

Mira rOLT (remote OLT)

Fiber connectivity, anywhere.

Expand FTTP coverage anywhere, faster and at significantly less cost.

Technetix' Mira rOLT is a remote-deployable optical line terminal that enables rapid deployment of high-speed services. Ideal for new build and overbuild for existing copper networks, rOLT moves capacity nearer subscribers for reduced investment in infrastructure, lower OpEx, improved service quality, and accelerated revenue generation.

Fully agnostic, the rOLT is a self-sufficient multi-platform technology with integrated management software. Each compact unit supports GPON, XGS-PON and Combo-PON standards for a future-ready access network that scales with demand. It is suitable for operators migrating HFC networks to fiber, and for those looking to replace traditional OLTs installed centrally. Our rOLT offers a quick-to-market, cost-effective solution with fast ROI, that delivers exceptional performance and flexibility, including extended range.

BREAK THROUGH CONNECTIVITY BARRIERS

HFC-to-PON migration and network extension to remote site deployments can be complex and costly.

Even when not entirely prohibitive, traditional centralized deployment methods can present intense obstacles to network expansion projects. These quickly become unattractive network investments when challenges such as problematic terrain, civils works over substantial distances, limited power infrastructure, intermediate equipment, and replacement infrastructure inflate costs.

Mira rOLT can be deployed as a new access node, or to replace existing HFC nodes. While both models minimize additional core and access infrastructural needs, node replacement employs the same input fiber, power supply, and street cabinet locations. This eliminates additional civils or power requirements.

For the likes of greenfield or service expansion programs, rOLT is deployed close to the subscriber base on existing infrastructure, e.g. utility poles and building structures. Unlike traditional OLT chassis that are distance-limited from the network core and require purpose-built technical facilities or street cabinets, rOLT overcomes both issues. In addition to simpler permit approval processes and faster installment, rOLT supports an additional 20km (12.4mi) reach after backhaul distance between 20km (12.4mi) and 80km (50mi).

For forward-looking operators, Technetix Mira rOLT presents a low cost option to speed up PON deployments and support scalability with capacity that can be expanded or upgraded as required.



WHAT OUR CUSTOMERS NEED

Technetix Mira rOLT is a powerful and versatile option for tackling common problems associated with conventional OLT placement. Customer specs have included:

Legacy copper network modernization

Operators transitioning from aging infrastructure to high-speed fiber.

Greenfield fiber deployments

New builds requiring efficient, scalable, future-proof network infrastructure.

MDU providers

Fiber extension in challenging real estate.

Rural or underserved areas

Operators that need high-density, high-bandwidth solutions for remote farmland, campuses, or apartment complexes.

MULTI-PLATFORM EXCELLENCE

Mira rOLT supports GPON, XGS-PON, and Combo-PON standards on the same robust hardware foundation and management architecture. This capacity maintains:

- unified operations
- location-appropriate deployment
- simplified training and optimized labor-related costs
- streamlined, cost-effective upgrade for higher speed PON that aligns with demand and component pricing permits

TECHNICAL SPECIFICATIONS

The Mira rOLT delivers carrier-grade reliability.

GPON remote OLT

- Cost-effective mass deployment
- Compatible with established ecosystems
- Optimized for residential services
- Vendor interoperability
- Existing deployment maturity

XGS-PON remote OLT

- Futureproof bandwidth capacity
- Support for emerging services
- Enhanced user experience
- Operational flexibility

THE ROLT IN NUMBERS

10G

XGS-PON symmetrical bandwidth 10 Gbps speeds for next-gen applications

IP68

Environmentally hardened for outdoor deployment



48 watts

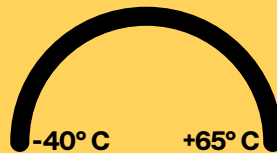
Very low power requirements

Up to 1024

fiber customers per rOLT

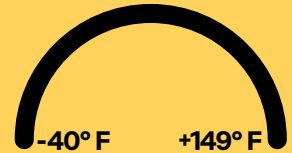
20km/12.4mi reach distance

Maximum optical span



-40° C

+65° C



-40° F

+149° F

Advanced thermal management for extreme climates

- Options for maximum uptime: 110/230 V AC main, 48 V DC telecoms, and 60-90 V AC HFC type power.
- Virtualized design supports new services, evolving standards, and long-term relevance.
- Distributed network systems pushing capability closer to customers and inherently greater resilience.

