



Modernizing Outdoor Cabinets for a Hyperscale Cloud Network

A leading U.S.-based hyperscale cloud provider modernized its nationwide access network by upgrading hundreds of outdoor service cabinets from 1G to 10G.

The project focused on upgrading hundreds of outdoor service cabinets to deliver higher bandwidth, faster service activation, and real-time SLA visibility, despite extreme environmental conditions. These temperature-exposed huts host the network's demarcation and aggregation devices, making reliability essential. As demand increased and 1G links reached their limits, the operator initiated a nationwide migration to 10G while preserving its existing operational model.

The Challenge: Scaling 1G in Harsh Environments

The customer had relied for years on BATM Networks 1G demarcation units in outdoor 'huts' serving business and multi-dwelling access. As cloud workloads and tenant demand surged, 1G links became a constraint. The goal was to transition to 10G connectivity without replacing enclosures, changing operating systems, or increasing field maintenance complexity.

Because these cabinets operate in non-conditioned environments - from sub-zero winters to desert heat exceeding 120°F - **reliability, compact design, and hardware-based service assurance** were critical selection factors.

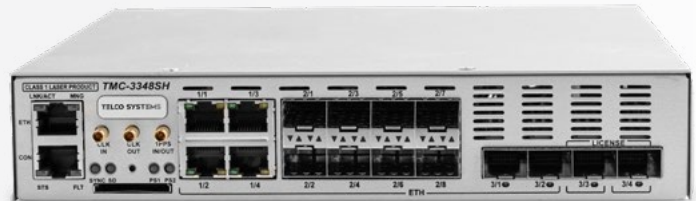
The Solution: TM-3348SH for 10G Edge Demarcation

The provider standardized its upgrade on **TM-3348SH**, a compact, temperature-hardened 10GE demarcation and aggregation device. Chosen for its proven Carrier Ethernet and MPLS OAM toolkit, the device provided immediate 10G capacity and end-to-end SLA visibility, in-line with existing management workflows.

Why the TM-3348SH was the right fit?

- ✓ Compact ½-width 1RU design with redundant AC/DC power supplies and wide-range DC input (–24 to –72V).
- ✓ Hardened temperature range –40°C to +70°C (–40°F to +149°F).
- ✓ Hardware-based OAM (IEEE 802.1ag CFM, ITU-T Y.1731, Y.1564, RFC 2544) for real-time SLA visibility.
- ✓ Carrier-grade resiliency with sub-50ms protection (G.8032, xSTP, LAG/MC-LAG, FRR, BFD).
- ✓ Hierarchical QoS (HQoS) per-service, per-flow for predictable performance.
- ✓ SDN-ready via NETCONF/YANG and Zero-Touch Provisioning integration.

Each hut was equipped with the 3348SH configured as the demarcation point, supporting ring-based 10G protection and built-in service assurance.



The Results:

Reliable 10G Service Delivery Across the Edge

- ✓ 10x bandwidth increase without changing the existing management model.
- ✓ Proven reliability in outdoor, high-temperature environments.
- ✓ Simplified operations, built-in test heads eliminated need for external tools.
- ✓ Real-time SLA assurance reduced troubleshooting time and field visits.
- ✓ Future-ready path to 100GE aggregation with the TM-8104/8106 family.

Why This Case Matters

This deployment showcases how large-scale cloud and carrier operators can modernize outdoor access networks step-by-step, keeping existing processes intact while expanding to 10G.

For any service provider managing unconditioned cabinets or MDU access demarcs, the TM-3348SH offers a proven, compact, and hardened approach to scale bandwidth, improve visibility, and ensure uptime in any environment.

BATM Networks enables global enterprises, communications service providers and system integrators to build and operate sophisticated virtual networks, with powerful edge devices, and endless application schemes. BATM networks products are successfully deployed at large carriers and enterprises around the world, delivering a resilient, secured, and flexible connectivity between thousands of branches and the cloud.

Want to talk with a solution expert? Reach out salesnetworks@batm.com