

3Com 11g 54Mbps Wireless LAN Building-to-Building Bridge Family

DATA SHEET



- Economically extend the reach of enterprise networks, eliminating costly fiber cabling or monthly telephone line charges
- Rugged, weatherproof 3Com® 11g 54Mbps Wireless LAN Outdoor Building-to-Building Bridge is ideal for cross-campus or longer-distance metropolitan area links
- Versatile 3Com 11g 54Mbps Wireless LAN Indoor Building-to-Building Bridge is ideal for large, open indoor areas or linking adjacent buildings

Key Benefits

Flexible, Cost-Effective Extended Reach

Avoid fiber cable installation costs and headaches—or monthly T1/E1 line expenses that can total up to US\$1,000 per month for little more than 1Mbps of bandwidth. Now you can connect LANs over secure, high-speed wireless, bridge-to-bridge links. The 3Com® 11g 54Mbps Wireless LAN Outdoor Building-to-Building Bridge with integrated 18dBi high-gain panel antenna is designed to operate in harsh environmental conditions at distances up to 10 miles (17 kilometers), while the 3Com 11g 54Mbps Wireless LAN Indoor Building-to-Building Bridge works well in large, open interiors or adjacent buildings. Deployed together, the bridges are an intelligent choice for connecting building LANs in campus-like settings.

Standards-Based, High-Speed Performance

Both 11g 54Mbps bridges deliver ten to twenty times the bandwidth of T1/E1 links through secure wireless network connections and support up to 1000 clients. The building-to-building bridges can operate in either point-to-point or point-to-multipoint configurations to meet growth and specific application demands.

Reliable Connections

Dynamic rate shifting helps keep network connections available.

Multiple Security Features

To shield wireless communications, WPA-PSK and AES authentication and encryption provide the latest industry-standard security. VPN and VLAN support keep network data private and transmissions safe from security breaches.

Simple Installation and Management

Setup wizard software makes installation and configuration easy. Once setup is complete, the building-to-building bridges can be remotely managed using a standard Web browser or SNMP management tools.

Features

	Description
FLEXIBLE HIGH-SPEED CONNECTIVITY	
Economical wireless building-to-building links	Brings rapid return-on-investment in as little as 2 to 3 months by eliminating fiber cable installation or recurring T1/E1 line costs, which can total up to \$US 1,000 per month for little more than 1Mbps of bandwidth. Wireless building-to-building bridge deployments cost about one tenth that of fiber cabling installations and avoid right-of-way and trenching problems.
High-speed 54Mbps data rate	Delivers 10 to 20 times the throughput of expensive T1/E1 lines through secure wireless network connections; easily handles large multimedia file transfers.
802.11g standard	Supports latest high-speed data transfer rates—five times the speed of 11b networks.
Antenna choices (Indoor Building-to-Building Bridge)	Antenna and cables are required; choose from 4dBi to 18dBi panel or omni-directional antennas for maximum RF coverage for a wide range of applications.

Features, *continued*

Description	
MULTIPLE SECURITY FEATURES	
Wi-Fi Protected Access-Pre-Shared Key (WPA-PSK), Wired Equivalent Privacy (WEP), and Advanced Encryption Standard (AES) encryption	Multiple encryption and authentication schemes protect all communications over the wireless LAN.
VPN and VLAN pass-through	Create secure tunnels for remote site-to-site or site-to-user data exchange.
Weatherproof, fire-resistant enclosure with integrated antenna (Outdoor Building-to-Building Bridge)	Rugged enclosure meets stringent outdoor environmental, safety, and security specifications; 18dBi panel antenna maintains a consistently strong directional signal. EC/EN 60529 IPX4 rated for water ingress protection meets the UL 50 and CAN/CSA C22.2 No.94, type 3R rating.
INSTALLATION AND MANAGEMENT CONVENIENCE	
Point-to-point and point-to-multipoint topology support	Provides maximum flexibility in configuring building-to-building networks; point-to-multipoint configuration supports up to seven bridge connections with either indoor or outdoor bridges.
PoE support	Power can be supplied by the included power injector or by a compatible Power-over-Ethernet (PoE) switch for deployment flexibility in hard-to-wire or remote locations.
Web browser, 3ND, and SNMP support	Enable administrators to remotely manage the bridges from anywhere and seamlessly integrate LANs with enterprise management tools.

