



**encom**  
WIRELESS

**Wireless Broadband Networks**

With ENCOM, wireless is simple.



### Wireless broadband networks dedicated to your success

For more than 20 years, ENCOM has been creating innovative wireless solutions that are trusted by government and industry for their power and reliability. We design and manufacture our broadband products in-house to create dedicated networks that will surpass your expectations now, and ensure success well into the future.

For deployments in dense urban environments to remote rural areas, in mobile or fixed applications, choose ENCOM for durable, industrial-quality equipment and proven expertise. Our dedicated wireless broadband networks are the long-term solution you can count on.

### Why wireless?

Organizations choose wireless networks over wired solutions for ease of installation, ease of expansion, and savings in time and money. Wireless networks also support mobile workforces and deliver higher bandwidth than shared or wired networks.

Where wired solutions require time, labour, and cost-intensive underground construction to install, wireless solutions simply attach to a building, tower, traffic-signal pole or other existing structure. ENCOM's wireless systems can be operational in a matter of hours and don't require permits or licenses for installation.

ENCOM's dedicated wireless networks are leading-edge, plug-and-play systems that integrate easily with wired or fibre optic networks and simplify infrastructure upgrades

*The U.S. Department of Transportation estimates that installation costs for wireless networks are one-tenth that of underground fibre optic cable.*

[www.itscosts.its.dot.gov](http://www.itscosts.its.dot.gov)

### Dedicated wireless network solutions

- WiFi and WiMAX (fixed and mobile)
- Wide-area networks (WAN)
- Video surveillance (CCTV)
- Wireless mesh networks (WMN)
- Point-to-point and point-to-multipoint

*"The total cost savings, assuming all our existing signal communications are converted down the road, is in the order of \$150,000 a year."*

*-Anna Bunce, Traffic Project Engineer, City of Aurora*

### Who relies on ENCOM?

- Municipal governments
- Corporate IT departments
- Department of Homeland Security
- Departments of Transportation
- Emergency first responders
- Mobile workforces
- Heavy industry (oil and gas, manufacturing)
- Electrical utilities – Smart Grid
- Water/Wastewater management

## The ENCOM solution

When you choose ENCOM to provide your wireless broadband network, you get a dedicated network engineered by an established leader in wireless technology. You also enjoy a personal level of service and comprehensive support and training from a company that views its customers as long-term partners.

## Dedicated versus shared networks

Shared networks – phone lines, DSL, cable or 3G and other cellular technologies – are just that. You share bandwidth and speed with everyone else on the network. High-traffic times translate into sluggish connection speeds, and dependence on a provider makes you vulnerable to service interruptions.

Mission-critical applications that require reliable access and speed are at risk for latency, communication errors and lost data. When remote sites lose connectivity the cost to business is enormous. Enterprises become less efficient, experience an increased drain on manpower to monitor systems manually, and endure longer response times for incidents, among other complications.

Dedicated wireless networks are networks owned by your enterprise – with no service provider to pay and no contracts to sign. You own the infrastructure and enjoy consistent high speeds and rock-solid uptime. Your information remains accessible and secure in the event of power outages, natural disasters and emergency situations.

Your dedicated network is an investment that reduces long-term operational costs, enabling budget dollars to be allocated to improving and expanding existing systems.

**ENCOM's dedicated wireless networks ensure advanced security, 99.9999% uptime and speeds over 108 Mbps.**

## Case Study: City of Tampa, Florida

As Super Bowl XLIII approached, Tampa city officials needed a surveillance system for security and traffic control around Raymond James Stadium. They chose ENCOM's industrial broadband CommPAK units, quickly installing 10 of the units and integrating them easily with the existing fibre optic network. The highly adaptable units were set to operate on the public-safety frequency of 4.9 GHz. They provided the performance needed to supply high-resolution, full-motion, streaming colour video images with PTZ (pan tilt zoom) control to both traffic management and city police, ensuring crowd control and a smooth flow of traffic for game time.

