

Ciena's WaveLogic Over Z-Series Interoperability

Evolving customer requirements present new challenges and push the network to adapt to deliver more capacity, flexibility, and performance every day, while keeping prices competitive. This means service providers must figure out new ways to get more from their existing assets and respond to future business needs, but also minimize CAPEX.

In the case of optical transport networks, providers can get more fiber capacity by adding new coherent powered wavelengths over an existing photonics system. The challenge is to do it seamlessly and risk-free, ensuring full interoperability and preserving existing services.

For the past 10 years, service providers have enjoyed the efficiency and operational simplicity of Ciena's Z-Series Packet-Optical Platforms. To help these networks unlock new revenue and opportunities, Ciena is providing lab-verified, fully supported guidelines for the deployment of state-of-the-art WaveLogic™ coherent technologies over Z-Series 100GHz photonic systems. Here is a high-level FAQ on this new, exciting solution.

1. What's new?

Ciena is now supporting the deployment of high-capacity (100G–400G) coherent WaveLogic-powered wavelengths over Z-Series 100GHz grid ROADMs photonics systems. It is a safe and cost-effective way to add further capacity and flexibility to your network.

2. Why go with WaveLogic coherent optics to upgrade capacity?

As a leader in coherent optical technology, Ciena's WaveLogic-based solutions are designed to maximize capacity over any

distance and drive power efficiency to lower the cost per bit of transport. This means you get higher capacity by maximizing spectral efficiency and deploying >100 Gb/s on a single wavelength, as well as utilizing lower-cost QSFP28 handoffs, to drive your cost-per-bit much lower than what is available on the Z-Series embedded optics.

3. Why go with WaveLogic-powered wavelengths?

- With WaveLogic-powered waves, you can add capacity and flexibility in a much more cost-effective way than ripping and replacing your current infrastructure, without any disruption to your existing services. You have a robust photonic system, and WaveLogic-powered waves allow you to maximize your photonic network investment by unlocking new revenue, while minimizing your new investment and operational costs.
- It saves CAPEX. Ciena's solution provides a 'pay-as-you-grow' model so you only pay for the capacity you require, and add capacity as demands increase. In addition, the solution offers hardware variants with integrated Optical Protection Switch (OPS) into each card, giving you full redundancy without the need to buy/install additional hardware.
- It saves OPEX. It fits more functionality into a space/power-optimized form factor so that you can scale larger, but require less space and power. In addition, our Zero Touch Provisioning (ZTP) enables remote provisioning, so anyone can drop the device at a location and plug it in for remote configuration.

4. How is this different from deploying alien wavelengths over my Z-Series optical line system?

Deploying alien wavelengths over an operational optical line system is a delicate task, dependent upon specific system parameters and requiring extensive testing to avoid the disruption of existing services.