SOFTWARE INTEGRATION

Unified management for distributed networks

The Mira rOLT offers sophisticated and modular software integration for centralized visibility, configuration and control across geographically distributed deployments.

- Virtualized OMCI/NMCI provides cloud-native flexibility for simpler management
- Industry standard interfaces support seamless connection to existing OSS/BSS, and other network management platforms
- Zero-touch provisioning reduces deployment time from days to hours with automated device discovery and configuration
- Real-time monitoring allows comprehensive visibility into network performance, alarms, and service quality metrics
- Centralized configuration and single-interface management with consistent policy enforcement.

PON MANAGER PLATFORM INTEGRATION

For improved operational efficiency, rOLT integrates with leading PON management platforms. To preserve operator workflows and support seamless service provisioning, performance monitoring and troubleshooting, the platform enables operators to continue using familiar interfaces.

- **API-based architecture**
Standard NETCONF/YANG/REST interfaces for rapid integration
- **Multi-vendor support**
Works with existing ONTs and provisioning/orchestration systems
- **Custom workflows**
Adapts to operator-specific provisioning and service models

BENEFITS OPERATORS

Cost effectiveness

The rOLT offers operators a number of cost savings throughout its entire life cycle.

Lower CapEx

Lower CapEx. Self-contained units deployed near subscribers significantly reduces upfront costs. Unlike traditional OLTs which require large investment in additional equipment such as cabinets, cooling, civils and construction costs, rOLT aligns with capacity needs. Its modular design and port-by-port approach to network expansion provides success-based expenditure, avoids over-build, and optimizes ROI. The rOLT eliminates the requirement for expensive technical space in central offices or street cabinets.

Reduced fiber and transport costs

Proximity to subscribers requires less trunk fiber, lower engineering costs, and reduced power demand. Rural deployments become increasingly viable when fewer kilometers of feeder fiber are required.

Reduced OpEx

In combination, rOLT's compact form factor and low electrical consumption offers operators significant energy and site cost savings. Space efficient and passively cooled, the solution can be pole, façade, or riser/cupboard mounted and requires little to no civil engineering to install.

Improved asset utilization

Where traditional network growth demands large, forecast-based investment, rOLT supports highly targeted and incremental growth. For operators, this translates as reduced stranded capacity and higher utilization rates for better return on network assets, including pluggables.

Futureproofed investment

The rOLT helps operators protect existing investments by minimizing the cost of future network upgrades. To overcome repeated infrastructure replacement to meet future bandwidth demands, no major architectural revisions are required for next-generation, premium broadband service delivery.

Faster time-to-market and new revenue opportunities

Mira rOLT can trigger revenue generating cycles within weeks, not months. Quicker, simpler deployment enables shorter launch timelines, while physically closer service origin offers easier subscriber activation processes. Mira rOLT can also be used as a metro Ethernet connectivity platform for mobile and enterprise services in addition to PON. The combination of these capabilities protects against competitor market share capture.

FLEXIBILITY AND SCALABILITY

Our technology-agnostic rOLT provides operators with a flexible pay-as-you-grow model that supports additional capacity where and when it is needed.

Easier expansion

The multi-platform solution provides capacities aligned to demand, and enables progressive network growth.

Deeper network penetration

Installed nearer to end-users, interoperable small form factor rOLTs help operators deliver consistent quality services without lock-in, and reduced environmental impact.

Selective subscriber migration

For high-capacity HFC customer handoff, FTTx overlay on cable HFC matches HFC service group architectures.

Accelerated rural coverage

Smaller, localized deployments improve business case economics, through reduced build costs, faster payback periods, and the option to address government-funded connectivity programs more competitively.

IMPROVED NETWORK PERFORMANCE

Improved end-user experience

With capacity distributed closer to subscriber bases, service quality is more consistent and reliable during periods of high-demand (peak streaming and gaming times, for example). This reduces customer complaints, support calls, and churn risks.

