

# Infinera Groove G30 Network Disaggregation Platform

*Powering Tomorrow's Cloud Experience*

## ENABLING CLOUD SERVICES WITH BEST-IN-CLASS CONNECTIVITY

The exponential growth of streaming cloud content delivery and the transition of consumer and business services to the cloud continue relentlessly and pose a challenge for high-capacity network connectivity. Since the heart of all cloud services is the network, the success of cloud services depends on the network that interconnects data centers and the network that connects end-users to the services hosted there. Infinera enables Internet Content Providers, Communications Service Providers, Carrier Neutral Providers, and enterprises to meet the surging demand for high speed connectivity with comprehensive mobile and fixed connectivity solutions. Infinera data center interconnect solutions provide the programmable, high speed, secure bandwidth that cloud applications require with best-in-class low power consumption, high density, and flexibility for data center connectivity at the lowest total cost.

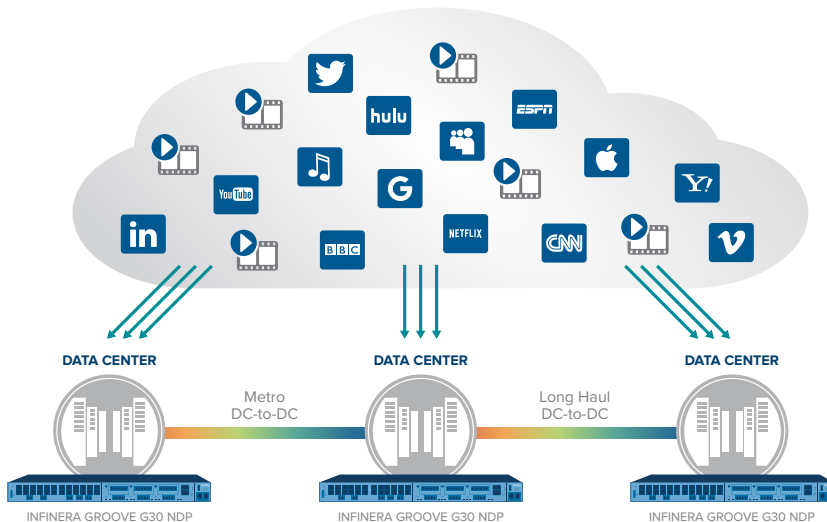


Figure 1: Powering High Performance, Cost-efficient Data Center Connectivity

## PURPOSE-BUILT INFINERA GROOVE G30 NETWORK DISAGGREGATION PLATFORM

The Infinera Groove G30 Network Disaggregation Platform (NDP) is an innovative 1RU modular open transport solution for cloud and data center networks that can be equipped as a muxponder (MUX) terminal solution, as an Open Line System (OLS) optical layer solution, and as a mixed configuration. Purpose-built for interconnectivity applications, the disaggregated Groove G30 delivers industry-leading density, flexibility, and low power consumption.

## BENEFITS OF INFINERA DISAGGREGATED NETWORK SOLUTIONS

- **Enable** high speed connectivity for data, cloud, and telecom customers
- **Enhance** end-user quality of experience with best-in-class connectivity solutions
- **Reduce** total cost of ownership via industry-leading low power consumption and highest density
- **Maximize** optical transmission performance in metro, regional, or long haul applications
- **Accelerate** revenue and service deployment with operational simplicity and open interfaces
- **Improve** service and application performance by extending automation throughout the network



Infinera Groove G30 Open Line System (OLS)



Infinera Groove G30 Muxponder (MUX)

With innovative three-tier modular open plug-and-play capabilities, the Groove G30 can be customized for any required application based on the installation of specific modules, sleds, and pluggables into the common Groove G30 chassis. Infinera supports a wide range of modules for DWDM transmission, muxponder, and line terminal applications. Open Line System (OLS) applications are enabled with optical multiplexer structures, amplifiers, and additional active optical layer functions such as protection switching, integrated OTDR, or tunable dispersion compensation. Designed to meet the scalability requirements of network operators now and into the future, the Groove G30 features the industry's most compelling pay-as-you-grow disaggregated approach that enables the lowest start-up costs, reduced equipment sparing costs, and cost-effective scalability.

## GROOVE G30 OPEN LINE SYSTEM SOLUTION

Purpose-built as a disaggregated and compact optical layer to manage surging data traffic volumes, the Infinera OLS solution is based on the Groove G30 NDP and leverages revolutionary Infinera Pluggable Optical Layer innovation to support coherent and direct detect (PAM4) applications. Key benefits of the modular solution include:

- **Open line system** – prevents vendor lock-in by disaggregating the optical layer from the transmission layer and enables the Groove OLS to be paired with either Groove or third-party transponder solutions
- **Industry-leading optical layer density** – supports up to 96 channels in 1RU with full WDM terminal functionality, including passive and active optical layer functions, delivering three to five times the density over comparable solutions and enabling significant OpEx savings via minimized footprint and power efficiencies
- **Unmatched configuration flexibility** – enables “build your own optical layer” based on plug-and-play configurable technology for coherent or direct detect (PAM4) applications including a diverse range of optical layer functions in compact modular pluggable formats such as multiplexing/demultiplexing, preamplifier, booster amplifier, local add/drop amplifier, optical channel monitoring, optical protection, OSC, OTDR, and tunable DCM functions
- **Open management** – shares common YANG model based NETCONF and RESTCONF and other northbound management and control interfaces of the Groove G30 for fast deployment and ease of integration into any OSS environment

## GROOVE G30 MUXPONDER TERMINAL SOLUTION

The Groove G30 MUX achieves a leading performance advantage by leveraging the latest innovations in high speed optics, photonic/electrical integration, and silicon photonics. By cost effectively powering a better end-user cloud experience and managing growing data traffic volumes to and between data centers, the Groove G30 MUX sets new benchmarks in network performance, including:

- **High Density** – supports up to 4.8 Tbps of line capacity in a high-density 1RU flatpack and a modular, scalable platform driving significant space and OpEx savings
- **Lowest Power Consumption** – less than 0.20 W per gigabyte of duplex traffic, including CFP2-ACO and client optics, enabling 50 percent lower power consumption per 100G versus available competing products, dramatically reducing energy costs and offering OpEx savings
- **Lowest First Cost** – simple pay-as-you-grow system design and mix and match pluggable interfaces deliver the industry's lowest first cost for services from 10G to 400G, enabling cost-efficient deployment and easy capacity scaling as data center traffic increases, as well as the lowest cost for onsite sparing
- **Leading Programmability/Reach** – powered by Infinera CloudWave Optics, the Groove G30 MUX supports dynamically adjustable modulation formats (64/32/16/8/4QAM with many hybrid modulation modes) to deliver cost-optimized optical reach in both metro and long haul applications and enable rapid capacity increases as cloud traffic escalates
- **Ride on Any DWDM** – with the freedom to use any optical line solution and prevent vendor lock-in; the Groove G30 MUX solution can be paired with Infinera optical layer solutions, including the Groove G30 OLS, or third-party line systems that support alien wavelengths

## POWERING A BETTER CLOUD EXPERIENCE

The Groove G30 NDP enables network and data center operators to build their own customized, scalable, secure, and simple to operate transmission and optical line solutions with best-in-class functions, all enabled through open APIs. The Groove G30 NDP reinforces Infinera's commitment to open solutions and delivers on the promise of disaggregation. Optimized to address the staggering growth in video and DCI traffic, the Groove G30 NDP brings game-changing advantages through the latest innovations to enable an unrivaled connectivity solution and achieve new benchmarks in enhanced network performance. Infinera connectivity solutions power a better cloud experience.

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