

# 3Com® Router 5000 Family

## DATA SHEET



- Built for the enterprise branch environment
- Efficient and streamlined single code base
- Flexible and feature-rich enterprise performance from the LAN to the WAN

### Key Benefits

The 3Com® Router 5000 family provides WAN access for regional, branch and remote office locations. Offering high-speed processors, feature-rich routing, and advanced security and control features in a flexible, modular package, the Router 5000 products help create easily managed, robust networks to reliably support key business applications.

These routers are simple to order and configure: each comes standard with a complete routing and security software suite and memory you will need. 3Com Router 5000 products offer significantly higher performance than equivalent products, at a substantially lower ownership cost<sup>\*</sup>.

#### Full-featured Router Family

The 3Com Router 5000 family delivers flexible, cost-effective routing for the medium enterprise to small office. Available in rackmount configuration, these modular routers let your network adapt to meet changing business needs. Flexible LAN and WAN components—Smart Interface Cards (SICs) and Multi-function Interface Modules (MIMs)—provide scalable, efficient, and secure network operation.

Built-in support for converged voice, data, and video provides advanced Quality of Service (QoS) and traffic management capabilities—integrating seamlessly with your existing network equipment. With its high-speed processors, open interfaces, multiple industry-standard protocols, and high-performance routing and software redundancy features, the 3Com Router 5000 family offers an ideal price-to-performance network solution.

### Competitive Advantage

All Router 5000 models come with maximum operating memory<sup>†</sup>, and complete routing and security features and applications set as standard—unlike many competitive products. This eliminates hidden upgrade costs and so enhances return on investment (ROI). The routers also support dual software images which assists in recovery and provides rollback capabilities.

### End-to-End Solutions

These routers are key components of 3Com's range of high-value, customer-focused data and voice solutions—used by enterprises worldwide—which provide competitive and complete network operation, management, and maintenance. A 3Com system delivers dependable high-performance today with the scalability and flexibility to expand tomorrow.

### Interoperable

The buying criteria for routers have changed over the past few years. As a result, a multi-vendor routed and switched network is a reality among many customers today. Because of this trend, 3Com's network solutions have been engineered to be standards-compliant and to work and interoperate in all types of business environments.

3Com WAN routers are "Tolly Verified for Interoperability with Cisco"<sup>‡</sup>. This reduces your implementation and testing time, as the question of multi-vendor interoperability has been removed.

\* Publicly available prices as of September 2004.

† Currently available maximums: Routers 5682, 5642, 5232: 256 MB; Router 5012: 128 MB.

‡ See <http://www.tolly.com/TVDetail.aspx?ProductID=171> for details.

## Features

"Network managers want best-of-breed devices and they want choice. That is what 3Com is offering the market—routers that are interoperable with installed Cisco gear and either offer greater performance, lower cost or both."

Kevin Tolly, President/CEO  
Tolly Group

### Cost-effective Performance

3Com Router 5000 routers offer attractive price-to-performance in a flexible, modular package that's easy to install, implement, and manage. They use interchangeable modules that further reduce budget strains. In addition, the 3Com Router 5000 family can easily be integrated into an existing network—preserving the initial investment.

### Advanced Security and Control

Whether across the company intranet, extranet, or on the Internet, the 3Com Router 5000 family helps safeguard data against unauthorized access. These routers support 3Com's layered approach to security with the latest security and control features—X.509 digital certificates, RADIUS and TACACS+ authentication support, L2TP and IPsec VPN, stateful packet filtering, firewall, and others—helping secure and protect sensitive client and company information.

### Voice and Data Integration

IEEE 802.1p Quality of Service (QoS) and 802.1Q VLAN functionality provide congestion and traffic management capabilities. This advanced functionality allows the network to handle the demands of converged IP telephony and voice over IP traffic. Support for Multiprotocol Label Switching (MPLS) VPNs provide scalable Layer 2 or Layer 3 VPNs throughout the corporate network increasing network efficiency in delivering services that utilize MPLS.

### Trouble-free Installations and Upgrades

New router deployments or upgrades can be costly and time-consuming to install, configure and troubleshoot when locations are far away or difficult to be on site. The Router 5000 family auto-configuration feature enables a router to be installed at a remote site and accessed from a central site for configuration. No local configuration or pre-configuration is required. This makes it easy and cost effective for organization to ship the routers to remote sites with no IT expertise on-site.