*"In the event of a major incident, with these cameras in place, their value to me is immeasurable... we're extremely happy. As far as the system went, it performed flawlessly."*

-Gary Strout, Supervisor, Traffic Engineering and Design, City of Tampa

## Case Study: City of Aurora, Colorado

With outdated, unreliable communications links leased from a telecom provider to the tune of \$150,000 per year, the City of Aurora's traffic department budget was gridlocked. From both a cost and a logistics standpoint, trenching cable to replace the phone lines was not an option. Instead, the Rocky Mountain city called on ENCOM to help develop a new Ethernet-based wireless system, comprised of about 25 CommPAK BB 58 units which form the backbone of an 802.11a wireless MESH network. Aurora now enjoys a bulletproof, high-performance intelligent transportation system that was implemented quickly and easily, and simplifies future expansion – with no more costly phone bills.





Find out how ENCOM can make wireless simple for you.

Call us today at 1-800-617-3487, or visit [encomwireless.com/solutions](http://encomwireless.com/solutions) to find an efficient, effective and economical network solution for your enterprise.

- Learn what our loyal customers have to say at: [encomwireless.com/customers](http://encomwireless.com/customers)
- See our products at: [encomwireless.com/products](http://encomwireless.com/products)
- Find out how our products are used in industries like yours at: [encomwireless.com/solutions](http://encomwireless.com/solutions)



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**ENCOM Wireless**  
7, 640 - 42 Avenue NE  
Calgary, AB Canada T2E 7J9  
Phone: 403.230.1122  
Fax: 403.276.9575  
[encom@encomwireless.com](mailto:encom@encomwireless.com)  
[encomwireless.com](http://encomwireless.com)

## How does the most powerful and reliable industrial wireless broadband system on the market benefit your enterprise?

### Superior performance

ENCOM designs and manufactures its own broadband wireless systems, so customers benefit from using the highest quality products on the market. Each ENCOM system is backed by solid warranties and over 20 years of experience.

### Industrial WiFi 802.11a/b/g and WiMAX systems offer

- Consistent high speeds > 108 Mbps
- Low latency wireless communications
- High-resolution, multi-cast and uni-cast streaming video capability
- High-powered 600 mW transmitters and selective -97 dB RX receivers for carrier-class wireless performance with a range of up to 60 miles (96.5km)
- Proprietary orthogonal frequency division multiplexing (E-OFDM) to resist interference, maximize bandwidth and increase reliability
- Continuous monitoring of RF link quality, automatically adjusting modulation and data rates for maximum performance
- Long-range Line of Sight (LOS) and Non-Line of Sight (NLOS) capability

### Reliable and secure operation

Created for optimal performance in demanding environments, and designed to maintain iron-clad security of your information assets, ENCOM's dedicated wireless broadband networks are solid and reliable.

- 99.999% uptime, even during power outages, natural disasters and emergency situations
- Rock-solid dependability with environmentally hardened, rugged radios created to meet NEMA operating specifications of -40°C to 80°C (-40°F to 176°F)
- Advanced security features including WPA2 (256 AES), WPA, WEP, MAC, and Radius Server authentication
- 802.11 a/b/g compliance plus proprietary WiMAX protocol for increased bandwidth and security
- Reliable products with dependable five-year warranties

### Flexible for future expansion

Engineered for optimal performance today and designed to meet the demands of the future, ENCOM products are backward-compatible, future-proof, and operate on a wide range of frequencies.

- Dependable operation on licensed and unlicensed frequencies (900 MHz and 2.4, 4.9, and 5.8 GHz)
- Point-to-multipoint and MESH topologies for connectivity in the most challenging environments
- Multi-radio platform increases capacity and scalability
- Dynamic frequency selection, seamlessly switching to the clearest RF signal
- Long-term, maintenance-free operation
- Simple integration with optical and wired networks to leverage existing infrastructure
- Easy installation and rapid deployment
- Scalability with simple, plug-and-play connectivity

### Cost effective and environmentally friendly

ENCOM's dedicated wireless broadband networks cost less than wired networks to install, upgrade and expand. They eliminate the subscriber fees of shared networks and enable efficient, greener business practices.

- One tenth the cost of wired or fibre optic networks
- Rapid deployment enables speedy ROI
- No service provider fees or contracts
- Minimal construction costs and no permits or fees necessary for installation
- Support mobile workforce
- Encourage green and energy-efficient business practices such as remote collaboration and telecommuting
- Wireless networks eliminate the need for environmental disruption and are perfect for environmentally sensitive areas and heritage sites