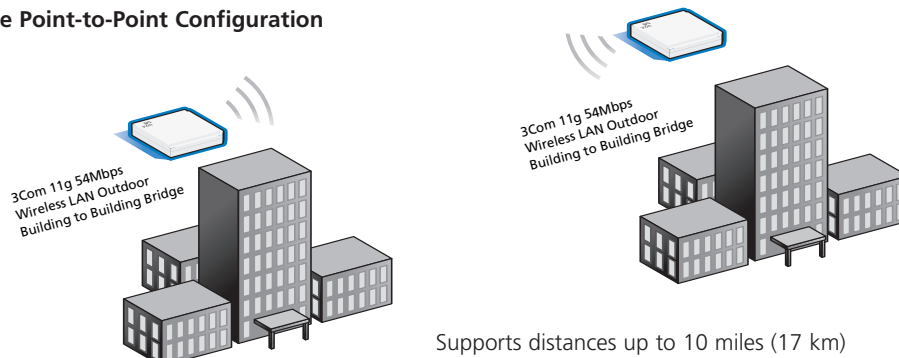
NOTE: 16.9 km (10 mi) range requires 3Com wireless LAN building-to-building bridges on both buildings. Data throughput can vary depending on several factors, including network traffic load, distance between bridges, antennas, line-of-sight, and local and remote EMI and Fresnel zone obstructions.

Key Applications

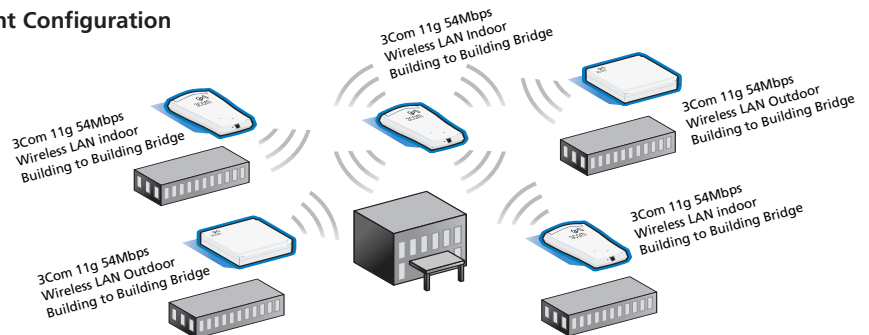
The 3Com wireless LAN indoor and outdoor building-to-building bridges can be deployed alone or in combination, in point-to-point or point-to-multipoint configurations, to meet different distance and coverage needs.

For example, on a school campus, the outdoor building-to-building bridge can be installed on a main office building, providing network access for adjacent classroom buildings or portables installed with 3Com wireless indoor or outdoor building-to-building bridges.

Bridge Point-to-Point Configuration



Bridge Point-to-Multipoint Configuration



Adjacent classroom buildings installed with 3Com 11g 54Mbps Wireless LAN Indoor Building to Building Bridges or 3Com 11g 54Mbps Wireless LAN Outdoor Building to Building Bridges

Specifications

Interfaces

RJ-45, 10BASE-T/100BASE-TX
802.11b/g

Wireless Data Rates

802.11g: 54, 48, 35, 24, 18, 12, 9 & 6 Mbps
802.11b: 11, 5.5, 2 & 1 Mbps

Frequency Band

802.11b/g: 2.4-2.4835 GHz

Wireless Transmit Power

Outdoor Building-to-Building Bridge:
17 dBm: +/- 1 dB (US, Canada, Mexico)
20 dBm +/- 1 dB (Europe, UK, Ireland, Latin America)
Indoor Building-to-Building Bridge:
17 dBm (US, Canada, Mexico)
20 dBm EIRP max. depending on antenna and cable configuration (Europe, UK, Ireland, Latin America)

Network Architecture Type

Bridge 802.3 to 802.11b/g

Number of Users/Bridge

Up to 1000 users

Wireless Bridges/LAN

Unlimited

Modulation Technique

DSSS (Direct Sequence Spread Spectrum)
OFDM (Orthogonal Frequency Division Multiplexing)

Media Access Protocol

CSMA/CA

Receive Sensitivity

802.11g:
54 Mbps: -70 dBm
48Mbps: -72 dBm
36 Mbps: -74 dBm
24 Mbps: -77 dBm
18 Mbps: -79 dBm
12 Mbps: -81 dBm
9Mbps: -83 dBm
6 Mbps: -85 dBm
802.11b:
11 Mbps: -86 dBm
5.5 Mbps: -88 dBm
2 Mbps: -89 dBm
1 Mbps: -91 dBm

Standards Conformance

IEEE 802.11b, 802.11g, 802.3, and 802.1X; HTTP
WPA, WEP

Antenna

Outdoor Building-to-Building Bridge: Integrated 18dBi directional panel antenna (19° beam angle)
Indoor Building-to-Building Bridge: Antenna must be ordered at the time of bridge purchase. See Ordering Information for antenna and cable options.

