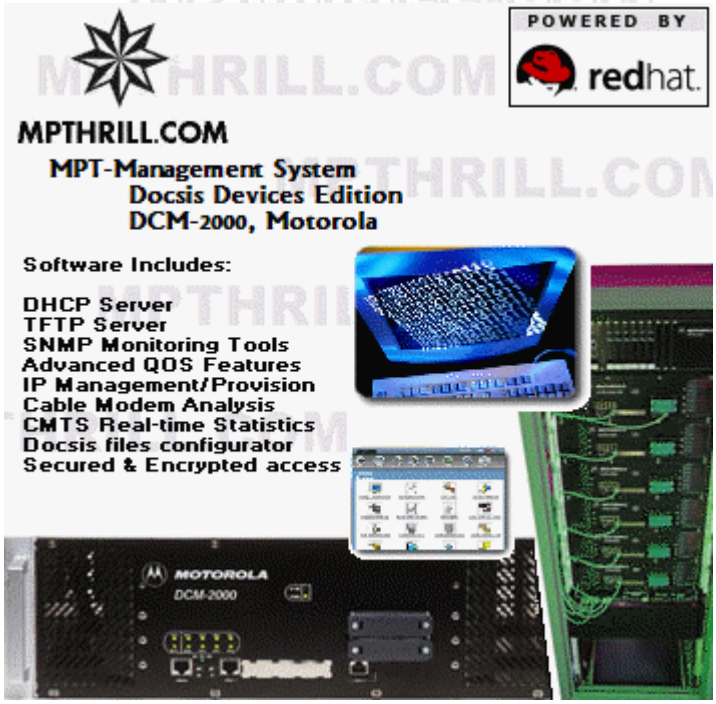
Benefits and features of the MPT-MNG:

Complete management software with an advanced QoS manager provides full control over assigned bandwidths for Cable modems, a perfect suite for a medium size ISP's

Compatible with:
Motorola CMTS DCM-2000, BSR64000 / Cisco UBR / Nortel CMTS (DOCSIS 1.0, 1.1, 2.0)

• Subscriber Access Control for authorizing and authenticating subscriber access
• Subscriber Management lets operators easily modify subscriber database
• Subscriber registration, and service provisioning
• Cable Modem Termination System (CMTS) Configuration gives operators full control over CMTS CATV and LAN interface parameters

MPT-MNG is a powerful software management solution that allows operators to seamlessly manage Motorola CMTS and industry-standard DOCSIS cable modem system. Perfectly suited for all Motorola DCM-2000 CMTS products, MPT-MNG is a low-cost, web-based system that excels in performance and flexibility.



Features

Designed to be highly scaleable, a single MPT-MNG server can simultaneously manage thousands of cable modems, and an unlimited number of subscriber records stored in the database. This efficient design leads to a highly adaptable, cost-effective solution that can accommodate operator needs--now and in the future. MPT-MNG implements classic, client-server SNMP Web-based architecture. The MPT-MNG server is based on Linux RedHat®, and the MPT-MNG client features an easy-to-use Web-based application providing cable operators over-the-net access to cable modems and CMTS units.

The MPT-MNG Quality of Service manager provides cable operators comprehensive control over various bandwidth assignments. It permits choosing from several profiles for each business or residential subscriber. This flexibility allows cable operators to readily offer tiered services to different market segments. Operators can also register subscribers automatically and directly in a MPT-MNG database with the MPT-MNG Auto Provisioning Interface. MPT-MNG management tools and software components feature a full spectrum of advantages including:

- Cable modem monitoring and control
- Service provisioning
- Subscriber authentication and authorization
- Subscriber registration
- Performance monitoring
- Easy / cost effective environment (Linux)

For more information on the MPT-MNG, please click here.
