General DataComm
Xedge Switches, SpectraComm Access Devices, Multiplexing Devices, Convergence Design

Positioned for today’s critical networks
GDC’s Xedge™ technology comprises an edge multiservice aggregation switch that transports multiple services over packet-based networks such as Metro Ethernet, MPLS, ATM.

The Xedge 6000 multiservice switch platform interconnects remote enterprise sites with emerging Ethernet/IP and legacy services across an MPLS or ATM WAN. Xedge enables Metro Ethernet Forum compliant Ethernet services on the same cost-effective and reliable platform that offers native services such as TDM, Frame Relay and ATM.

This convergence promotes a graceful, incremental migration and mediation between legacy circuits and new packet-based services. Users benefit by accessing the richest variety of standards-compliant service modules and interface speeds, along with advanced packet technology that reliably and securely satisfies user demand for new services.

Xedge modules interface seamlessly with a diverse complement of in-demand line protocols:

- DS1/E1, DS3/E3
- DS1/E1 IMA
- HSSI
- OC3c/STM-1
- OCn/STMn
- IP/Ethernet
- VC multiplexing
- IEEE 802.1.d.q.p
- X.21/V.11, RS-449, V.35
- EIA/TIA-232, EIA 530/449

General DataComm is a global supplier of advanced communications networking equipment and convergence solutions for today’s networks.
GDC’s SpectraComm™ LAN/WAN technologies result from more than 30 years of engineering method and innovation.

The modular, scalable SpectraComm package design accommodates network growth with a single card enclosure, a dual card shelf, or the robust 16-slot shelf system. Any SpectraComm device, from 202 to V.34 to T1 to T3 to IP, is interchangeable between the various shelf/enclosure platforms.

"SpectraCommonality" maximizes the network facilities and helps simplify network management. SNMP-based management streamlines configuration, control and monitoring of shelf devices and their remote units.

From IP to T3 to T1-E1 to xDSL, SpectraComm solutions support a wide range of integrated NEBS Level 3 Certified, carrier-class network access solutions in a common plug-in blade form factor:

- T1/T3
- xDSL
- DDS and analog services
- Modems
- CSUs/DSUs
- Routers
- Ethernet switches
- Ethernet LAN extension
- IP termserv/transport
- TEAM Network management systems
GDC’s Transport Management System™ is a TDM bit interleaved based networking platform that efficiently transports data, voice, fax, and video information, and extends LANs to sites in a bandwidth constrained communications network.

TMS-3000 is ideally suited for network applications that require full period availability with low/fixed delay, delivering high efficiency and circuit multiplexing, circuit routing, and standards-based access and termination. With all services delivered across wide areas by standard circuit switching techniques, network planners can achieve the most efficient use of equipment, space and human resources at reduced cost.

GDC’s OCM feeder and Minimux systems are companion access systems that integrate into the TMS network at smaller branch or regional offices.

Transport Management System (TMS) Applications formerly supported over separate LAN, data, and voice networks are thus integrated into simpler, streamlined topologies with reduced equipment requirements.

- T1/FT1
- E1/FE1
- DDS / Narrowband Services
- DACS
- V.35 / RS-422 / EIA-530 / V.11
Harris Corporation needed a robust, reliable solution for backhauling critical FAA radar and weather data from remote locations, with the most stringent timing and latency requirements. GDC’s SpectraComm family of products met their needs, with added efficiency via enhanced SNMP network management capabilities.

AT&T
AT&T’s large deployment of end-of-life modems and CSUs/DSUs needed replacement. GDC’s SpectraComm platform gave AT&T a feature-rich line of modular, scalable network access devices and low power shelving that reduced sparing and support costs.

U.S. Air Force Space Command
The USAFSC was dissatisfied with the several weeks it took to reconfigure its communications systems for successive launches. This excessive interval between launches increased costs and delayed subsequent programs. With GDC’s Xedge technology and ProSphere management system, the USAFSC was able to perform reconfiguration within a day, reducing the interval time required, and maintaining high availability of the overall system.

Los Angeles DoT
The city of Los Angeles pioneered an intelligent traffic solution by monitoring and controlling traffic flow throughout the city in response to real-time conditions. The numerous required low-speed, delay-sensitive communications links to central management locations were provided by GDC’s Xedge platform, selected for its reliable and efficient transport capabilities.

Burlington Northern Santa Fe
BNSF, one of the largest railroad operators in the United States, required transport of delay sensitive voice and data traffic to central monitoring locations for managing hundreds of trains simultaneously. GDC’s Xedge solution met the strict latency requirements and provided the scalable packet-based infrastructure that BNSF needed to expand services.

Thales Communications
Thales, a primary contractor for NATO communications in Afghanistan, required a support network for mission critical data and voice, primarily over costly satellite bandwidth. Thales chose GDC’s Xedge solution for its bandwidth cost-savings, superior voice capabilities and dynamic satellite bandwidth optimization, with the added advantage of reducing the number of transponders.

**Xedge™** multiservice aggregation switches support TDM, Ethernet or ATM transport over flat, lower-cost packet-based networks like Metro Ethernet, MPLS, ATM.

**SpectraComm™** LAN/WAN access devices support IP to T3 to T1-E1 to xDSL applications in a common plug-in blade form factor.

**TMS™** is a TDM bit interleaved based networking platform that integrates and transports formerly separate data, voice and video networks over simpler, streamlined topologies, and extends LANs to sites in a bandwidth constrained communications network.
Legacy Services and Applications over Next-generation Network Infrastructures

Today, the telecommunications industry is migrating to Internet Protocol (IP). Carriers, governmental agencies and large enterprises are looking to IP for its cost advantages, support of enhanced applications and common operational function. IP, however, lacks predictive “connection-oriented” transport. Network planners need to support legacy ATM and TDM applications (PBX, private line, etc.), along with IP applications, such as Internet Access and VPN services. MPLS offers the best of connection-oriented services with the connectionless advantage of IP. In the current business climate, maintaining multiple networks is cost-prohibitive, and attempting to convert all mission critical legacy applications to IP too quickly may result in a counter-productive multi-year project.

BRIDGING THE GAP

General DataComm has always helped networking professionals to bridge the gap between support of legacy services and in-demand applications over next-generation infrastructures. Founded in 1969, GDC’s advanced modem technology allowed the transport of digital communications over an analog network. The introduction of a DSU/CSU product line provided our customers with transport of legacy serial interfaces over a T1 plesiochronous network. Our Time Division Multiplexing (TDM) equipment set the standard for applications requiring maximum throughput with minimum latency.

GDC next pioneered Asynchronous Transfer Mode with transport of voice, video and data services over non-TDM networks for more efficient use of bandwidth. In response the demand for IP connectivity, GDC’s IP family of access devices provides scalable IP routing, LAN extension and Ethernet switching.

Today, GDC provides transport of legacy TDM, ATM and Ethernet services over IP and MPLS. By collapsing their networks to a single infrastructure, customers can realize technical benefits and cost savings without disrupting business operations.