Coriant Groove™ G30 Disaggregated Platform Update

A Market Impact Report, March 2018

Executive Summary

Coriant today announced new Coherent Multiservice Sleds for the Coriant Groove™ G30 Network Disaggregation Platform.

The high density, 1RU Groove G30 platform began shipping for data center interconnect (DCI) applications in Q2-2016. In early 2017 Coriant followed with the launch of the Groove G30 open-line system (OLS), which supports mux/demux, amplification, monitoring and filtering of coherent and direct-detect wavelengths for Coriant or third-party sources.

The new coherent sleds are backward compatible with existing Groove G30 chassis and represent a significant enhancement in capacity, power and reach. The CHM1T sled module occupies one of four slots of the Groove G30 chassis and supports 3x400G client interfaces and 2x600G 64QAM coherent line-side interfaces. A chassis populated with all four sleds can deliver 4.8 Tb/s client and 4.8 Tb/s line-side capacity for a total of 9.6 Tb/s combined. Integration and collaboration with Coriant's CloudWave™ Optics reduces power to 0.16 watts per gigabit. With 16nm DSP technology, optical transmission distances are significantly extended, including 400G, 50 GHz channel coherent transmission beyond 1,000 kilometers.

Service providers and web-scale Internet operators seeking high-density, multi-terabit, modular, disaggregated optical solutions for data center interconnect, metro, long-haul and submarine transport should consider the enhanced Coriant Groove™ G30 platform with increased capacity and performance.

Key Findings

- Coriant introduces new multi-service sleds enabling 4.8 Tb/s client and 4.8 Tb/s line-side capacity per 1RU, enabling up to 38.4 Tb/s per fiber pair
- Next-gen technology extends high-speed optical reach including 400G, 50 GHz channel, single-wavelength transmission beyond 1,000 km
- Reduces power to 0.16 watts per gigabit
- Flexible programmability with modulation up to 64QAM, symbol rate up to 70 GBaud and FEC up to 27%
- Open software architecture with NETCONF, RESTCONF APIs enables programmability with Coriant Transcend™ or 3rd party SDN control
- Availability Q3-2018 for trials

GROWING DEMAND, INCREASING ADOPTION

ACG Research's optical port tracker estimates that the number of 100G+ coherent DWDM ports deployed in 2017 exceeded 360,000 units or a 42% increase versus 2016[1]. Although Optical DCI represents over 17% of the High-Speed Optical networking market and is growing at 24% y-y in the first three quarters of 2017, the Optical DCI small form factor (SFF) appliance segment, which includes the Coriant Groove™ G30 platform, is growing at a blistering 89% y-y[2].

Coriant has announced a steady stream of customer deployments for the Coriant Grove™ G30 platform, including Telefónica, Windstream and NTT Communications. In total, the Groove G30 is deployed by over 45 customers worldwide, including three of the top-five web-scale providers. Increasing customer adoption and revenue growth is reflected in ACG Research's Optical DCI syndicated service; Coriant has moved into the number four position in the Optical DCI SFF appliance category in Q4-2017[2].

Figure 1: Coriant Groove™ G30 Platform

ENHANCED SLEDS

Two new sled modules are being released. The CHM1T occupies a single chassis slot with 3x400G client and 2x600G line-side interfaces. The CHM2T is dual-slot as it requires additional face-plate real estate for 100G client interfaces delivering 12x100G/3x400G client and 2x600G line-side interfaces. Client optical interfaces support pluggable optics; the line-side optical interfaces are integrated into the modules.

The new sleds utilize the latest 16nm DSP technology, enabling a highly flexible and programmable design. Line-side wavelengths may be programmed from 100G to 600G transmission with modulation ranging from QPSK to 64QAM, baud rates from 30 to 70 GBaud and forward error correction (FEC) schemes from 0 to 27% overhead. Combining the 16nm DSP design with Coriant CloudWave™ optics results in an industry-leading 0.16 watts per gigabit – less than half that of today's commercial offerings.

OPEN PROGRAMMABLE SOFTWARE

Programmable hardware is not usable unless the software enables its configuration. Coriant continues to provide open interfaces on the Groove G30 platform, enabling Coriant Transcend™ SDN control or third-party SDN control and management. The Coriant Groove G30 supports YANG modeling along with NETCONF and RESTCONF application programming interfaces (APIs). Support or gRPC streaming telemetry, OpenConfig and OpenROADM are planned.

CONCLUSION

The Coriant Groove™ G30 network disaggregation platform has been deployed by over 45 service providers and web-scale Internet providers. Customer adoption and revenue growth are reflected in the Groove G30 platform moving into the number four competitive position in the Optical DCI SFF appliance category. Coriant's launch of new sleds for the product with integrated CloudWave optics and 16nm DSP technology delivers 9.6 Tb/s total capacity, power reduction to 0.16 watts per gigabit and extended optical reach for high-speed wavelengths, including 400G, 50 GHz channel, single-wavelength transmission beyond 1,000 km. Service providers or web-scale Internet providers seeking a modular platform for DCI, metro, long-haul and submarine networks should consider the Groove G30 disaggregated platform with enhanced sleds.

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[1] Q3-2017 ACG Research Optical Network Report.

[2] Q3/Q4-2017 ACG Research Optical DCI Report.