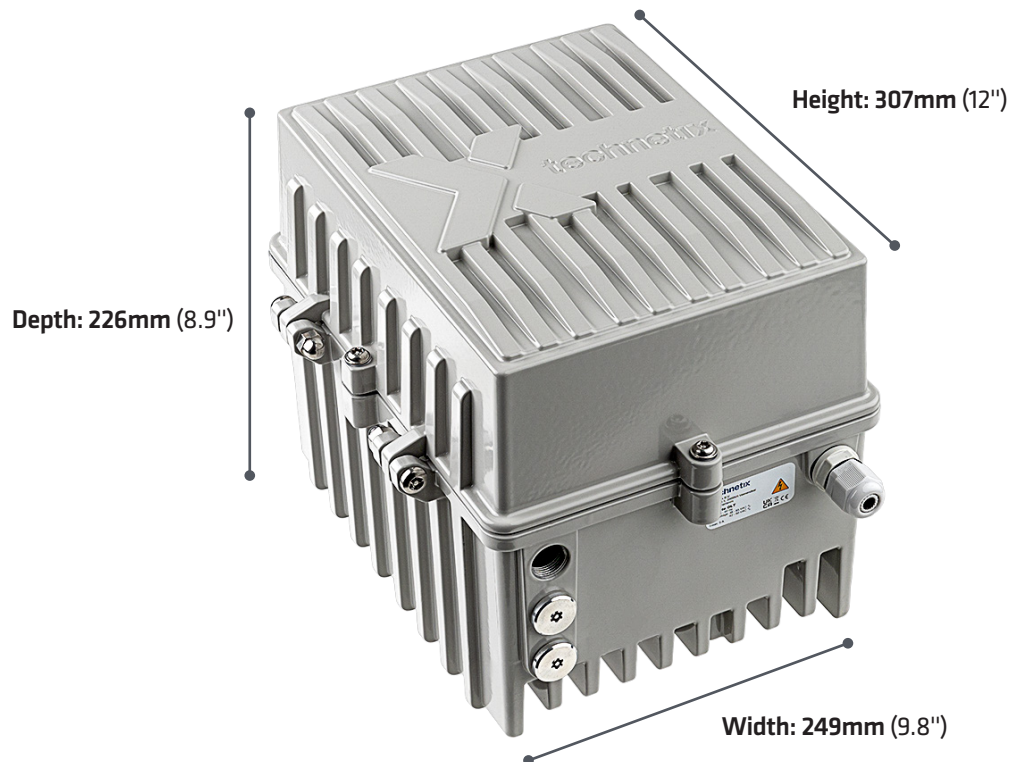
Improved resilience

A smaller failure 'blast radius' occurs when the service area is itself small.

COMPARATIVES

A quick-look comparison between traditional OLTs and Mira rOLT.

Factor	Central/ large OLT chassis	Mira rOLT
Location	Centralized in CO/headend	Near subscribers: pole, façade, cupboard, or field cabinet
Fiber usage	Long feeder fiber runs	Minimal distribution fiber
Initial investment	High CapEx	Lower upfront costs
Operational	New architecture, additional equipment	Same topology as existing HFC, easy FTTx migration
Scalability	Requires chassis planning	Modular, incremental growth
Power efficiency	Concentrated needs (1 kW)	Distributed, lower total draw (<50 W)
System UPS	Substantial	Simple, local
Deployment time	Long construction timelines	Fast rollout to new areas
Management	Centralized hardware control	Centralized software control
Form factor	Large, 17RU rack w/ shelf	Compact, self-contained
Futureproofing	Higher speed required fabric capacity upgrade	Flexi-PON, success-based migration over time, HFC-to-GPON-to-XGS-PON
Capacity	256 ports (8K HP)	8 ports GPON (512 HP)
Blast radius	8K homes requires redundancy	256/512 homes redundancy NOT essential



PARTNER WITH TECHNETIX

Ready to transform your network?

Our technology is backed by dedicated engineers and rapid field support for maximum reliability.

Technetix brings four decades of expertise and a proven track record of successful fiber optic deployments across Europe and the Americas. Our Remote OLT is engineered specifically to meet the challenges - and opportunities - of FTTP network expansion to hard-to-reach locations.

Whether its extending fiber services to rural communities, connecting remote enterprise locations, or optimizing network architecture, our technical teams design solutions tailored to requirement and provide 24/7 technical support for the ultimate customer experience.

Partner with us

- Request a technical consultation with our engineering team.
- Schedule a demonstration of our management software.
- Download datasheets and technical specifications.
- Discuss integration with your existing infrastructure.



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