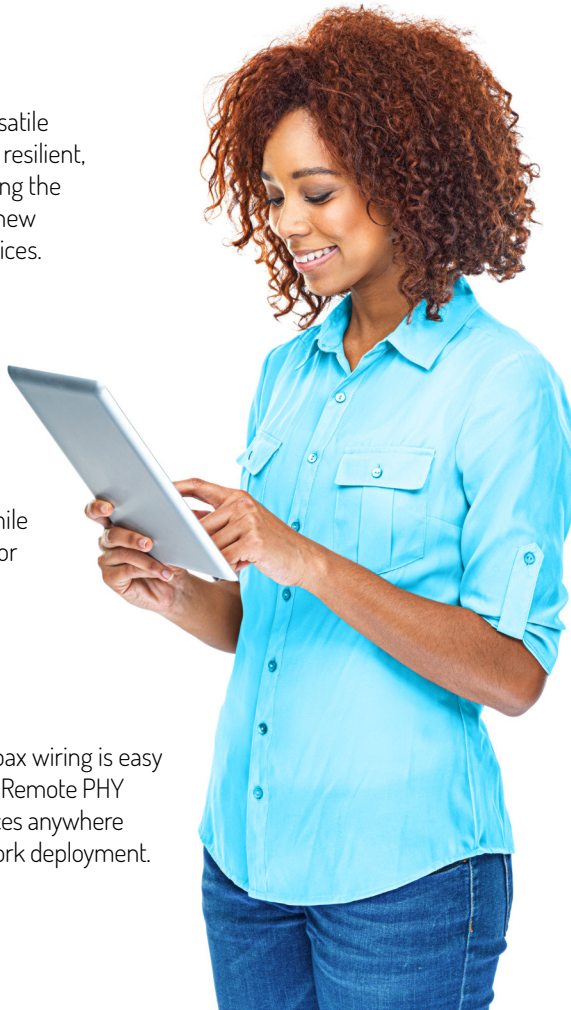
cOS FIBER SOLUTIONS

A comprehensive broadband ecosystem for fiber-to-anything applications

Harmonic's cOS® virtualized broadband platform enables fast deployment of fiber services to more locations over longer distances with less equipment. Powered by the cOS virtualized core software platform, the solutions are proven across more than 23 million active homes served by more than 100 leading operators.

DESIGNED TO GENERATE SAVINGS

The cOS core software, including vBNG functionality, intelligently manages Harmonic's versatile portfolio of network edge devices, as well as an array of third-party devices. It is incredibly resilient, scalable and highly performant. The software platform is constantly optimized for cost using the latest enterprise processors and continuously elevates performance. As servers improve, new capabilities can be added to your network without having to change out physical edge devices.



EXTENDED FIBER BROADBAND SERVICE REACH WITH MINIMAL INVESTMENT

cOS core software powers Harmonic's portfolio of hardened edge devices, including high-density switches, optical line terminals (OLTs) and nodes in various form factors that can be placed in outdoor cabinets, strands, pedestals and walls. The use of long-range coherent optics for extended middle-mile reach and high-output OLTs for the last mile provides the versatility to serve more subscribers from fewer locations without the need for major construction or building maintenance.

BROADBAND TRANSPORT OVER ANY WIRE

Providing 10G fiber services to markets, sites, buildings and complexes with pre-existing coax wiring is easy with a cOS solution. The virtualized core software can simultaneously support OLTs and the Remote PHY devices (RPDs) used in cable broadband, allowing operators to deploy fiber broadband services anywhere and accelerate time to market by mitigating the real-world challenges associated with network deployment.

OPEN ONUS & INTEROPERABILITY

Unlike vendor-locked ecosystems, the cOS platform allows operators to use any third-party optical network unit (ONU) or optical network terminal (ONT). As a result you can purchase ONUs and ONTs based on your business and network requirements, whether related to pricing, availability, port count, voice capability, Wi-Fi performance, weather resiliency or other characteristic critical to ensuring the best subscriber experience. This freedom of choice can also have a positive material impact on your bottom line.

