



## DATA SHEET

# 3Com® XRN™ Interconnect Kit

## Key Benefits

### **XRN™ Technology**

The 3Com® eXpandable Resilient Networking (XRN™) Interconnect Kit enables two SuperStack® 3 Switch 4900 family or two 3Com® Switch 4050 and 4060 switches to build an XRN Phase One Distributed Fabric.

### **Pay As You Grow**

3Com XRN technology lets customers cost-effectively upgrade their existing core based on a single SuperStack 3 Switch 4900 or 3Com Switch 4050 and 4060, to a high-performance, high-availability, 48-port multilayer Gigabit switching core.

### **Network Level Availability**

XRN technology lets customers design and implement core Gigabit backbones that feature no single point of failure—a safeguard against hardware, cabling, or software failure.

### **Performance and Scalability**

The distributed nature of XRN technology takes full advantage of the high-performance, non-blocking switching capacity of each switch in the Distributed Fabric—yielding aggregate forwarding capacity in excess of 70Mpps across the 48 switched Gigabit ports.

### **Manageability**

XRN Technology enables unprecedented levels of manageability across the two switches in the Distributed Fabric, by offering "plug and play" setup of the Fabric, single IP address management, and fabric-wide configuration of all management, system and port features.

### **High Performance Layer 3 Switching**

An XRN Distributed Fabric uses the Layer 3 switching capabilities of both switches for greater performance and scalability but without the complexity of managing two separate routers.

### **Distributed Link Aggregation**

Configuring ports of an aggregated link across both switches in a Distributed Fabric enables wiring closets to be dual-homed for greater availability and performance across the network backbone.

### **Flexibility and Migration**

An XRN Phase One Distributed Fabric is built with any combination of SuperStack 3 Switch 4900 family or 3Com Switch 4050 and Switch 4060.

### **Advanced Security capabilities**

Security features such as RADIUS Client and Routed Access Control Lists ensure authorized user access to network resources. Also, Application Filtering lets the XRN Distributed Fabric identify and discard unauthorized applications.

### **Powerful Management**

3Com Network Supervisor fully supports XRN Phase One fabrics and provides discovery, mapping, monitoring, and alerting for easy network administration. Network-wide switch traffic prioritization can also be performed. The 3Com Network Supervisor Advanced Package increases the number of IP devices supported and provides advanced configuration capabilities such as bulk software upgrades.

"3Com offers a revolutionary approach to build enterprise LAN cores with innovative technology that breaks new ground in the networking industry."

Zeus Kerravala, vice president of Enterprise Infrastructure, Yankee Group

### XRN Technology Overview

3Com eXpandable Resilient Networking (XRN™) is a patented technology that lets enterprise customers design and implement affordable, high-availability Gigabit Ethernet core and aggregation backbones that provide exceptional performance and flexibility. XRN technology lets multiple Gigabit Layer 3 switches function as a single multi-

layer switching entity called a Distributed Fabric. The Fabric is managed and configured as a single device, even though each switch in the Distributed Fabric makes its own Layer 2 and Layer 3 forwarding decisions.

The XRN technology hierarchy is shown in figure 1.

XRN Technology Hierarchy

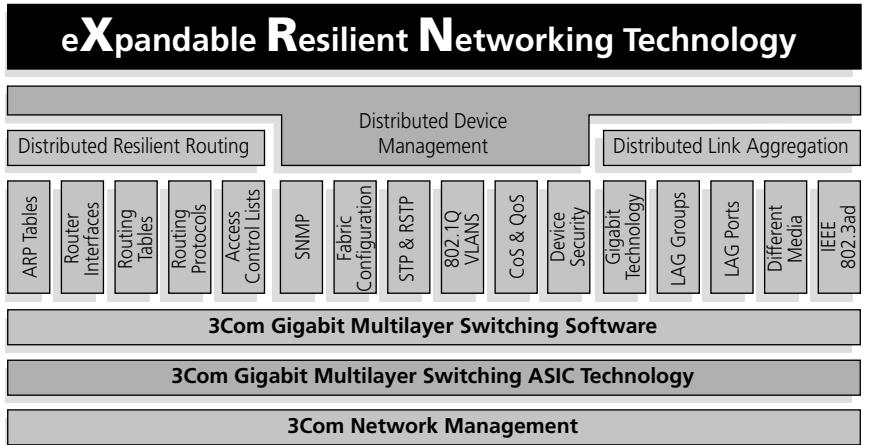


figure 1

The main components of the XRN technology are as follows:

***Distributed Device Management (DDM)***

DDM lets customers configure and manage the Distributed Fabric as a single entity via the CLI, Web interface, or SNMP. In the event of failure in one of the switches, management access to the remaining switch is retained on the same IP address.

