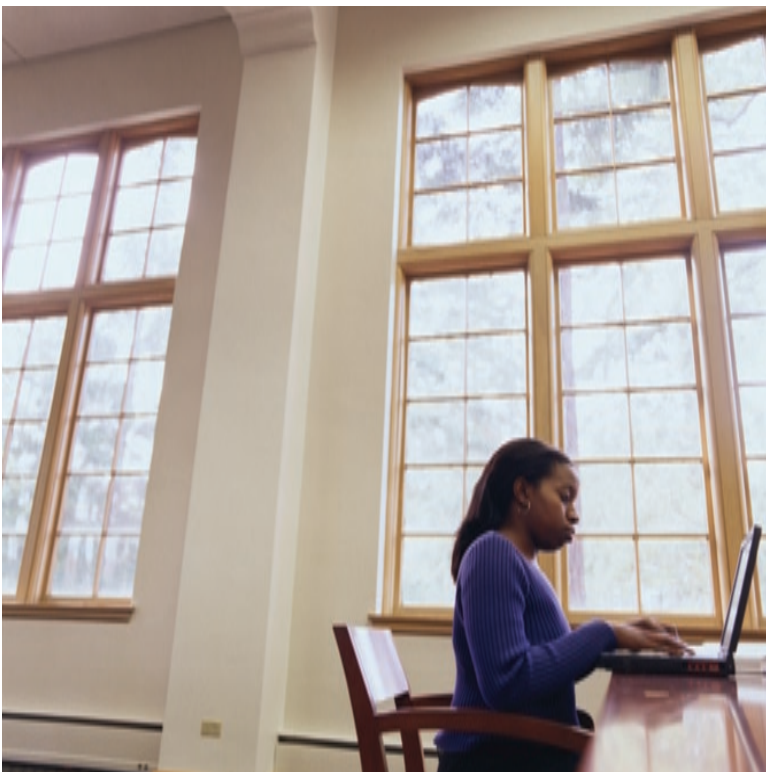
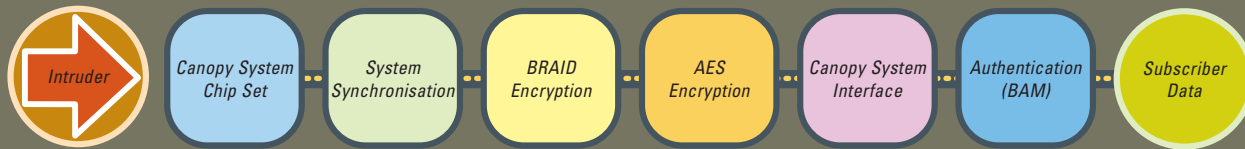


# Motorola Helps Colleges and Universities Take the Fast Track to High-speed WiFi Connectivity



Motorola's MOTOwi4™ portfolio of next-generation wireless broadband solutions is earning high marks in helping institutions of higher education quickly meet the growing demand for high-speed services on-and-off campus. The backbone of the MOTOwi4 portfolio, the Canopy® wireless technology platform is one of the fastest, most reliable, most affordable ways of bringing high-speed access and other learning and communications solutions to higher education environments of all types and sizes.





*Canopy System Security Architecture*

## Higher Learning Environments are Increasingly Reliant on Higher Speed Access

The foundation of the Motorola MOTOwi4™ portfolio is the Canopy Wireless broadband platform. Canopy technology provides the ideal wireless infrastructure for delivering any type of high-speed voice, video or data traffic on campus and off. A Canopy broadband WiFi network fosters social computing and a collaborative learning environment. It can also give colleges and universities an important competitive edge in attracting the best and the brightest students and faculty.

MOTOwi4 solutions help campus administrators successfully manage their most important challenges and facilitate their most important opportunities.