The Router 5000 family also provides failsafe recovery and roll-back capabilities. The routers include 32MB of flash memory which can hold multiple configuration files and OS images. Should the router be unable to boot from a recently updated software image or configuration file it will attempt to boot from a specified backup OS image or file.

### Management

GUI management of the router is supported by 3Com Router Manager, included<sup>†</sup> with 3Com Network Director. Together, these applications provide sophisticated router management including bulk-updating of remote router code and configuration backup, auto-trap setup and monitoring, router system status and historical reporting.

An intuitive and easy-to-use CLI interface can be accessed directly, or remotely via Telnet, Secure Shell or Rlogin; other management applications may also be used. In addition, the Info Center diagnostic tool, available through the CLI interface, quickly diagnoses trouble spots and reports back for quick and immediate action.

### Service, Support and Training

The 3Com Router 5000 family is backed by 3Com Global Services and its authorized partners' expertise in assessment, implementation, and maintenance of your network. Trained personnel—competent in a variety of network environments—provide assistance through all phases of the network lifecycle with services that include, but are not limited to, project management, troubleshooting, and training.

<sup>†</sup>Available as an optional purchase

## 3Com Router 5000 Family Highlights

"The new 3Com routers have once again proven interoperability across a laundry list of standards-based WAN and routing protocols."

Kevin Tolly, President/CEO  
Tolly Group

FEATURE	BENEFIT	3COM ROUTER 5000 FAMILY
WAN Routing	<ul style="list-style-type: none"> <li>Comprehensive support for standards-based WAN and LAN interfaces and protocols ensures easy integration with the widest variety of public and private networks</li> </ul>	<ul style="list-style-type: none"> <li>ISDN, Frame Relay, X.25, PPP, PPPoE, MP, SLIP, E1, T1, E3, T3, HDLC/SDLC, leased line, sync/async, 10/100/1000 Ethernet</li> <li>IP, IPX, OSPF, RIP v1 and v2, BGP-4, Integrated IS-IS, Static Routing</li> </ul>
Security	<ul style="list-style-type: none"> <li>Protection of corporate data, assets and resources</li> <li>Security from unauthorized access</li> <li>Secure access for authorized entities</li> </ul>	<ul style="list-style-type: none"> <li>VPN: L2TP, GRE, IPsec</li> <li>MPLS VPN: L2 and L3</li> <li>Stateful packet inspection firewall, ACLs, NAT, X.509</li> <li>AAA, RADIUS, PAP/CHAP, TACACS+</li> </ul>
Management	<ul style="list-style-type: none"> <li>Ability to securely manage and control across the enterprise</li> <li>Remote diagnostics and reporting</li> </ul>	<ul style="list-style-type: none"> <li>3Com Network Director, 3Com Router Manager†, CLI</li> <li>SNMP v 1, 2 and 3, Telnet, SSH</li> <li>Info Center (diagnostic tool)</li> </ul>
Voice/Data Support	<ul style="list-style-type: none"> <li>Effective management of voice and real-time traffic delivers top-quality transmission</li> <li>Assured availability of bandwidth for key applications</li> </ul>	<ul style="list-style-type: none"> <li>IP QoS (CAR, LAR, GTS, FIFO, PQ, CQ, WFQ, WRED, LLQ); IEEE 802.1p</li> <li>Multicast routing protocols (IGMP, PIM-SM, PIM-DM)</li> <li>IEEE 802.1Q VLAN, Inter-VLAN Routing</li> </ul>
Resilience	<ul style="list-style-type: none"> <li>Minimize downtime</li> <li>Bring remote sites online quickly</li> <li>Redundant links, routers and extra bandwidth ensure resilience in the face of potential service disruptions</li> </ul>	<ul style="list-style-type: none"> <li>Configuration roll-back, auto-configuration</li> <li>VRRP (Virtual Router Redundancy)</li> <li>Backup Center (Configuration / Port)</li> <li>Dial Control Center, Multi-links</li> </ul>
Tolly Verified	<ul style="list-style-type: none"> <li>Provides independent verification of claimed features and functionality</li> <li>Eliminates question of interoperability</li> </ul>	<ul style="list-style-type: none"> <li>Tolly Verified: Cisco Interoperability</li> <li>Tolly Verified: System Management</li> </ul>

The 3Com Router 5000 family offers a high-performance, cost-effective solution that keeps pace with ever-changing business needs. The multi-service, modular design—with a variety of LAN and WAN interfaces that adhere to strict service provider specifications—offers multiple routing options.

