CROWN CASTLE

Managed Private Optical Network

With applications like high-speed trading, medical imaging, content delivery, synchronous replication and cloud solutions, the demand for bandwidth continues to increase—exponentially. These applications place significant strain on available network resources, driving a need for increased scalability and performance.

Built to meet this increased demand, our Managed Private Optical Network (MPON) is a flexible, dedicated solution capable of supporting multiple technologies, protocols and applications across a wide area. MPON provides a turnkey, dedicated, private network with custom designed Dark Fiber routes, DWDM equipment installation and around-the-clock monitoring, maintenance and troubleshooting by our Network Operations Center.

MPON is a great option for organizations looking for a Dark Fiber solution that does not require in-house technical and operational personnel to install, monitor and troubleshoot the network.

Key Benefits

Custom Solutions

A custom, Dark Fiber, dedicated network with all of the privacy, security and bandwidth required that is more cost effective than building it yourself.

Service

A single point of contact—as compared to working with multiple providers—increasing efficiency and peace of mind.

Expertise

Access to technical and operational teams without the need to staff DWDM expertise internally, reducing your technical risk and overhead.

Control

Software and equipment updates performed on your schedule—minimizing network impact.

More than
25 Years
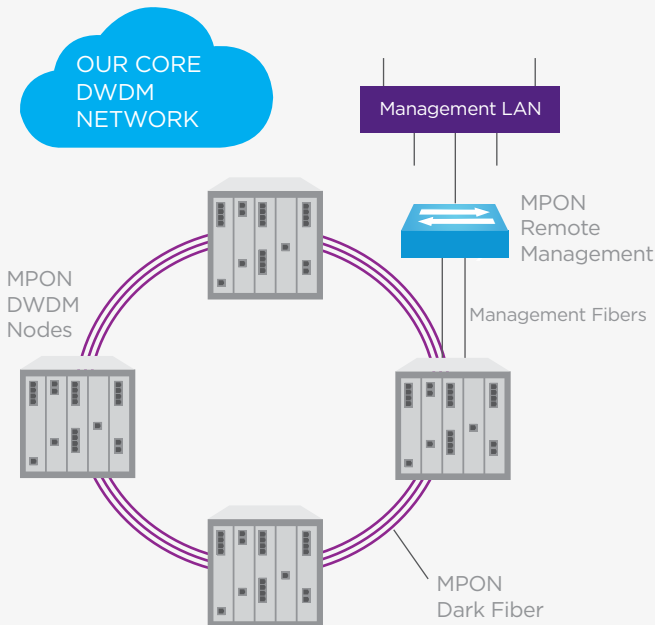**of Expertise**

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
> Bandwidth on Demand
> Fixed Wireless
> Ultra-Low Latency
> Video Transport

Key Network Features

> 25 years of experience applied to the design, installation, monitoring, maintenance and upgrade of advanced DWDM networks

> Multiple high availability options for fiber and equipment protection, giving you the uptime you need and a guaranteed SLA

> Enhanced security with private fiber and equipment, and optional FIPS-certified Layer 1 optical encryption adds extra protection for your data in flight

> Ability to engineer a design with the latest available equipment and software for higher density and peak performance

> Optimal fiber routes and equipment, with optional built-in upgrades to meet your future needs

> Monitoring and managing all DWDM nodes and fiber via an out of band management connection to our Network Operations Center

> 24/7 network surveillance and monitoring

Key Security Features (optional)

> NIST-compliant AES-256 encryption

> Elliptic Curve Cryptography (ECC) algorithms and certificates

> Diffie-Hellman secured key negotiation (including Elliptic Curve)

> x.509 certificate support for authentication

> Easily integrates into enterprise Public Key Infrastructure (PKI) using x.509 certificate-based authentication

> Support for Certificate Revocation List (CRL)

> Hitless AES-256 key rotation every second

> TLS-secured and mutually authenticated interface for encryption monitoring and management by customer personnel

> SNMPv3 support

Dedicated Fiber and Equipment

OUR CORE DWDM NETWORK

Management LAN

MPON Remote Management

MPON DWDM Nodes

Management Fibers

MPON Dark Fiber

Technical Specifications

SPECIFICATION	DESCRIPTION
Key Solution Components	Dark Fiber between desired locations DWDM nodes with ROADM technology
(See Diagram)	Network management via out-of-band connection Designed, installed and managed by expert teams
Bandwidth Options & Hand-off Protocols (non-encrypted)	- 1Gbps(plus): 1 GigE, OTU1 - 10Gbps: 10 GigE, FC800/1200, OC-192/192c, OTU2 - 40Gbps: 40 GigE, OC-768, OTU3 - 100Gbps: 100 GigE, OTU4
Bandwidth Options & Hand-off Protocols (Encrypted)	- 10Gbps: 10 GigE, FC800, FC1200, OC-192/192c - 40Gbps: 40 GigE, OC-768, OTU3 - 100Gbps: 100 GigE, OTU4
Optional Protection Options	- Backup circuit on diverse route - Optical Protection Switch for automatic failover to backup path - Guaranteed SLA options determined by the design you select
Bit Error Rate	1×10^{-9}
Mean Time to Repair (MTTR)	4 hours
Availability	Configurations from 99.9% to 99.999% availability
Topology	Customized to meet your needs, ranging from a single point-to-point wave to multiple-ring networks

For more information, please contact 1-833-635-0915 or visit **CrownCastle.com**