### Network and Campus Security

- **IT Security Solutions.** The latest available data suggest that over half of higher education environments have experienced “hack” attacks on campus networks. These security breaches include spy ware incursions, virus infestations and exposure of confidential student records. Through DES and AES over-the-air encryption standards, Motorola’s Canopy systems help colleges and universities manage an enormous number of individual profiles and access policies to maximize network security. The Canopy architecture provides high levels of security to support the dual educational requirements of open creation and information sharing, and secure network environments.
- **Video Surveillance Security Solutions.** In today’s ever-changing world, personal safety, premise and property protection, data center security and public safety are among the highest priorities on campuses of all sizes. A high-speed Canopy network enables state-of-the-art IP-based video surveillance solutions that are rapidly becoming the security system of choice worldwide. Applications include remote monitoring of perimeters, parking lots, dormitories and other hard to reach and heavily used campus locations.

### Ubiquitous Campus-Wide Connectivity

Selective hot spot coverage is no longer sufficient for today’s Internet generation of students and

faculty. Motorola’s MOTOwi4 solutions make it easier, faster and more affordable to provide students and faculty with broadband Internet access from virtually everywhere on campus.

### Online Delivery Models

In today’s more open and interactive learning environment, faculty and students are using the Internet more often and more creatively. A Canopy Wireless broadband network greatly extends the geographical reach of higher education, and provides the availability and flexibility required by nontraditional students. The Canopy system facilitates faster access to educational research, online library repositories, learning portals, Course Management Systems, and much more.

### Administrative Productivity

MOTOwi4 solutions help improve administrative productivity and lower costs by enabling advanced applications such as online class registration, electronic grading, data collection, access to student transcripts and other data, ID verification, library services and billing procedures.

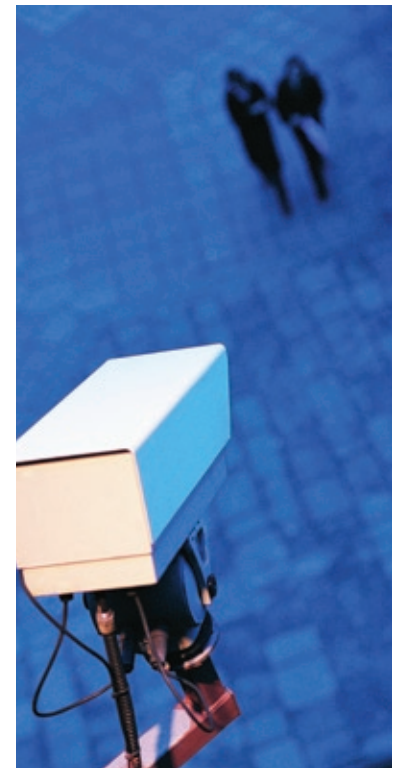
### Contingency Planning

In the event of a Katrina-like disaster situation, a Canopy Wireless broadband network enables colleges and universities to build redundant systems and develop contingency plans for maintaining continuous communications with faculty, staff, students, parents, government agencies and first responders.

### Revenue Building

A Canopy broadband WiFi network also offers numerous opportunities for colleges and universities to create new profit centers and add new revenue opportunities. These include charging campus visitors for access, offering cutting edge applications many users are willing to pay a premium for and offering students VoIP long distance phone service.

Motorola also offers you the expertise we’ve amassed in more than 75 years of wireless technology and networking leadership. We provide industry leading design, planning, implementation and customer support services.



# MOTOwi4™ Solutions Simplify Bringing Next-Generation Capabilities to Campus WiFi Networks



## THE CANOPY PLATFORM ENABLES NETWORK DEPLOYMENT IN DAYS, NOT WEEKS OR MONTHS

Canopy technology allows higher education institutions to take the fast track to designing and deploying a campus-wide broadband network. Unlike DSL or cable networks, there is no costly and time-intensive wiring, cabling, drilling or digging. A Canopy high-speed network or extension can be installed with a minimum of disruption to the campus environment.