In addition to two SIC slots and one MIM slot, the Router 5012 provides one 10/100BASE-T port, and one high-speed serial port to further enhance flexibility. A choice of smart interface cards (SICs) and multi-function interface modules (MIM) help future-proof the network.

The Router 5232 also features flexible configuration and powerful processing capability. Two embedded 10/100BASE-T ports and three MIM slots provide a variety of routing options. Over twelve different multi-function modules are available for use in the MIM slots.

For larger networks, the Router 5642 and Router 5682—with four and eight MIM slots respectively—provide high-density remote office solutions.

Offering a selection of modular units, choice of SICs and MIMs, high-speed processors, convergence capabilities, and feature-rich routing and security options, the 3Com Router 5000 family provides competitive WAN and LAN connectivity solutions.

† Included with 3Com Network Director and 3Com Network Administrator, available as an optional purchase

## Specifications

### Ports and slots:

*Router 5012:*  
 One 10/100BASE-T port  
 One serial port (Sync/Async)  
 One Console Port  
 One AUX Serial Port  
 One MIM and two SIC slots

*Router 5232:*  
 Two 10/100BASE-T ports  
 One Console Port  
 One AUX Serial Port  
 Three MIM slots

*Router 5642:*  
 One Console Port  
 One AUX Serial Port  
 Four MIM slots

*Router 5682:*  
 One Console Port  
 One AUX Serial Port  
 Eight MIM slots

### Memory

Boot ROM: 512 KB  
 SDRAM:  
 Router 5012: 128 MB  
 Router 5232, 5642, 5682: 256 MB  
 Flash: 32 MB

### Dimensions

*Router 5012:*  
 Height: 43.0 mm (1.7 in)  
 Width: 440.0 mm (17.3 in)  
 Depth: 315.0 mm (12.4 in)  
 Weight: 6.0 kg (13.2 lb)

*Router 5232 and 5642:*  
 Height: 43.0 mm (1.7 in)  
 Width: 440.0 mm (17.3 in)  
 Depth: 400.0 mm (15.7 in)  
 Weight: 8.0 kg (17.6 lb)

*Router 5682:*  
 Height: 86.0 mm (3.4 in)  
 Width: 440.0 mm (17.3 in)  
 Depth: 400.0 mm (15.7 in)  
 Weight: 14.0 kg (30.9 lb)

### Power Supply

Input Voltage and Maximum Power Consumption:  
*Router 5012:* 100 to 240 VAC, 60W  
*Router 5232 and 5642:* 100 to 240 VAC, 80W  
*Router 5682:* 100 to 240 VAC, 120W  
 AC Line Frequency 50/60 Hz

### Environmental Requirements

Operating temperature:  
 0° to 40°C (32° to 104°F)  
 Operating humidity:  
 5% to 85% non-condensing

### MTBF

Router 5012: 39 years (342,000 hours)  
 Router 5232: 38 years (333,000 hours)  
 Router 5642: 40 years (350,000 hours)  
 Router 5682: 40 years (350,000 hours)  
 Router 1-Port 10/100 SIC:  
 3,459 years (30,301,000 hours)  
 Router 1-Port Serial SIC:  
 2,138 years (18,729,000 hours)  
 Router 2-Port ISDN S/T SIC:  
 929 years (8,138,000 hours)  
 Router 2-Port ISDN U SIC:  
 548 years (4,800,000 hours)  
 Router 1-Port Fractional T1 SIC:  
 431 years (3,776,000 hours)  
 Router 1-Port Fractional E1 SIC:  
 292 years (2,558,000 hours)  
 Router 1-Port Analog Modem SIC:  
 286 years (2,505,000 hours)  
 Router Encryption Accelerator MIM:  
 588 years (5,151,000 hours)  
 Router 2-Port 10/100 MIM:  
 333 years (2,917,000 hours)  
 Router 2-Port Enhanced Serial MIM:  
 285 years (2,497,000 hours)  
 Router 4-Port Enhanced Serial MIM:  
 182 years (1,594,000 hours)  
 Router 2-Port E1/CE1/PRI MIM:  
 552 years (4,836,000 hours)  
 Router 4-Port E1/CE1/PRI MIM:  
 282 years (2,470,000 hours)  
 Router 4-Port ISDN S/T MIM:  
 453 years (3,968,000 hours)  
 Router 2-Port T1/CT1/PRI MIM:  
 424 years (3,714,000 hours)  
 Router 1-Port ADSL MIM:  
 249 years (2,181,000 hours)  
 Router 2-Port ADSL MIM:  
 163 years (1,428,000 hours)  
 Router 1-Port 10/100/1000 MIM:  
 342 years (2,996,000 hours)  
 Router 1-Port Channelized T3 MIM:  
 821 years (7,192,000 hours)  
 Router 1-Port Channelized E3 MIM:  
 342 years (2,996,000 hours)

