Ekinops



SOLUTION BRIEF

Maximizing The Middle Mile

How to Best Put Your BEAD & MMG Funds to Work

Making It Possible

The Broadband Equity, Access, and Deployment (BEAD) Program run by the U.S. Department of Commerce (DOC) under the management of the National Telecommunications and Information Administration (NTIA), was developed to disburse the $42.5 billion included in the $1.2 trillion Infrastructure Investment and Jobs Act (IIJA) of 2021 that was earmarked for broadband deployment to address unserved (less than 25Mbps downstream/3Mbps upstream) and underserved (between 25/3 and 100/20) locations throughout the 50 U.S. states and six territories, including the District of Columbia.

Less well known is the Middle Mile Grant (MMG) Program, a separate program from BEAD under the IIJA established to deliver $1 billion specifically for middle mile infrastructure.

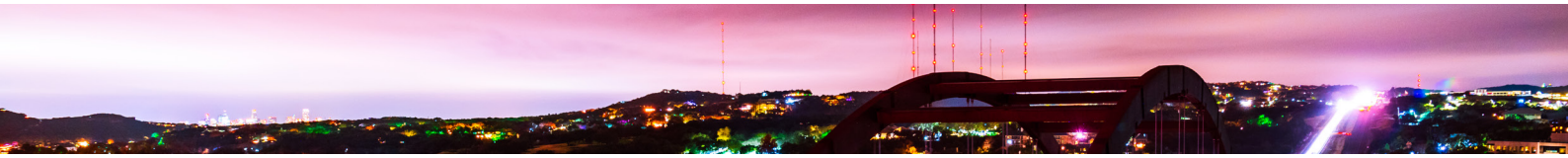
Facts & Figures:

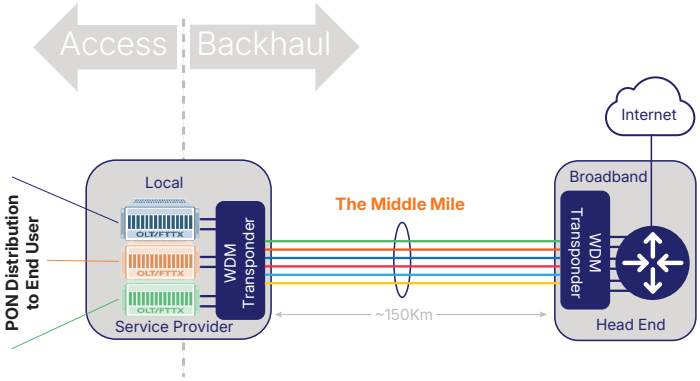
- Texas received the largest BEAD funding allocation with $3.312B and Delaware the least with $108M.
- As of May 2026, 841 individual awards were made to service providers in all states and territories totaling $108B.
- Spending on telecom equipment for BEAD began in 2026 but MMG funding has already been awarded.
- There were 39 MMG awards made to service providers in 40 states plus Puerto Rico valued between $1.3M and $88.9M each exclusively for rural connectivity projects.

The Challenge

The purpose of the MMG is "...to expand and extend middle mile broadband infrastructure to reduce the cost of connecting areas that are unserved or underserved to the internet backbone." The challenge is that, for virtually all rural providers, that broadband infrastructure is many miles away. Connecting to it requires an extended, high-capacity optical link capable of supporting the distance and all the traffic from its service area including residential, business and mobile services.

[1] National Telecommunications and Information Administration 'Limited Applicability Nonavailability Waiver of the Buy America Domestic Content Procurement Preference as Applied to Recipients of Middle Mile Grant Program Awards; September 2022'





Basically there are two ways of provisioning that middle-mile capacity—buy a lit wavelength service from a wholesale carrier or build it yourself. While it may sound easier just to buy it, there are a number of factors that need to be considered including:

- Does anyone even offer wavelength services in my area?
- If yes, how many sources are there? Several or only one?
- What are my upfront costs for bringing connectivity to my location and can it be done in the timeframe in which I need it?
- What are my monthly recurring charges (i.e., what is my cost per kilometer per bit) including maintenance?
- What if I extend my services and need more capacity quickly?
- What control do I have over the service and what is my SLA?

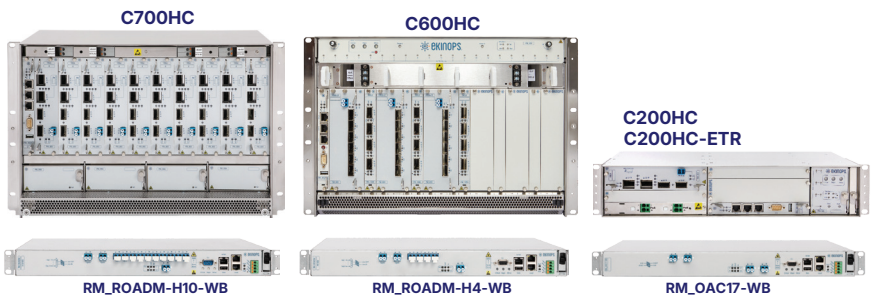
With all of the upfront deployment and commissioning costs followed by monthly recurring charges based on distance, capacity and maintenance, the buy option is not as easy as it sounds and can get expensive quickly (see our White Paper 'Scaling Backhaul for Rural Broadband Connectivity' on this page).