DISTRIBUTED ACCESS ARCHITECTURE & ENHANCED EFFICIENCY

The cOS broadband platform deployed in a distributed access architecture (DAA) leverages virtualization to enhance network efficiency and enable more flexible compute. The cOS core software performs all compute heavy data processing on enterprise servers. The edge device, the OLT, is then more cost-effective, with zero sacrifice to capability. With the same net result that the virtualized core offers, given the volume of OLTs, you can also achieve economies of scale doing the compute on a semi-centralized core.

PROACTIVE NETWORK INTELLIGENCE

Harmonic's cOS Central leverages the cOS core software to continuously monitor the network and its connected devices, delivering real-time data feeds through opt-in streaming telemetry. Integrated artificial intelligence utilizes this information to provide insight into system-wide activity, helping to ensure fewer service issues and increase net promoter scores.

GAIN THE COMPETITIVE ADVANTAGE WITH HARMONIC FIBER SOLUTIONS

MATURE TECHNOLOGY

Trusted by more than 100 leading broadband providers worldwide, Harmonic's Emmy® Award-winning cOS virtualized core software powers high-speed connectivity for tens of millions of subscribers.

NETWORK CONVERGENCE

Simultaneous support for the OLTs used in PON networks and the RPDs used in cable broadband simplifies the delivery of 10G fiber services, even over pre-existing coax.

DEPLOYMENT VERSATILITY

cOS virtualized core software and network edge devices enable the delivery of high-speed broadband for a range of applications, including cellular backhaul 10G enterprise broadband, FTTH and FTTP for MDUs.

PROACTIVE INTELLIGENCE

Ensure consistent service excellence with streaming telemetry data and AI-based actionable insights to optimize performance, as well as reduce truck rolls and trouble tickets.

