



# Apollo 9603

## Powerful and Versatile Access-to-Metro Optical Transport Platform

Apollo 9603 is a powerful and versatile 2RU transport platform ideal for Enterprise, access, and metro edge sites, low degree ROADM nodes, and inline amplification. It accommodates the entire range of Apollo transponder, muxponder, ROADM, and amplification blades. Each of its three slots supports dual 400G density-power-cost-optimized blades, for a total client plus line platform capacity of 4.8T. It also supports double-slot blades that delivers two performance-optimized 800G lines, for the most demanding transport applications.



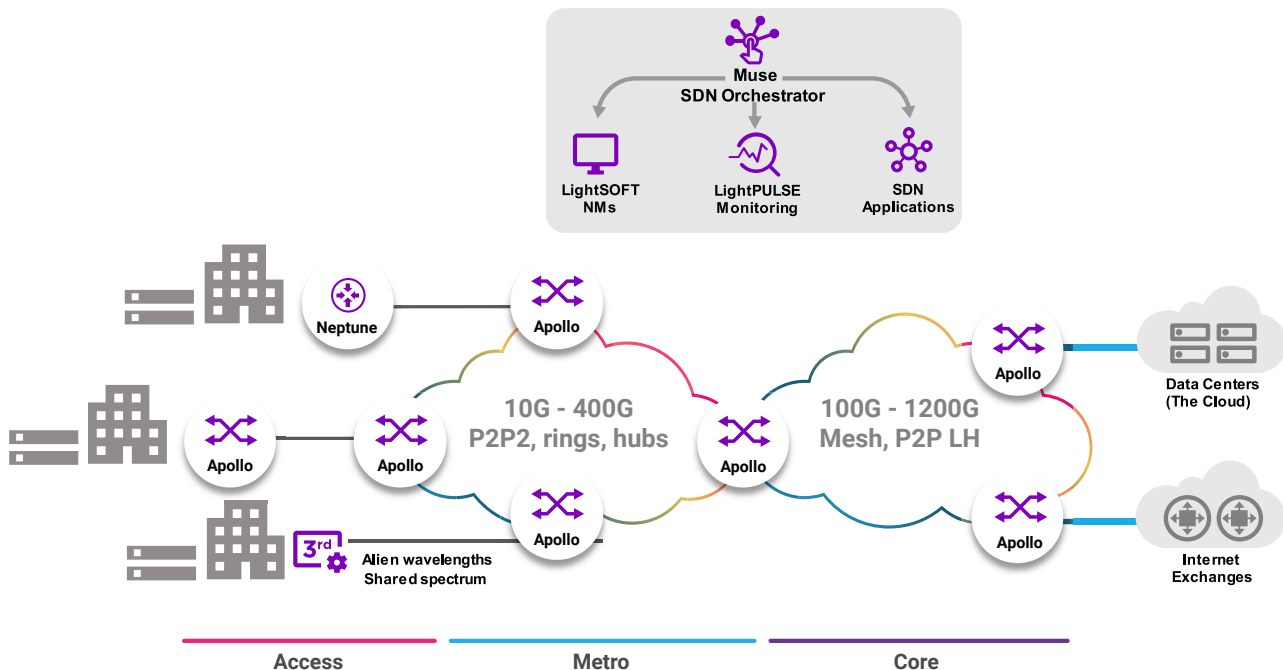
Apollo optical transport and switching platforms combine to deliver high-performance access-to-core optical networking solutions at the lowest cost per bit. Highly modular, they are tailorable into solutions that precisely meet current needs, and can evolve economically to accommodate traffic growth and new technologies. All Apollo platforms support multiservice client interfaces including 400GbE, as well as alien wavelengths, shared spectrum, and packet services. They are controllable through Muse Domain Orchestrator, or directly, via open industry-standard interfaces, and can stand by themselves in disaggregated networks such as for Open Optical Line Systems.

**Programmable**  
for SDN applications

**Open**  
for modular disaggregated solutions

**Self-aware**  
for E2E visibility and operability

**Efficient**  
low power and high density



## Technical Specifications

<b>Topologies</b>	Mesh, hub, ring, linear, point-to-point
<b>Spectrum</b>	Extended C-band Flexible grid at 6.25GHz resolution Super-channel up to 128 channels
<b>Capacity</b>	3 slots for blades, interchangeable across Apollo family of transport platforms Max platform capacity 4.8T (2.4T client capacity plus 2.4T line capacity)
<b>Service (client) interfaces</b>	Ethernet (1GbE, 10GbE, 40GbE, 100GbE, 400GbE) SDH/SONET (STM-1, 4, 16, 64/OC-3, 12, 48, 192) SAN (FC-1, 2, 4, 8, 10, 16, 32, 64) Video (DVB-ASI, SDI 270, HD-SDI 1.5G/3G) OTU 1, 2, 2e, 3, 4; FlexO
<b>Layer 2 interfaces</b>	MEF Carrier Ethernet 2.0 virtual LAN services: E-Line, E-LAN, E-Tree, and E-Access Statistical multiplexing transport aggregation
<b>Security and Encryption</b>	AES256-GCM encryption; Diffie-Hellman key exchange with X.509 node authentication, enhanceable with external QKD keys and with PQC algorithms; FIPS 140-3, level 3; CC EAL2
<b>Network (DWDM) interfaces</b>	OTU1 (2.5 Gbps) OTUC2 (200 Gbps) OTU2/2e (10 Gbps) OTUC4 (400 Gbps) OTU3e (40 Gbps) OTUC6 (600 Gbps) OTU4 (100 Gbps) OTUA (100 to 800Gbps, in 50Gbps increments)
<b>Optical add/drop multiplexers</b>	2-, 4-, 9-, and 20-degree ROADMs (flexible and fixed grid) with OCM and automatic power equalization and Colorless, Directionless, and Contentionless (CDC) wavelength routing Fixed OADM 100% add/drop capacity
<b>Amplification</b>	EDFA, Raman, Hybrid EDFA/Raman, with embedded optical leveling and control Output power: 16 dBm to 26 dBm Gain: up to 40 dB with/without 10 dB midstage
<b>Protection</b>	OCH 1+1, OLP, OMSP, Y Protection, DRI/DNI
<b>Restoration</b>	Spectrum Switched Optical Network (SSON) - spectrum level Wavelength Switched Optical Network (WSON) – wavelength level Automatic Switched Optical Network (ASON) – service level 1+1, 1+1 forever, preplanned/dynamic protection
<b>HW redundancy</b>	All common units/cards: power supply, controllers, fan units
<b>Dimensions</b>	19" width, 88 mm height, 240 mm depth, 3 service slots
<b>Power input</b>	-40.5 VDC to -75 VDC, AC mains
<b>Environmental</b>	Operating temperature: -5C to +55C (short term) 5C to +45C (long term) Relative humidity: 5% to 90% (non-condensing)
<b>SDN</b>	Muse Optical Domain Controller and Applications
<b>Network management</b>	LightSOFT® end-to-end, point-and-click network management
<b>Performance monitoring</b>	LightPULSE™ integrated real-time OSNR and other parameters, and integrated OTDR
<b>Control interfaces</b>	Netconf/Yang open interface
<b>Management Ports</b>	One IMG port, two multi-shelf ports

*Specifications subject to change without notice*

**Contact Us**

We are here to help. Contact us about our IP Wave Solutions.