



Empower Your DCS/DACS Network

Reduce Equipment End-of-Life Risk while Increasing Performance

Minimize Operational Strain, Risk – and Costs

Legacy equipment – a product already discontinued by the manufacturer, or targeted for extinction – creates serious challenges for network operators. Managing end of life or manufacturer discontinued equipment strains daily operations and poses unacceptable risks for utilities, municipalities, transit agencies, LECs and other operators of critical infrastructure networks. The loss of vendor support for key systems such as digital cross-connects (DCS/DACS), whether badged Alcatel, Lucent, Tellabs or another manufacturer, robs network operators of their highest level of support in the event of a catastrophic failure. Access to spares and replacements becomes limited and expensive.

Selecting new equipment, and planning the transition and physical replacement of the old equipment to minimize network impact, takes a significant amount of time. But putting off the replacement process until an existing device fails or is no longer vendor supported could jeopardize service reliability, SLAs and customer satisfaction. Unplanned capital equipment expenditures might also delay other needed upgrades.

Taking a proactive, pragmatic approach to replacing legacy devices overcomes these challenges and can actually improve network quality and performance. First, removing unsupported equipment reduces the risk of catastrophic outages and simplifies maintenance. Second, the replacement process offers an excellent opportunity for network operators to recover stranded bandwidth and transition circuits to optimal routes. Finally, by deploying replacement platforms that efficiently consolidate diverse communications services and protocols, network operators can further simplify their networks and reduce operational costs.

How Sycamore Can Help

Our solutions experts and systems engineers can help network operators drive dramatic improvements in underlying network infrastructure by replacing legacy DCS/DACS equipment with the carrier-class DNX cross-connect platform: saving significant rack space, power, and operational costs; enabling new services; and building a solid, reliable foundation for service delivery and customer satisfaction.

With proven deployments, Sycamore has extensive experience with helping operators maximize the performance of their transmission networks. Utilities, municipalities, transit agencies and LECs have all benefited from our innovative networking solutions and expert technical support. Sycamore is committed to helping our customers maximize the potential of their network infrastructure.

Putting off your DCS/DACS replacement process until an existing device fails or is no longer vendor supported could jeopardize service reliability and customer satisfaction. Taking a proactive, pragmatic approach to replacing legacy devices overcomes these challenges and can actually improve network quality and performance.

The DNX Cross-Connect Platform: Intelligent Bandwidth Management for Legacy DCS/DACS Replacement Applications

In today's challenging economic environment, staying one step ahead of the competition requires intelligence, efficiency and leadership.

The DNX Multiservice Cross-Connect combines the power of traditional cross-connects with intelligent bandwidth management – in one compact, scalable system. Proven to reduce costs and simplify multiservice provisioning in digital transmission networks, the DNX is widely deployed in mission-critical infrastructure environments by industry-leading telecom service providers, utility operators, municipalities and transit agencies.

- **Replace legacy or discontinued DCS/DACS** to eliminate operational risks and ensure the highest level of reliability, performance, and system support
- **Reduce total cost of ownership** with an economical DCS/DACS platform that minimizes up-front and recurring costs and provides significant space and power savings
- **Enhance the efficiency and useful life** of core resources – conserve ports on costly voice and data service delivery platforms by concentrating traffic associated with these platforms
- **Facilitate network transition** from copper to optical and from circuit-switched to packet-based technologies – and signaling network migration from SS7 to Sigtran

Multiservice Functionality in a Single, Scalable Platform

Sycamore DNX Cross-Connects aggregate, groom, and deliver a variety of services, ranging from traditional leased lines to dynamic IP VPNs, with multi-tiered, end-to-end protection options. DNX provides the power of a high-performance intelligent bandwidth manager in a compact and scalable platform, including a unique IP forwarding engine to ease the transition from TDM to IP. Exceptional performance monitoring and diagnostic capabilities support remote management and automated operations while maintaining carrier-class network availability.

For operators migrating their access networks off legacy DCS/DACS equipment such as the Tellabs 530 series products, the DNX product line offers both a rich feature set and a history of reliable performance in network provider mission-critical networks worldwide. The ability to consolidate multiple network nodes into a single intelligent system leads to simpler operations, space savings, cost optimization, and improved economies of scale, now and into the future, as networks and traffic demands continue to grow and evolve.

