

Magnum Blade™ Ethernet Hubs Create a New Solution for Compact PCI Systems

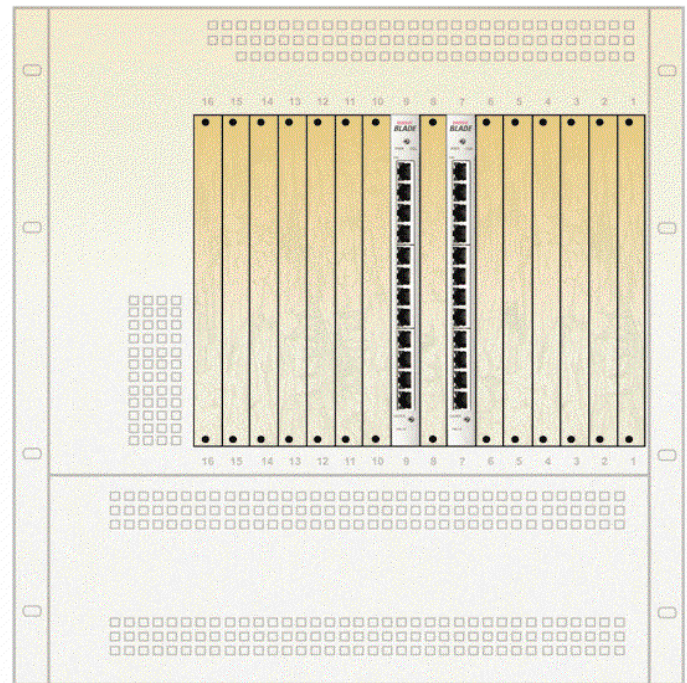
cPCI "Hub-on-a-Card"

TECHNOLOGY TODAY

With the rapid growth in demand for traditional telephone and advanced data services, Incumbent Local Exchange Carriers (ILECs) and Competitive Local Exchange Carriers (CLECs) are ramping up their networks. According to BellSouth's Digital Innovation Index, almost half of the nation now has Internet access, Call Waiting, and Caller ID. Advancements in these affordable, attractive services are creating a crunch for space to house equipment in Central Offices (COs) and Point of Presence locations (POPs). The necessity for higher performance equipment with greater functionality in less space becomes a priority.

THE CHALLENGE

As a growing number of subscribers who want faster services are added to networks, the requirement for new equipment is rapidly growing. Only through technology is it possible to add such services and increase bandwidth. So getting more equipment into the valuable CO space becomes a key benefit of advancements in equipment technology. For example, a CO running at full capacity has proven to be a big problem because this eliminates the ability to house more equipment, and it simultaneously increases the cabling that blocks aisles used for walking. With the focus on reducing required space, the introduction of CO systems in a cPCI form factor has become a desirable new alternative. The precious front slots of a cPCI chassis are typically reserved for hot swappable modules and it is therefore undesirable to provide supervisory Ethernet connectivity using the front slots of a cPCI system. Traditional Hubs and Switches are separate rack-mount boxes that take up one or more units of very valuable front-rack space.

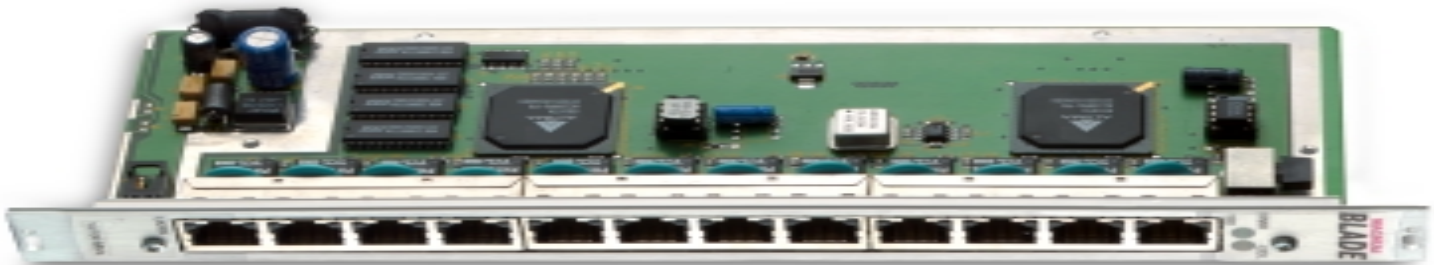


THE SOLUTION

RadiSys, a leading independent cPCI systems provider for communications OEMs, was conscious of this need to conserve space in their cPCI designs. They needed a hub-on-a-card for Ethernet connectivity. To get it, RadiSys wanted an Ethernet hub designed that would use only one rear-I/O slot in a cPCI system. Therefore, RadiSys approached GarrettCom Inc. to design and build a cPCI Hub as a solution to its cPCI Ethernet connectivity space problem. RadiSys designs and manufactures building blocks for next-generation Internet, communications, industrial automation, medical equipment, and transaction terminal applications. With their experience in these fields they have been exposed to the abilities of GarrettCom, and to the Magnum line of Ethernet connectivity products. GarrettCom has a reputation for producing products with Carrier Class reliability, low EMI noise, high performance, and simple plug-and-play operation.

“Hub-on-a card” Compact PCI Solution

RadiSys



THE RESULTS

The development team that GarrettCom put together designed a hub, dubbed Magnum Blade™, that is specifically made for rear- I/O in a cPCI chassis. It provides twelve 10/100Mb Ethernet ports in a single 6U card. In addition, the Magnum Blade model DS12 was designed as NEBS™ Level 3 compliant and with EMI Class B for low noise. It has excellent reliability, boasting over a 30-year MTBF. With the plan for minimum cPCI space as a key requirement, the Magnum Blade DS12 design fits into a single rear transition module.

The hub-on-a-card offers two models at either dual-speed 10/100Mb or fixed-100Mb speeds. There is no interconnection from the hub card to the cPCI BackPlane, resulting in high system reliability and a universal design usable in practically all cPCI configurations.

With GarrettCom’s Magnum Blade, RadiSys’ service-provider customers are able to simplify their networks and add more services for their customers while conserving valuable rack space in their COs. No longer is a separate hub with its power supply in a box required in the rack. The robust Magnum Blade DS12 hub provides a dozen Ethernet ports with simplicity and space efficiency for a better cPCI system design. Because the Magnum Blade was designed as a rear transition module, its Ethernet cabling now resides in the back of the cPCI system—out of the way. These benefits save space, wiring, energy, cost, and increase reliability as well.

ABOUT MAGNUM BLADE cPCI HUBS

GarrettCom, the leader in Carrier Class Ethernet, offers two models of the Magnum Blade. The model DS12 has 10/100Mb dual-speed ports; the model DS12E has 100Mb-only fixed-speed ports. Both are constructed for high reliability and low EMI noise. They insert into a rear-I/O slot of a cPCI chassis, and provide twelve RJ-45 ports. Each hub card is standalone, eliminating backplane connections to maximize reliability. MagnumBlade DS12s are high availability hubs with over a 30-year MTBF. The DS12s comply with 100BASE-TX and 10BASE-T Ethernet standards; and have 100Mb Class II + repeater functionality. Each port of a Magnum Blade model DS12 is auto-sensing for speed at 100Mb or 10Mb. The DS12E is fixed at 100Mb and is not auto-negotiating.

These new hub-on-a-card products are a unique alternative to bulky rack-mount hub boxes, and are a simple space-saving solution to cPCI Ethernet connectivity problems.

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