***Distributed Link Aggregation (DLA)***

DLA enables wiring closet switches or hosts to create Aggregated Links that are dual-homed across the switches in the Distributed Fabric. Should a port in the Aggregated Link fail, traffic will be forwarded via the remaining ports. DLA provides Intelligent Local Forwarding—enabling each switch in the Fabric to make its own forwarding decisions, without sending traffic across the Fabric Interconnect.

***Distributed Resilient Routing (DRR)***

DRR lets both switches in the Distributed Fabric act as a single logical router. The switches use the same router interfaces and mirror each other's routing tables. This protects the network against unit failure and enables each switch to locally route traffic for greater Layer 3 forwarding performance.

XRN Phase One, enabled by the 3Com XRN Interconnect Kit, is the first evolution of XRN technology. It is supported on the 3Com Switch 4050 and 4060, and the SuperStack 3 Switch 4900 family. XRN Phase One lets customers build a Distributed Fabric with two 3Com switches which are managed as a single logical entity. A Fabric retains the software capabilities and functionality of its component switches.



An XRN Distributed Fabric using 3Com Switch 4060s, the XRN Interconnect Kit, and the 5m Interconnect Cable

## Product Overview

The 3Com XRN Interconnect Kit includes two XRN modules, a 1 meter cable (an optional 5m cable is also available), and version 3.0 of the 3Com Gigabit Multilayer Switching Software.

When installed, it provides a high-performance 8Gbps connection which enables configuration and management of the Distributed Fabric as single switching entity. If one switch in the Fabric fails, management and Layer 2 and Layer 3 switching are automatically restored on the remaining switch.

In the unlikely event of a failure in an XRN interconnect module or cable, DLA continues to provide an active path allowing the switches to communicate, and DRR ensures that only one of the switches continues to route—eliminating the possibility of duplicate routers on the network.

XRN technology can be deployed at all areas of an enterprise network: at the core backbone with the 3Com Switch 4060 and Switch 4050; the server farm with a SuperStack 3 Switch 4924; in the wiring closet using the SuperStack 3 Switch 4900 and 4900SX as Gigabit aggregation switches.

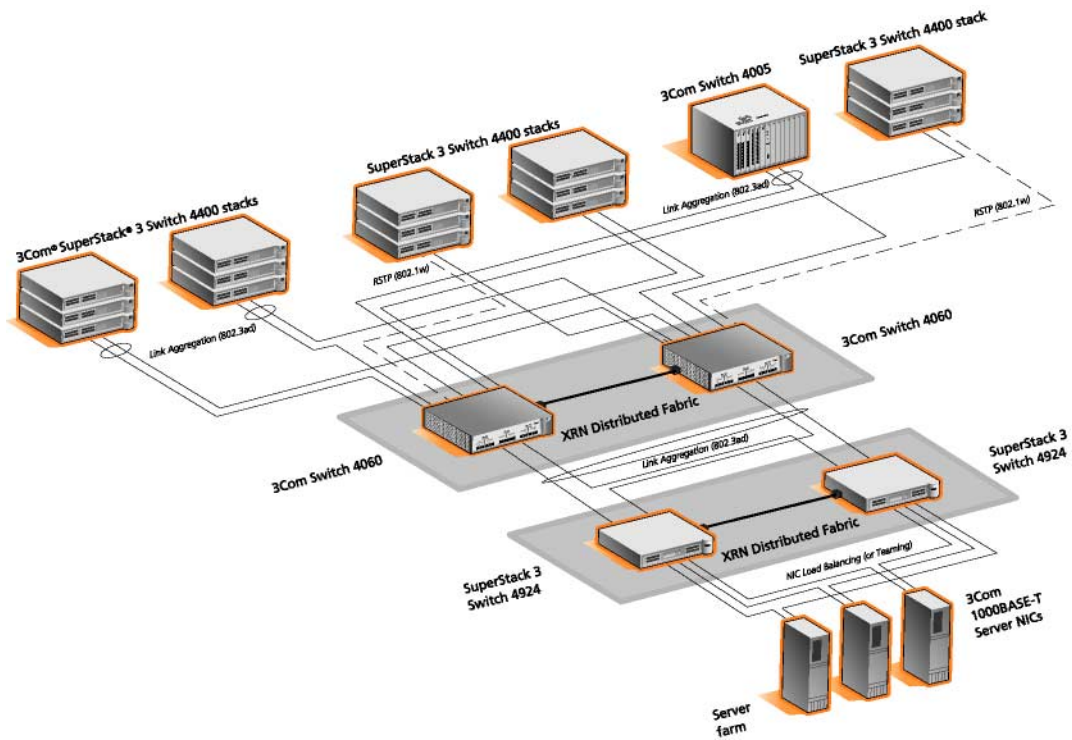
## Advanced Multilayer Switching Functionality