### Regulatory Compliance

CE Mark for European Union, Council Directive 99/5/EC

### Safety

UL 60950 3rd Edition  
 CAN/CSA-C22.2 #60950  
 EN 60825-1, 60825-2, 60950  
 IEC 60950  
 AS/NZS60950: 2000

### Emissions

CISPR 22 Class A  
 EN55022 Class A  
 FCC Part 15, CFR 47 Class A  
 ICES-003 Class A  
 AS/NZS CISPR22 Class A  
 VCCI V-3 Class A

### Immunity

CISPR 24  
 EN 55024  
 EN 61000-3-2  
 EN 61000-3-3  
 EN 61000-4-2  
 EN 61000-4-3  
 EN 61000-4-4  
 EN 61000-4-5  
 EN 61000-4-6  
 EN 61000-4-8  
 EN 61000-4-11

### Warranty Terms

Hardware: Limited 1 year  
 Software: 90 days  
 See [www.3Com.com/warranty](http://www.3Com.com/warranty) for details.

### Management

3Com Enterprise Management Suite  
 3Com Network Director  
 3Com Network Supervisor  
 3Com Router Manager†  
 SNMP management

† Included with 3Com Network Director



The "Tolly Verified" certification, supported by intensive testing by The Tolly Group, provides the opportunity for enterprise network buyers to evaluate products on an objective basis and gain the confidence that products support industry-accepted protocols and features, and deliver interoperability. For details, see <http://www.tolly.com/TVDetail.aspx?ProductID=171>.



3Com products are well engineered and rigorously tested to ensure compliance with relevant standards. 3Com Router 5000 families, running the currently available operating system v 2.1, were tested by 3Com against the Cisco 2600, 3600, 3725, and 3745 routers, running one of Cisco's operating system versions 12.2 (12c), 12.2 (12g), or 12.3 (x), in July 2004. Results support our claim of standards compatibility for those protocols, features, models, and software versions tested. Not all routing protocols, features, models, and software versions were tested; details of testing parameters and results can be found at [www.3com.com/router\\_test](http://www.3com.com/router_test).

Ordering Information

PRODUCT DESCRIPTION	SKU
<b>3Com Router 5012</b> 3Com Router 5012 chassis, 1 x 10/100 port, 1 x serial port, 2 SIC slots, 1 MIM slot	3C13701
<b>3Com Router 5232</b> 3Com Router 5232 chassis, 2 x 10/100 ports, 3 MIM slots	3C13751
<b>3Com Router 5642</b> 3Com Router 5642 chassis, 4 MIM slots	3C13755
<b>3Com Router 5682</b> 3Com Router 5682 chassis, 8 MIM slots	3C13759
<b>Smart Interface Card (SIC) Options</b> for Router 5012 only:	
3Com Router 1-Port 10/100 SIC 1-port 10/100BASE-T Fast Ethernet interface card	3C13712
3Com Router 1-Port Serial SIC 1-port SynclAsync Serial interface card	3C13714
3Com Router 2-Port ISDN S/T SIC 2-port ISDN BRI S/T port interface card	3C13716
3Com Router 2-Port ISDN U SIC 2-port ISDN BRI U port interface card	3C13718
3Com Router 1-Port Fractional T1 SIC 1-port Fractional T1 interface card	3C13720
3Com Router 1-Port Fractional E1 SIC 1-port Fractional E1 interface card	3C13722
3Com Router 1-Port Analog Modem SIC 1-port Analog modem interface card	3C13724

