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FOR IMMEDIATE RELEASE

Ciena Ushers In the Age of the Autonomous, Self-driving Network with WaveLogic Ai

HANOVER, Md. – October 31, 2016 – [Ciena](#)[®] (NYSE: CIEN) today unveiled [WaveLogic Ai](#), the industry's first fully programmable coherent modem that delivers maximum network performance at minimum cost. With its combination of scale, automation and intelligence, WaveLogic Ai is a foundational enabling technology for a self-driving network that is critical in the era of IoT, machine learning and disruptive on-demand services.

WaveLogic Ai sets new performance benchmarks that significantly improve transport network economics and flexibility across a broad set of network applications. Specifically, in metro and DCI applications, it drives 400G single carrier transmission with disruptive power and density metrics. In regional and long-haul networks, WaveLogic Ai establishes 200G and 300G as the new reference line rates for backbone transmission, doubling capacity and dramatically lowering cost per bit. And, in submarine networks, it provides maximum capacity with ultimate reach at distances up to 14,000 kilometers.

WaveLogic Ai offers enhanced intelligence for new levels of visibility into the network that enables autonomous decisions to further improve network performance. Through open interfaces, it monitors and gathers critical networking data, including embedded real-time link measurements, to make intelligent capacity decisions in real time. For instance, WaveLogic Ai helps determine the optimal capacity for any path across the network and can tune to different capacity levels from 100G to 400G in 50G increments.

Additional details:

- WaveLogic Ai advances Ciena's leadership in high-speed optics with the following features:
 - **Massive Scalability:** WaveLogic Ai uses an advanced 400G-optimized technology engine with a higher baud rate to drive twice the capacity per channel, three times the distance at the equivalent capacity, and four times the service density at less than half the power. This

scalability supports 400GE and flexible client services to best match service throughput to flexible line capacity.

- **Open Automation & Intelligence:** WaveLogic Ai is designed to calculate and then make available massive amounts of optical networking performance data through open interfaces that can be mined to build on-demand, programmable networks.
 - **Extensive Tunability:** To better match capacity to system margin, WaveLogic Ai provides unprecedented tunability via open software interfaces that help drive automated and intelligent decisions to reduce operational expense and avoid manual errors.
 - **Previously Unattainable Network Efficiencies:** WaveLogic Ai provides access to real-time link monitoring information, thereby giving operators new levels of network visibility and the ability to accurately engineer the network for optimal capacity and maximum efficiency.
- WaveLogic Ai will be available in the second quarter of 2017.

Executive Comments:

- “Growth in cloud computing, HD video and IoT have greatly changed the way our customers use and rely on the network. To meet current and future demands, the Verizon network needs to be not only scalable, but also have the intelligence and programmability to monitor, control and respond in real-time to meet user demands. The introduction of Ciena’s next-generation WaveLogic platform brings a new paradigm for optical networks and is an important step in our future network evolution.”
 - *Glenn Wellbrock, Director of Optical Transport Planning, Verizon*
- “With exponential growth in science traffic from instruments and facilities around the world, our network needs to be able to adjust in real-time to meet the needs of data-intensive applications and scientific research. In the past, decisions were often made using best-guess or anecdotal information and handled through over-provisioning. We now have a need to use real-time network telemetry and analytics to intelligently engineer the underlying infrastructure for optimal capacity.”
 - *Inder Monga, Executive Director, ESnet*
- “In today’s on-demand world – where new applications can put unexpected demands on the network – operators need advanced optical capabilities that allow them to not only scale for more capacity, but also program the network to make autonomous and intelligent decisions that improve the performance of the network in real-time. While it is impossible to predict the next ‘killer app,’ Ciena’s WaveLogic Ai platform will help position operators to proactively manage user demands and squeeze more bits out of the network using less hardware.”
 - *Ian Redpath, Principal Analyst, Intelligent Networks, Ovum*

Ciena is the pioneer and global market leader in coherent optical transmission systems. Over 100,000 WaveLogic high-speed coherent line interfaces have been shipped and deployed across more than 100 million coherent kilometers worldwide.

Events:

- On Thursday, November 3 at 11 a.m. ET, Ciena will host a webinar, “*WaveLogic Ai – The Foundation of the Self-Driving Network.*” The webinar will feature Ciena’s Rick Dodd, Chief of Open Architecture and Joe Cumello, Vice President of Portfolio and Solutions Marketing. Click [here](#) to register.

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About Ciena

Ciena (NYSE: CIEN) is a network strategy and technology company. We translate best-in-class technology into value through a high-touch, consultative business model – with a relentless drive to create exceptional experiences measured by outcomes. For updates on Ciena, follow us on Twitter [@Ciena](#), [LinkedIn](#), the [Ciena Insights blog](#), or visit www.ciena.com.

Note to Ciena Investors

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