The MOTOwi4 portfolio offers many of the broadband industry's most advanced, most reliable and most affordable solutions, leveraging a number of leading edge Motorola products, including:

- **Canopy® Wireless Broadband Platform.** Canopy Wireless broadband networks provide a powerful, cost-effective infrastructure that integrates seamlessly into your campus-wide high-speed network, offering exceptional benefits, including:
  - **Proven Reliability.** The Canopy system is a robust, high-speed wireless solution now successfully deployed in more than 100 countries. Canopy equipment provides the power and reliability demanded by today's sophisticated higher education applications.
  - **Configuration Flexibility.** A Motorola wireless broadband network offers a variety of configuration options that include: the point-to-point series of wireless Ethernet bridges, Canopy point-to-multipoint Access Points and Subscriber Modules and mesh WiFi networks. These networks are easily compatible with legacy wired or wireless networks, making it easier to extend or supplement the existing network to provide access virtually whenever and wherever students congregate, and support faculty and staff needs for workforce mobility.
  - **Affordability.** A Canopy network is one of the industry's most affordable, most cost-effective WiFi solutions, with exceptionally attractive entry and network expansion costs. Canopy networks make it easier to demonstrate measurable return on investment in the assessment and evaluation process. In addition, the network supports educational/municipal partnerships to provide truly affordable, high-quality

broadband access to the community.

- **Interference Resistance.** The Canopy system provides an industry leading low Carrier-to-Interference (C/I) ratio. Its unique signal synchronization offers a high-level of tolerance to self-interference in dense campus environments.
- **Bandwidth Capabilities.** Canopy technology supports the bandwidth intensive requirements of learning applications from streaming video to VoIP to Course Management Systems software. Prizm, the MOTOwi4 Element Management System (EMS), provides bandwidth management that enables crucial traffic prioritization.
- **HotZone™ Duo.** HotZone Duo is a powerful dual-radio WiFi mesh network solution designed to offer colleges and universities the access capabilities and flexibility needed to meet both short-term and long-range goals. Some higher education environments need a dual-radio system today. Others need only a single-radio system at present, but want the flexibility to upgrade to a dual-radio network as broadband demand increases and expands. HotZone Duo provides that flexibility and scalability quickly, simply and cost-effectively.
- **Broadband Over Powerline (BPL) Solutions.** Motorola's Powerline MU BPL solution enables service providers to quickly and easily bring plug-and-play high-speed broadband access to campus multi-unit properties. These include such difficult-to-serve multi-unit locations such as dormitories, faculty offices and administrative buildings. Powerline MU transforms a building's existing electrical system into a powerful broadband communications network, eliminating costly and time-consuming drilling, wiring and cabling.

# Learning from Broadband Networking Experiences of Other Colleges and Universities

## **Multi-Location Southwestern University: “Networking a 235-mile learning environment.”**

A large university system, located in the southwestern United States, needed to build a high-speed, interactive distance learning network that connected its main campus with 24 school districts elsewhere in the state. The network needed to be constructed over a 235-mile rural area with no existing infrastructure to support the expansion. The university chose a Motorola point-to-point wireless broadband networking solution that is now providing a cost-effective, carrier-grade, interactive communications network. The network is now being used not only for distance learning applications, but also for support services such as admissions, financial aid programs and non-credit workforce training for the state government.

## **Major Midwestern University. “Bringing off-campus faculty up to broadband speed.”**

A major university, located in the upper Midwest, already had a broadband network connecting students, faculty and administrative personnel on campus. But many of the faculty and staff who lived off-campus need to connect to the network from home. The university chose to implement a wireless broadband system, and selected a Motorola Canopy Wireless broadband network for its reliability, ease of implementation and affordability. The university installed the Canopy system that now connects off-campus users to the university broadband network, resulting in more efficient, more effective 24/7 high-speed communications including Internet access and e-mail.

## Connecting the Unconnected: The MOTOwi4™ Platform

Motorola has been a global leader and innovator in wireless technology for over 75 years. Our expertise at “connecting the unconnected” has literally been proven all around the world. MOTOwi4 is a portfolio of innovative wireless broadband solutions that create, complement and complete IP networks. Delivering IP coverage to virtually all spaces, the MOTOwi4 portfolio includes Fixed Broadband, WiMAX, Mesh and Broadband Over Powerline solutions for private and public networks.

For more information about Motorola’s Canopy and MOTOwi4 high-speed connectivity solutions for colleges and universities, contact your Motorola distributor, call us at 1.800.795.1530 or 1.866.515.5825 or visit us on the Web at [www.motorola.com/canopy](http://www.motorola.com/canopy).



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