PRODUCT DESCRIPTION	SKU
<b>Multi-function Interface Module (MIM) Options</b> for use with all Router 5000 models, except where noted:	
3Com Router Encryption Accelerator MIM Accelerated encryption interface module	3CR13771-75
3Com Router 2-Port 10/100 MIM 2-port 10/100BASE-T Fast Ethernet interface module	3C13761
3Com Router 2-Port Enhanced Serial MIM 2-port SynclAsync serial interface module	3C13762
3Com Router 4-Port Enhanced Serial MIM 4-port SynclAsync serial interface module	3C13764
3Com Router 2-Port E1/CE1/PRI MIM* 2-port E1/CE1/PRI interface module	3C13765
3Com Router 4-Port E1/CE1/PRI MIM 4-port E1/CE1/PRI interface module	3C13766
3Com Router 4-Port ISDN S/T MIM* 4-port ISDN BRI S/T interface module	3C13767
3Com Router 2-Port T1/CT1/PRI MIM 2-port T1/CT1/PRI interface module	3C13769
3Com Router 1-Port ADSL MIM 1-port ADSL interface module	3C13770
3Com Router 2-Port ADSL MIM 2-port ADSL interface module	3C13772
3Com Router 1-Port 10/100/1000 MIM 1-port 10/100/1000BASE-T interface module	3C13774
3Com Router 1-Port Channelized T3 MIM* 1-port Channelized T3 interface module	3C13775
3Com Router 1-Port Channelized E3 MIM* 1-port Channelized E3 interface module	3C13777

\* Not for use with Router 5012

PRODUCT DESCRIPTION	SKU
<b>Cables (3 meters in length, unless otherwise noted)</b>	
for use with 3C13762 and 3C13764 MIMs only:	
3Com Router X.21 DTE Cable- Enhanced X.21 DTE Cable- DB-28M to X.21M	3C13681
3Com Router X.21 DCE Cable- Enhanced X.21 DCE Cable- DB-28M to X.21F	3C13682
3Com Router V.24 DTE Cable- Enhanced V.24 DTE Cable- DB-28M to V.24M	3C13683
3Com Router V.24 DCE Cable- Enhanced V.24 DCE Cable- DB-28M to V.24F	3C13684
3Com Router V.35 DTE Cable- Enhanced V.35 DTE Cable- DB-28M to V.35M	3C13685
3Com Router V.35 DCE Cable- Enhanced V.35 DCE Cable- DB-28M to V.35F	3C13686
for use with all Router 5000 models:	
3Com Router T1 Cable, RJ45, 3m T1- RJ45 to RJ45	3C13674
3Com Router E1 Cable, BNC, 20m E1 - 75 ohm/2.55 mm-DB-15M to 2 x BNC 75 ohm; 20 meters	3C13675
3Com Router E1 Cable, RJ45, 20m E1 - 120 ohm/0.32 mm-DB-15M to RJ-45; 20 meters	3C13676
3Com Router E1 Cable, RJ45, 3m G.703 - 120 ohm/0.32 mm-DB-15M to RJ-45	3C13677
3Com Router T3/E3 Cable E3/T3 Cable- 75 ohm, SMB to BNC- 15 meters	3C13687
for use with Router 5012 embedded serial port only:	
3Com Router V.35 DTE Cable V.35 DTE Cable- DB-50M to V.35M	3C13670
3Com Router V.35 DCE Cable V.35 DCE Cable- DB-50M to V.35F	3C13671
3Com Router V.24 DTE Cable V.24 DTE Cable- DB-50M to V.24M	3C13672
3Com Router V.24 DCE Cable V.24 DCE Cable- DB-50M to V.24F	3C13673
3Com Router X.21 DTE Cable X.21 DTE Cable- DB-50M to X.21M	3C13678
3Com Router X.21 DCE Cable X.21 DCE Cable- DB-50M to X.21F	3C13679

SERVICE

3Com recommends a 3Com Express™ service contract for the Router 5000 family, which provides telephone technical support, hardware replacement, and software upgrades to ensure that any technical issues are resolved quickly and efficiently. Express support is available with 8x5 or 24x7 response time options for telephone support. Choose next-business-day or 4-hour response for advance hardware replacement. Availability may vary by geographic location.

Order 3Com Router Installation service to ensure a successful result, faster deployment, and minimize the risk of disruption to your business.