Security

64/128-bit WEP, 128-bit AES, WPA TKIP encryption;
WPA-PSK authentication
Local MAC address filtering
VPN and VLAN pass-through

Networking Protocols

NetBui, IPX, TCP/IP, Bridging Protocol, Spanning Tree Protocol, SNMP, RMON, DHCP

Management

Command line interface (via Telnet or SSH)
HTTP or S-HTTP Web browser interface
SNMP
3ND
Remote software upgrades via HTTP

LEDs

Power, LAN activity, Radio activity

Physical Dimensions

Indoor Building-to-Building Bridge:
Length: 6.9 in (17.5 cm)
Width: 4.76 in (12.1 cm)
Height: 1.4 in (3.6 cm)
Weight: 0.575 lb (0.26 kg)
Outdoor Building-to-Building Bridge:
Length: 15 in (38 cm)
Width: 13.78 in (35 cm)
Height: 2.75 in (7 cm)
Weight: 5.6 lb (2.54 kg)

Regulatory/Agency Approvals

Safety:

EN 60950 2000, IEC 60950 Edition 3, CSA 22.2 60950 3rd edition, UL 60950 3rd edition, UL 2043, IEC 60529, NOM-109 SCFL, AS/NZ 3260

Radio/Electromagnetic:

47 CFR Part 15, Section 15.247, 15.207, 15.407; FCC 03-287 Parts 2 & 15, Fcc Bulletin OEC-65; Canada RSS-102 Issues 1 & 5; EN 300-328, EN 301 983, EN 301-489

Emissions/Immunity:

ICES-003 Class B, FCC Part 15 Class B, ETSI EN 301 489-17, EN 55022:1994+A1: 1995+A2: 1997 Class A, EN 61000-3-2:2000, EN 61000-3-3:1995+A1:2001

Environmental Operating Ranges

Operating temperature: -33 to 50°C (-27 to 122 °F)
Storage temperature: -20 to 70°C (-4 to 158 °F)
Altitude: Up to 3 km (1.86 miles)
Humidity: 5 to 95% non-condensing
Wind (Outdoor Bridge): Operational loading up to 153 kmph (95 mph); wind survival to 201 kmph (125 mph)

Package Contents

54 Mbps 11g Wireless LAN Indoor or Outdoor Building-to-Building Bridge
Power adapter/PoE injector
Power cable for PoE injector
Lightning arrestor (Outdoor B-to-B bridge)
Mounting bracket
CD-ROM with user guide and configuration software
Warranty booklet

Warranty

One-year limited warranty
Refer to www.3com.com for details

Ordering Information

PRODUCT DESCRIPTION	FOR USE IN	3COM SKU
3Com® 11g 54Mbps Wireless LAN Outdoor Building-to-Building Bridge	Canada, Mexico, U.S.	3CRWEASYG73-US
3Com 11g 54Mbps Wireless LAN Outdoor Building-to-Building Bridge	Ireland, Europe, Latin America, U.K.*	3CRWEASYG73
3Com 11g 54Mbps Wireless LAN Indoor Building-to-Building Bridge	Canada, Mexico, U.S.	3CRWE920G73-US
3Com 11g 54Mbps Wireless LAN Indoor Building-to-Building Bridge	Ireland, Europe, Latin America, U.K.*	3CRWE920G73

Antenna Options

Antenna and cables are required for the LAN Indoor Building-to-Building Bridge. Choose from one of the following options.

3Com 6-Foot Ultra-Low Loss Antenna Cable	3CWE580
3Com 20-Foot Ultra-Low Loss Antenna Cable	3CWE581
3Com 50-Foot Ultra-Low Loss Antenna Cable	3CWE582
3Com 6/8 dBi Dual-Band Omni Antenna	3CWE591
3Com 3/4 Dual-Band Ceiling Mount Antenna	3CWE592
3Com 18/20 dBi Dual-Band Panel Antenna	3CWE596
3Com 4/6 dBi Dual-Band Hallway Antenna	3CWE597
3Com 8/10 dBi Dual-Band Panel Antenna	3CWE598

PoE Options

3Com Switch 7700 48-port 10/100/1000BASE-T PoE	3C16890
3Com Switch 7700 48-port 10/100BASE-TX PoE	3C16891
3Com Switch 5500G-EI PWR 24-Port	3CR17252-91
3Com Switch 5500G-EI PWR 48-Port	3CR17253-91
3Com Switch 5500-EI PWR 28-Port	3CR17171-91
3Com Switch 5500-EI PWR 52-Port	3CR17172-91
3Com SuperStack® 3 Switch 4400 PWR	3C17205
3Com OfficeConnect® Managed Switch 9	3CR16708-91
3Com Power over Ethernet Multiport Midspan Solution	3CNJPSE24
3Com Power over Ethernet Single-Port Midspan Solution	3CNJPSE

*Not available in all countries – please check with your local reseller or 3Com office for local availability



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