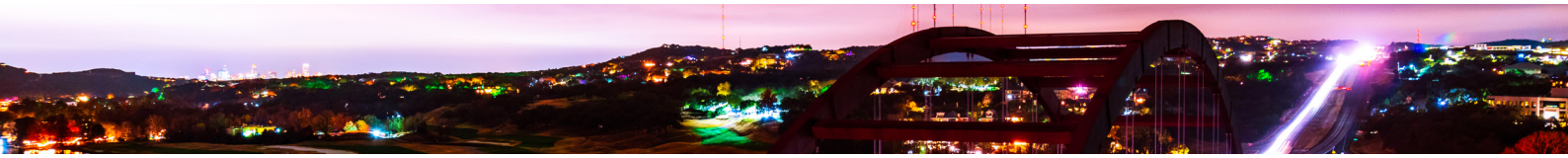
Building your own middle-mile connection has its own challenges to be sure but it can help save money by matching exactly the infrastructure to your needs, provide greater control over both the deployment process and the network once it's been commissioned and provide the capacity needed along your network lifetime at the touch of a button and with a pay-as-you grow approach. While securing dark fiber can be an issue in many locations, most carriers that offer lit wavelength services also offer dark fiber given that the high cost of deploying new fiber cables leads most carriers to install more fiber pairs than they need whenever they construct new routes.

The question then becomes, how do I light the fiber once I have it? At Ekinops, we have the answer.

Ekinops Optical Networking Platform

The Ekinops Optical Networking Platform provides the capacity and performance you need to serve all your customers at the lowest cost per bit while providing a platform for growth. As a WDM system based on the latest generation of high-speed coherent technology, it provides the highest level of bandwidth efficiency, performance, reliability and service flexibility.





Features:

- FlexRate™ programmable line interface—100G to 800G—no license fee to upgrade
- Small footprint—only 800G solution available in telco-compliant 300mm depth
- Extended reach to 10 000 Km
- Multiprotocol support—Ethernet, Fibre Channel, SONET/SDH, OTN
- Multi-level service aggregation for low-speed transport over high-speed links
- Flexible ROADM and amplifier options—1RU 'pizza box' or modular chassis-based
- Extended temperature range (ETR) operation from -40 °C to +65 °C
- Single-fiber working on all line rates from 10G to 600G
- Advanced NMS for end-to-end management control and monitoring

Applications

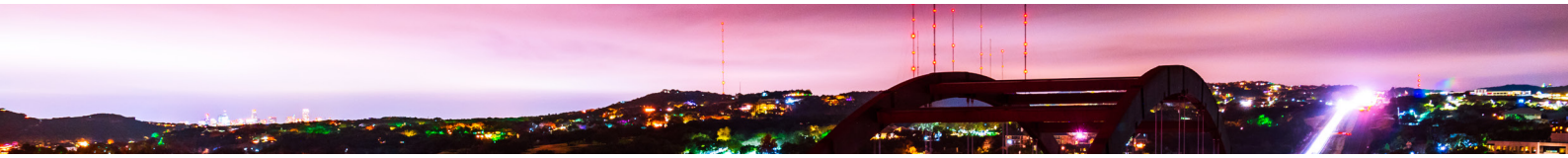
The Ekinops Optical Networking platform can be deployed in a variety of both greenfield and brownfield scenarios including:.

- Alien wavelength over existing line systems
- Metro/Regional/Long Haul/Ultra-Long Haul transport
- Single fiber networks
- Aggregation of legacy 10G and below services into high-speed links

Cost Efficiency

The Ekinops Optical Networking provides the lowest total cost of ownership available both in terms of CAPEX and OPEX.

- Lowest equipment cost per 100G (incl. chassis, amps, commons and optics)
- Easy to deploy, simple to commission—get your network up and running in hours, not weeks
- Automated power balancing for optimal performance without a truck roll
- Remote management using one tool to provision, monitor and troubleshoot services across all Ekinops WDM devices



About Ekinops

Ekinops is a European leader in optical networking and secured connectivity solutions for service providers, enterprises and public organizations around the world.

Ekinops designs, develops and manufactures high-performance solutions with cutting-edge software used to deliver high-bandwidth connectivity and managed services in over 70 countries worldwide.

Ekinops leads in the areas of:

- Advanced coherent optical networking for all metropolitan, regional, long-distance and datacenter interconnection applications
- Secured connectivity solutions for enterprises, from voice and data routing devices to Secure Access Service Edge (SASE) capabilities, including ZTNA (Zero-Trust Network Access), SD-WAN, and SSE.

Ekinops operates globally and is listed on Euronext Paris (FR0011466069 - EKI).

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