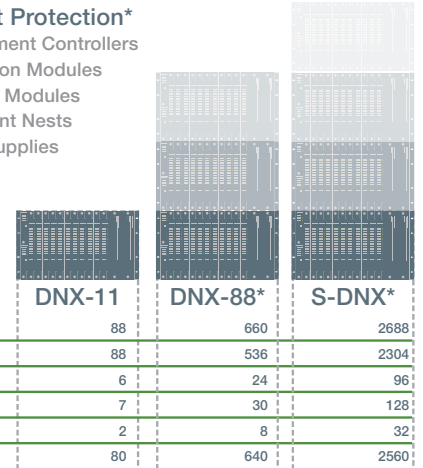
Successfully overcome the challenges associated with a manufacturer discontinued digital cross-connect, ADM or multiservice switching system. We can help:

- Simplify equipment replacement
- Mitigate the risk of catastrophic outages
- Reduce operational costs
- Improve network quality and performance

Investment Protection*

- Management Controllers
- Application Modules
- Interface Modules
- Equipment Nests
- Power Supplies

System Capacities



| | DNX-11 | DNX-88* | S-DNX* |
|------------|--------|---------|--------|
| T1 | 88 | 660 | 2688 |
| E1 | 88 | 536 | 2304 |
| T3 | 6 | 24 | 96 |
| E3 | 7 | 30 | 128 |
| OC-3/STM-1 | 2 | 8 | 32 |
| Data | 80 | 640 | 2560 |

Scalability and Investment Protection

With minimal front-end investment, a network operator can rapidly provision services on right-sized platforms; then scale seamlessly from DNX-11 to S-DNX to accommodate growth.

| LEGACY EQUIPMENT ISSUES | BENEFITS OF REPLACEMENT |
|---|---|
| <p>Limited Technical Support</p> <ul style="list-style-type: none"> ■ No guaranteed support (completely unavailable from some vendors) ■ Little or no vendor-provided product training ■ Greater risk of catastrophic failure | <p>Consistent Vendor Support</p> <ul style="list-style-type: none"> ■ Equipment warranties ■ Extended coverage ■ Ongoing training direct from vendor ■ Reduced risk of prolonged service outages |
| <p>No Feature Development, Software Upgrades, or System Enhancements</p> <ul style="list-style-type: none"> ■ Revenue generating customers at risk | <p>Ongoing Platform Development</p> <ul style="list-style-type: none"> ■ New features and functions simplify network evolution ■ Problem resolution for identified hardware/software issues |
| <p>Limited Access to Spare Components</p> <ul style="list-style-type: none"> ■ Vendor and channel inventory may be limited ■ Replacements of questionable quality may have to be purchased through resellers | <p>Spares Available from Primary Vendor</p> <ul style="list-style-type: none"> ■ Spares of guaranteed quality available directly from the vendor |
| <p>Increased Operational Costs</p> <ul style="list-style-type: none"> ■ Increased lead time and component cost forces stockpiling of replacement parts – at additional expense | <p>Reduced Operational Costs</p> <ul style="list-style-type: none"> ■ Replacements available directly – and quickly – from vendor ■ New equipment typically reduces space and power consumption ■ New equipment typically consolidates functions, services, protocols |
| <p>Negative Service Impacts</p> <ul style="list-style-type: none"> ■ Prolonged outages (and resulting SLA credits to customers) adversely affect revenue and alienate customers | <p>Positive Service Impacts</p> <ul style="list-style-type: none"> ■ Stranded bandwidth recovered ■ Long-established services transferred to more cost-effective routes ■ Old circuits (not properly de-provisioned) can be removed |

For more information about our intelligent networking products and solutions, please contact your Sycamore Sales Representative.

Sycamore Networks, Inc. • 220 Mill Road • Chelmsford, MA 01824-4144, USA • Phone: 978-250-2900 • Fax: 978-256-3434 • www.sycamorenet.com

Sycamore Networks, Inc. (NASDAQ: SCMR) is a leading provider of intelligent bandwidth management solutions for fixed line and mobile network operators worldwide. From multiservice access networks to the optical core, Sycamore products enable network operators to lower overall network costs, increase operational efficiencies, and rapidly deploy new revenue-generating services.

Sycamore assumes no responsibility for the accuracy of the information presented, which is subject to change without notice. Sycamore, and Sycamore Networks are trademarks or registered trademarks of Sycamore Networks, Inc. in the United States and/or other countries. Copyright © 2011 Sycamore Networks, Inc. All Rights Reserved.