An XRN Phase One Distributed Fabric retains the functionality of its component switches. 3Com Gigabit Multilayer Switching Software v3.0 provides management and multilayer switching functionality for the XRN Fabric. VLAN tagging, Multicast Filtering, Spanning Tree and Rapid Spanning Tree (802.1w) provide XRN Fabrics with rich Layer 2 features for demanding Gigabit backbones. Distributed Link Aggregation using IEEE 802.3ad/LACP enables automatic configuration of aggregated links across both switches in the Fabric for greater levels of resiliency and performance.

A Distributed Fabric supports Layer 3 switching for IP networks, enabling unicast IP routing supporting static routes, RIP and RIPv2, IP Multinetting, Classless Interdomain Routing (CIDR) and UDP Helper.

In addition, DDR provides distributed routing functionality and resiliency across a fabric. Enhanced Quality of Service provides multiple priority queues per port, traffic classification and prioritization, using multilayer packet information and queue scheduling based on WRR. Priority Remarking, Application Filtering and Webcache Redirection for enhanced traffic control across the backbone may also be available. Greater security is provided by RADIUS Client for management access, Application Filtering for controlling rogue applications across the backbone and Routed Access Control Lists.

Using DDM, true plug-and-play support, single IP address management, single step software upgrades, and fabric-wide configuration via SNMP, Web interface, and the CLI ease device management in the Distributed Fabric. In addition, the Fabric supports 7 groups of RMON and RMON event notification via an integrated SMTP client.



### XRN Phase One Applications

XRN technology can be used throughout an enterprise network to provide high-performance, highly fault-tolerant backbones, Gigabit-over-copper aggregation, and Layer 3 switching. It lets larger networks connect multiple fabrics for greater performance and increased scalability.

## Specifications

**Dimensions**  
 Height: 46 mm (1.8 in)  
 Width: 146 mm (5.8 in)  
 Depth: 245 mm (9.7 in)  
 Weight: 0.35 kg (12.3 oz)

**Environmental Requirements**  
 Operating temperature: 0° to 40°C (32° to 104°F)  
 Operating Humidity: 10% to 95% relative humidity non-condensing

**Safety Agency Certifications**  
 UL1950, EN60950, CSA22.2 No. 950-93, IEC 950, AS/NZS 3260

**Emissions**  
 EN55022 Class A, FCC Part 15 Class A, ICES-003 Class A, VCCI Class A, AS/NZS 3548 Class A, CNS 13438 Class A, CISPR22 Class A, Korean EMI Class A

**Power Consumption**  
 3 W maximum

**Warranty**  
 Hardware: Limited Warranty for one year.  
 Software: Ninety (90) days.  
 See [www.3com.com/warranty](http://www.3com.com/warranty) for details.

## Ordering Information

3Com XRN Interconnect Kit	3C17715
3Com 5m XRN Interconnect Cable	3C17722
The XRN Interconnect Kit can be used with the following 3Com Switches:	
3Com Switch 4050	3C17708
3Com Switch 4060	3C17709
3Com SuperStack 3 Switch 4900	3C17700
3Com SuperStack 3 Switch 4900 SX	3C17702
3Com SuperStack 3 Switch 4924	3C17701
3Com SuperStack 3 Switch 4950	3C17706

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To learn more about 3Com solutions, visit [www.3com.com](http://www.3com.com). 3Com Corporation is publicly traded on Nasdaq under the symbol COMS.

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