



### D-Link Benefits at QuakeCon

- High-Performance Network Backbone
- Complete End-To-End Solution
- 2,800 Ports of 10/100 Ethernet
- Wire-Speed Switching
- Low Latency Throughput
- 10 Gigabit Fiber Uplinks
- Quick and Easy Network Installation

*"The gamers go to LAN parties so they can actually play the game the way it was designed to be played with zero lag. They expect absolutely no latency. This is the best experience they can possibly have...D-Link helps us ensure that."*

- Marty Stratton  
Executive Producer of QuakeCon,  
id Softwares

*"They're playing constantly, twenty-four hours a day over the course of the entire convention. With demands that extreme, we needed a robust and highly dependable networking solution. We went with D-Link again this year because we knew that they could deliver."*

- Marty Stratton  
Executive Producer of QuakeCon,  
id Softwares

## QuakeCon™ Relies on D-Link® xStack™ Switching to Power the Largest, Most Stressed Gaming Network in the U.S.

*id Software's Annual Gaming Event Sets Up Massive High-Speed 2,800 Port Network in One Day*

### Customer/Event Profile

QuakeCon™ is the largest LAN gaming party in North America. With 6,000 attendees, 1,400 tables, and 73,000 square feet of space packed with gaming enthusiasts and leading-edge hardware, the event brings fans of Quake® and the new Enemy Territory: Quake War™ together to compete non-stop for 76 blissful hours (8:00 AM Thursday, August 2nd to noon Sunday, August 5th). You can imagine the amount of network capacity required to facilitate 2,800 networked gamers.

QuakeCon (www.quakecon.org) started in 1996, after id Software's™ original Quake game was released. Quake is a multi-player first-person warfare game. People play Quake over the Internet all year long, but at the QuakeCon event, participants play the game over a high-speed local area network with no glitches, freezes or latency. It's the ultimate high-performance blast, frag, torch, bomb, strategize and conquer scenario.

Attendees bring their own computers to the Dallas, Texas event, where they can connect to the local network with super-cooled, multi-processor machines and rapid-refresh, big screen monitors. id Software's executive Marty Stratton produces the event every year, and a team of volunteers installs the gear and makes sure everything runs smoothly. "With 2,800 simultaneous gamers, this is the largest LAN party in North America," said Stratton. "The gamers go to LAN parties so they can actually play the game the way it was designed to be played with zero lag. They expect absolutely no latency. This is the best experience they can possibly have."

There's \$100,000 in prize money on hand for winners of various one-on-one, dueling and multi-player death match fracasces on Quake, Quake II, Quake III and Quake 4, as well as on the newly released Enemy Territory: Quake Wars. "Since this event runs around the clock, reliability is crucial," said Stratton. "People plug in and stay up as long as they possibly can. They're playing constantly, twenty-four hours a day over the course of the entire convention. With demands that extreme, we needed a robust and highly dependable networking solution. We went with D-Link again this year because we knew that they could deliver."



*Thousands of gamers come to QuakeCon to play with their friends on a giant gaming network, see the latest technology, and compete in a world-class tournament.*

One of the best things about QuakeCon is that it's free. You'll find networking gurus, hard-core gamers and even curious locals crawling all over the place. For the casual observer, it's not necessary to BYOC (bring your own computer), since many of the vendors in the exhibit area have workstations that are connected into the gaming network.

In addition to the gaming, QuakeCon features parties, press conferences, workshops, main stage entertainment and lots of breaking product announcements from id Software and various gaming industry vendors.

### The Challenge

High-speed, graphic-intensive gaming requires zero latency. Therefore the network infrastructure for the QuakeCon event needed to be reliable, robust and flawless. "As far as networks go, gaming is as stressful on the equipment as you can get," said Stratton. The network also needed to set-up and tear down quickly, and be scalable from year to year. D-Link provided the equipment for the event last year, and the turnout (and network capacity) has doubled since.

In addition to the live gaming, the network needs to handle a large amount of file downloads for game demos, game patches and vendor demo software. It has to stream matches, videos and other data to the outside Internet, as well. Essentially, the architecture must handle excessive amounts of data transfer while maintaining zero-latency gaming.

### D-Link DES-3526



- Stackable 24-Port 10/100 Switch  
+ 2 combo Gig copper/SFP uplinks**
- 8.8Gbps Switching Capacity
  - Stackable Up to 32 Units

### D-Link xStack DXS-3350SR



- 48-Port 10/100/1000 Switch  
+ 4 combo SFP + 2 10GbE ports**
- Recoverable Ring or Star Stacking Architecture
  - Dual 10-Gig Stacking Ports and Optional 10-Gig Uplinks
  - Stacks up to 8 Units per Stack

### D-Link DEM-411X



- 1-Port 10GBASE-X XFP Module**
- 10 Gigabit Fiber XFP Module for xStack 3200
  - IEEE 802.3ae Compliant

### D-Link DEM-422X



- 10Gigabit XFP (10GBASE-LR)**
- 802.3ae 10GBASE-LR Compliance
  - Supports Full-Duplex 802.3x Flow Control

### The Solution

D-Link xStack™ switches and uplink modules power the entire QuakeCon network, and there is zero latency lag. “Last year, we had no issues whatsoever with latency, so we chose D-Link to be our partner again this year,” said Stratton. “Our engineers have been really happy with D-Link.”

The complete set-up includes 185 D-Link stackable 24-Port Fast-Ethernet switches (DES-3526), most of which are used in the BYOC gaming area. Five 48-Port Gigabit switches (DXS-3350SR), equipped with two 10GbE ports, constitute the backbone. The DXS-3350's are linked via DEM-411X 10Gb XFP fiber modules at several network operation centers (NOCs) dispersed throughout the venue.

The network is linked to the outside world via a 15GB up/down link that streams matches, videos and news to Internet observers. Everything is handled through the same networking equipment.

“We assembled the entire network in 37 hours,” said Stratton. “We started 8 AM on Tuesday and were finished by 9 PM Wednesday. It’s easy with the D-Link hardware.”

Everything is broken down in about eight hours on Sunday. “The fact that we can deploy like this in such a short amount of time is key,” he said. “2,800 people spend their hard-earned money to come to the event. The event itself is free, we don’t charge for it. But they travel to the event. So it’s important to us that the network performs flawlessly.”

“It’s awesome,” continued Stratton. “We get great photos of the set-up – stacks and stacks of switches, rows and rows of tables, and more than 15 miles of cabling. The gear is packed in, and the rooms are as packed as the fire marshal allows.”

To witness all the fun and see the equipment in action, visit [www.quakecon.org](http://www.quakecon.org).



*QuakeCon is a huge party for fans of computer gaming in general... from the hobbyist to the hardcore. Often described as the Woodstock of gaming, QuakeCon is “4 Days of Peace, Love, and Rockets”*