

Ethernet

Ethernet has become the go-to technology for high-performance, reliable and cost-efficient connectivity. Healthcare providers use it to connect imaging facilities to hospitals and improve patient care, while banks rely on its ability to cost-effectively connect branches with regional headquarters.

Our Ethernet solutions combine the reliability and ubiquity of Carrier Ethernet with next-generation metro area transport technology. The result is an efficient, fully restorable network that's easy to manage and ready for any vertical or application requirement. Additionally, the natural flexibility of Carrier Ethernet allows us to offer you a range of solutions that give you varying levels of control to meet the bandwidth and security requirements you need—today and in the future.

Our business Ethernet solutions include MetroE Advanced Private Line, E-Line, Ethernet Virtual Private Line (EVPL) and Ethernet Private LAN (E-LAN). With support for Layer 2 point-to-point, point-to-multipoint and multipoint-to-multipoint

topologies, you can seamlessly extend your Ethernet network from your building into the metro area and beyond.

With a private, diverse fiber backbone, along with protected access options, we offer a robust solution set for your business continuity requirements. With approximately 85,000 route miles of fiber across every major metro area, you'll be tapping into one of the largest, densest Ethernet footprints in the country.

Our fully staffed Network Operations Center and locally based service teams proactively monitor your fiber network around-the-clock and respond to changing circumstances—giving you unmatched reliability and peace of mind.

More than
25 Years
of Expertise

**NYSE
S&P 500**

Our Solutions

- > Towers
- > Small cells
- > Dark Fiber
- > **Ethernet**
- > Wavelength
- > Managed SD-WAN
- > Internet Access
- > Private Networks
- > Colocation
- > Cloud Connect
- > Optical Encryption
- > DDoS Defense
- > Cyber Defense One
- > Bandwidth on Demand
- > Fixed Wireless
- > Ultra-Low Latency
- > Video Transport

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Crown Castle has taken away the pain points when it comes to bringing in new applications. We've been impressed with their level of customer service on every level, and have been very happy with the performance and service of our network.

GREG KLOPP

Information Technology, Hershey Entertainment & Resorts

Key Benefits

- › Seamless interconnection with no additional equipment on your premises, reducing equipment capital costs
- › Simple installation and turn-up with no protocol conversion
- › Easier installation and management allows for rapid provisioning compared to other platforms
- › Flexible bandwidth allows you to pay as you grow
- › Scalability for long-term network evolution connectivity

Key Features*

- › Speeds from 10Mbps to 100Gbps
- › Switched and dedicated bandwidth configurations
- › Dedicated access links with multiple protection options
- › Bandwidth on Demand gives you the agility and control you need to upgrade bandwidth in near real-time
- › Standards-based IEEE Ethernet service for Layer 2 transport
- › 802.1Q VLAN and 802.1 QinQ tunneling supported
- › MEF Carrier Ethernet 2.0, MEF 9, and MEF 14 certified technology
- › 24/7 network monitoring

*Not all features are available in all markets. Please contact your sales representative for more information.

Our Solution

- › Our Ethernet solutions enable the extension of dedicated or virtual LAN infrastructures for WAN connectivity, with committed information rates from 10Mbps to 100Gbps and guaranteed network performance.
 - E-Line: Dedicated UNIs for point-to-point connections—simple and secure
 - EVPL: A flexible, virtualized option allowing multiple applications and connections to run over a converged interface
 - E-LAN: Transparent LAN service and multipoint VPNs
 - MetroE Advanced Private Line: Private Ethernet delivered over dedicated fiber with switches deployed at each end-user location across a metro area.
- › Four Classes of Service provide the routing options necessary to manage traffic while ensuring application performance:
 - Mission Critical: Ultra-high availability, superior performance, lowest latency
 - Business Critical: High-availability, high-performance
 - Business Priority: Enhanced performance
 - Standard: Standard performance



SPECIFICATION	METRO-E ADVANCED PRIVATE LINE	E-LINE	EVPL, E-LAN
Technology	Layer 2 Ethernet over private fiber	Layer 2 Ethernet over DWDM or fiber	Layer 2 Ethernet over MPLS or fiber
Throughput	1Gbps - 10Gbps	50Mbps - 100Gbps	10Mbps - 10Gbps
Interface	10 GigE	GigE or 10 GigE	GigE or 10 GigE
Framing	Jumbo Frames up to 9100	Jumbo Frames up to 9100	Jumbo Frames up to 9100
Network Management	24/7 monitoring and surveillance	24/7 monitoring and surveillance	24/7 monitoring and surveillance
Network Options	Metro configurations	Long-haul and metro configurations	Long-haul and metro configurations
Availability	Available at most on-net locations throughout the Crown Castle network	Available at most on-net locations throughout the Crown Castle network	Available at most on-net locations throughout the Crown Castle network
Architecture	Point-to-point	Point-to-point	Point-to-point, point-to-multipoint, multipoint-to-multipoint



Crown Castle owns, operates and leases more than 40,000 cell towers and approximately 85,000 route miles of fiber supporting small cells and fiber solutions across every major US market. This nationwide portfolio of communications infrastructure connects cities and communities to essential data, technology and wireless service—bringing information, ideas and innovations to the people and businesses that need them.