

Magnum 3000-Series Ethernet Hubs Create a cost-effective LAN solution for Choice One Communications

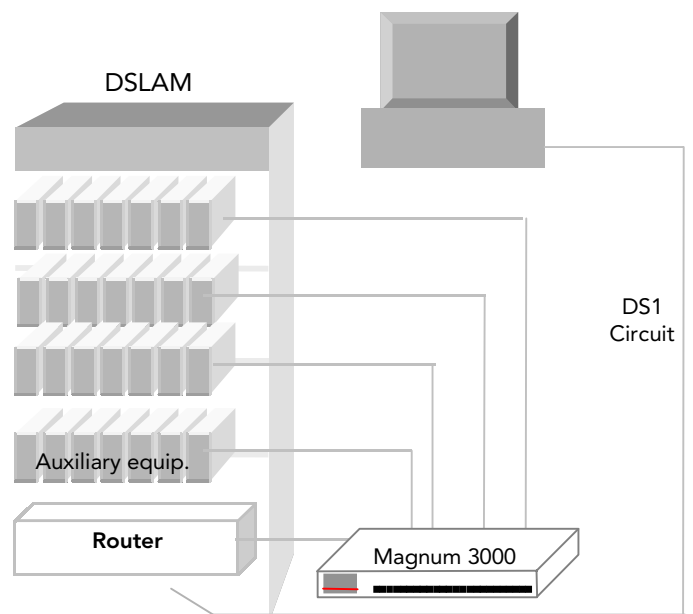
Central Office Network Management

Technology Today

Leading-edge Carriers are looking for ways to maintain a high level of network reliability while reducing the cost of network management systems in Central Offices. NEBS-certified 10/100 Ethernet switches can do the job, but generally are overkill for the job and are excessively expensive.

A more cost-effective solution is needed. Many applications need several Ethernet LAN connections from CO equipment such as DSL Multiplexers and T1 equipment, to the network management stations to provide data for Carrier-traffic monitoring and control. NEBS-certification and very high reliability are a necessity because of the central office location and Carrier Class facilities requirements. Hence, there is no real benefit or necessity to pay extra for 100Mb Ethernet speed or for switching performance when the standard 10Mb Ethernet speed is more than adequate for such applications.

Preparing for growth is key to scalability advantages. As new DSL lines and T1 circuits are continually being added, the need for demand increases. To scale the "Ethernet LAN box", it should have the capacity for up to a dozen lines in smaller offices, and 20 or more ports for larger offices in addition to optional expansion via stacking.



Network Management via Ethernet Hub

About Choice One

Choice One Communications, a "Next Generation" carrier, (www.choiceone.com) provides competitive local access and high capacity digital transport services to their customers. They integrate voice, data, Internet, Web hosting & design and DSL services. Choice One helps businesses streamline their flow of information, while saving them money in the process, by creating custom solutions that allow a business to communicate more efficiently and effectively.

As these companies need to expand their networks, they turn to Choice One for competitive services using its central office equipment.

The Challenge

Choice One needed to find a reliable and cost-effective Ethernet LAN solution to manage varied CO equipment in their traffic-carrying system. They needed to choose products that would be NEBS certified and operate on -48VDC central office power to fulfill their customer's requirements

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The Solution

The Magnum line offers a wide selection of Ethernet products, NEBS Level 3 Certified, well established in carrier-class installations, known for reliability and quality, and approved for co-location by all major ILECs (Incumbent Local Exchange Carriers). Choice One chose the best solution for their network management facility - the 10Mb Magnum 3000 Stackable Hubs from GarrettCom for this application. Choice One selected Magnum models 3012 and 3024 NEBS-Certified Hubs, rack-mountable in 19" and 23" racks with -48VDC power supplies. This enabled Choice One to provide the Central Office network management via Ethernet LANs.

Choice One Communications has implemented the Magnum 3000 Hubs into their network management systems by cabling 10Mb Ethernet from each DSL or T1 chassis into a Magnum hub. Compared to a high-end Ethernet Switch, the advantages of the 10Mb hub are simplicity and cost effectiveness.

Low cost-per-port, about ½ as much as an alternate high-end Ethernet switch, means large cost savings. By mounting the units into rack cabinets in a 1U vertical space, the LAN is largely self-contained within the cabinets.

The Magnum 3000 Hubs provide an Ethernet data rate of 10Mbps, a data rate more than adequate in this network application. In most cases, the connection to the network management workstation is via a router and through a DS-1 circuit/line (1.5 Mb), making speeds higher than 10 Mb Ethernet unnecessary even for future bandwidth growth projections. Higher speed at higher cost has no merit in this application.

The Results

The Magnum 3000 Hubs have enabled Choice One to implement an Ethernet-based network management system into their central office environments with seamless installation and commissioning. Since the ILEC-approved Magnum 3000's meet the standards necessary for co-location in central offices, the Magnum 3012 and 3024 Hubs have enabled the network management LAN to expand as traffic increases in Choice One's customer base while maintaining a reliable and cost-effective management system.

About Magnum 3000 Hubs

The Magnum 3012's (12-port) and 3024's (24-port) hubs are NEBS tested and certified at Level 3. The Magnum 3000's -48VDC internal power option makes it particularly applicable to the central office environment. In addition, a dual-source DC power option is available. These products even have ambient temperatures of up to 50 degrees C are within operating specifications.

They are approved for co-location and can be deployed in data communications, telephone central offices, and in ISP data centers, where high-availability equipment is a requirement.

Tens of thousands of the Magnum 3000 hubs have been placed in service, and their reputation for robustness is well established. Many installations are still running smoothly after more than five years.

About GarrettCom

GarrettCom is the leading supplier of Carrier Class Ethernet LAN products. GarrettCom designs, manufactures and markets a comprehensive line of ETSI and NEBS-certified hubs and switches for use in data and telecommunications systems worldwide. For more information on GarrettCom and its products, please visit www.garrettcom.com.

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