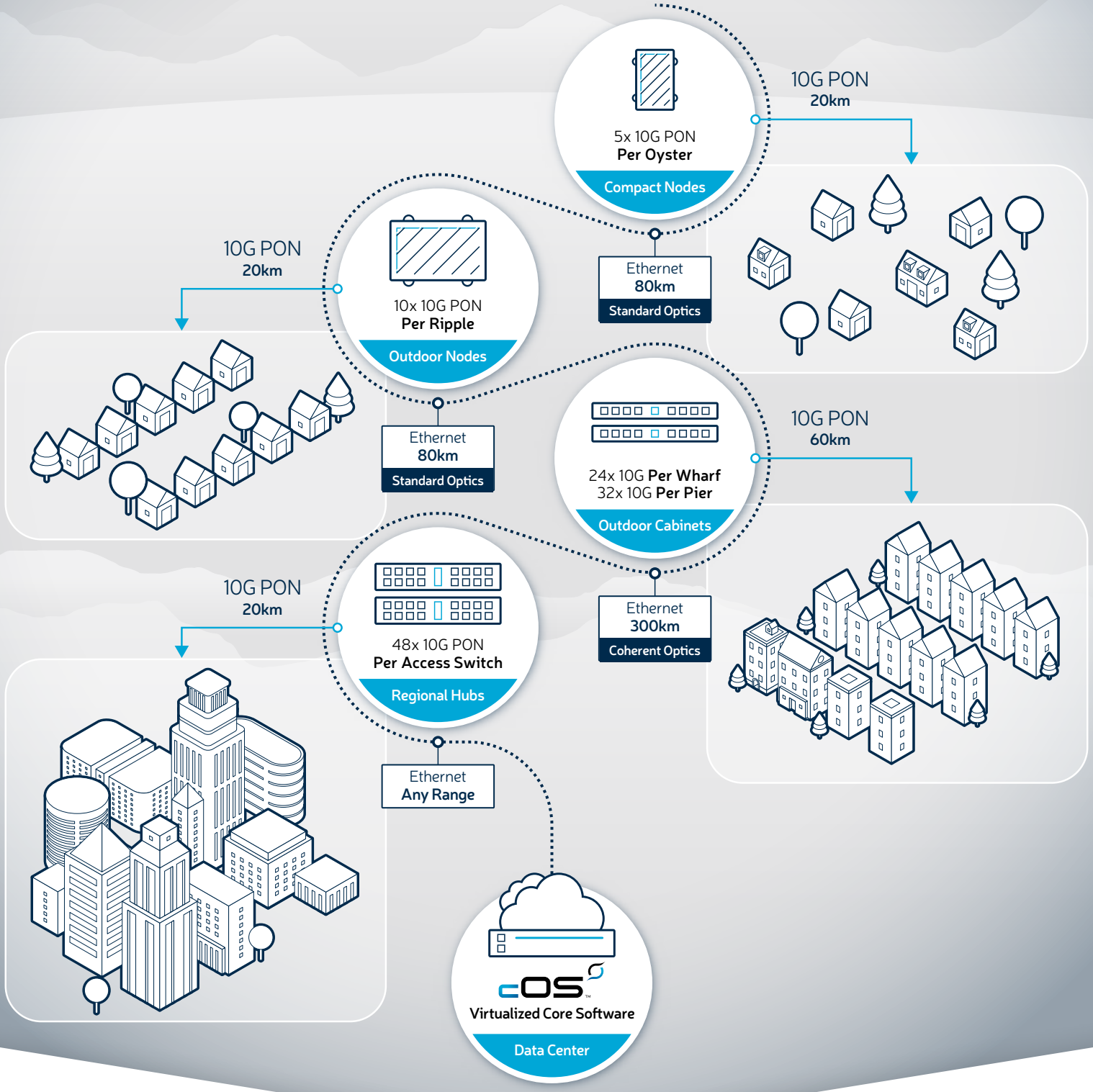
EXTENDED SERVICE REACH

Ultra-long-range coherent optics and high-output OLTs simplify the ability to reach underserved and rural communities in addition to densely populated residential and business districts.

COST-OPTIMIZED OPERATIONS

Minimize new construction, permitting and building constraints, and reduce costs with high-density hardened OLT shelves that are easy to deploy in outdoor cabinets, or remote OLTs in hardened outdoor nodes.

GO FURTHER WITH THE cOS PLATFORM



A COMPREHENSIVE FIBER BROADBAND SOLUTION

Provide high-speed connectivity, superior network performance and an always-on subscriber experience with Harmonic's cloud-native cOS software platform and versatile family of network edge devices.

COS CORE SOFTWARE

The cOS virtualized core software platform powers all Harmonic fiber solutions. It enables multiple paths to high-speed broadband service deployment, fast time to market, easy scalability and five nines availability.

WHARF HARDENED SWITCH

Functioning as a DAA switch (DAAS) and CRE module, the Wharf switch accelerates the delivery of ultra-fast broadband in a diverse range of applications, including fiber-to-anything deployments and DAA network extension.

PIER OLT SHELF

Pier is a high-density, energy-efficient OLT shelf that increases the serviceable area of high-speed fiber broadband networks using fewer plant locations, simplifying the deployment of PON services to underserved and rural communities.

FIN 10G SFP+ BASED OLT MODULE

The Fin SFP+ based OLT is a versatile and compact module that supports XGS-PON or 10G-EPON protocols from cOS-powered nodes. It can be deployed in minutes, making it easy to utilize existing provisioning workflows.

RIPPLE AND OYSTER HARDENED REMOTE NODES

The Ripple hybrid R-OLT outdoor enclosure provides the ability to deliver XGS-PON, Ethernet and DOCSIS services in DAA deployments. The compact, low-power Oyster node is ideal for diverse use cases, including fiber-to-the-premises for MDUs, hospitality, and distributed PON and Ethernet.

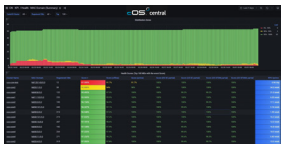
JETTY REMOTE SWITCH

The Jetty 60g-capable switch enables the fast launch of high-speed broadband services to remote communities. It can be deployed as a PON overlay on top of cable services or as a PON island in greenfield areas using existing DAA infrastructure.

PEBBLE-1 REMOTE DAA DEVICE

The versatile Pebble-1 RPD provides full DOCSIS 3.1 functionality and complete support of DAA networks. It integrates seamlessly with different enclosures, easing the ability to deliver high-speed video, data and voice services over coax.

COS CENTRAL



cOS Central offers a powerful set of applications for ensuring optimal network performance, including advanced streaming telemetry that provides real-time intelligence and AI-generated recommendations for proactively resolving issues before they affect service.