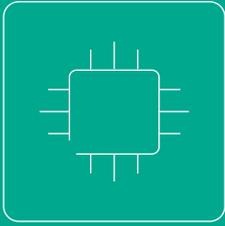


A woman with dark curly hair, wearing a white button-down shirt and a blue lanyard, is shown in profile from the chest up. She is holding a tablet computer and looking towards the left. The background is a server room with rows of server racks and glowing green lights. The overall lighting is dim and blue-toned.

Boost the efficiency and scalability of your edge and aggregation networks with OSEA Filter Connect Lite

Deliver high-bandwidth services while minimising network complexity and costs



To help you meet your customers' growing bandwidth demands in the most efficient way possible, we've partnered with networking systems, services and software company Ciena, to create OSEA Filter Connect Lite.

OSEA Filter Connect Lite delivers 10Gbps and 100Gbps spoke links into a low-power, compact aggregation point at an exchange or datacentre.

It will help you streamline your device footprint, turn up and scale new services for customers faster, and support the next-generation of apps and use cases – including low-latency and 5G mobile services.

Why OSEA Filter Connect Lite for your business?

Meeting enterprise connectivity demands is now a major challenge. While 10Gbps connections were enough for most companies just a few years ago, that's no longer the case.

Instead, the demands of new, high-bandwidth and low-latency apps – combined with multi-cloud and remote working strategies – means that 100Gbps is now a common requirement in enterprise DCI, WAN, and mobile networks.

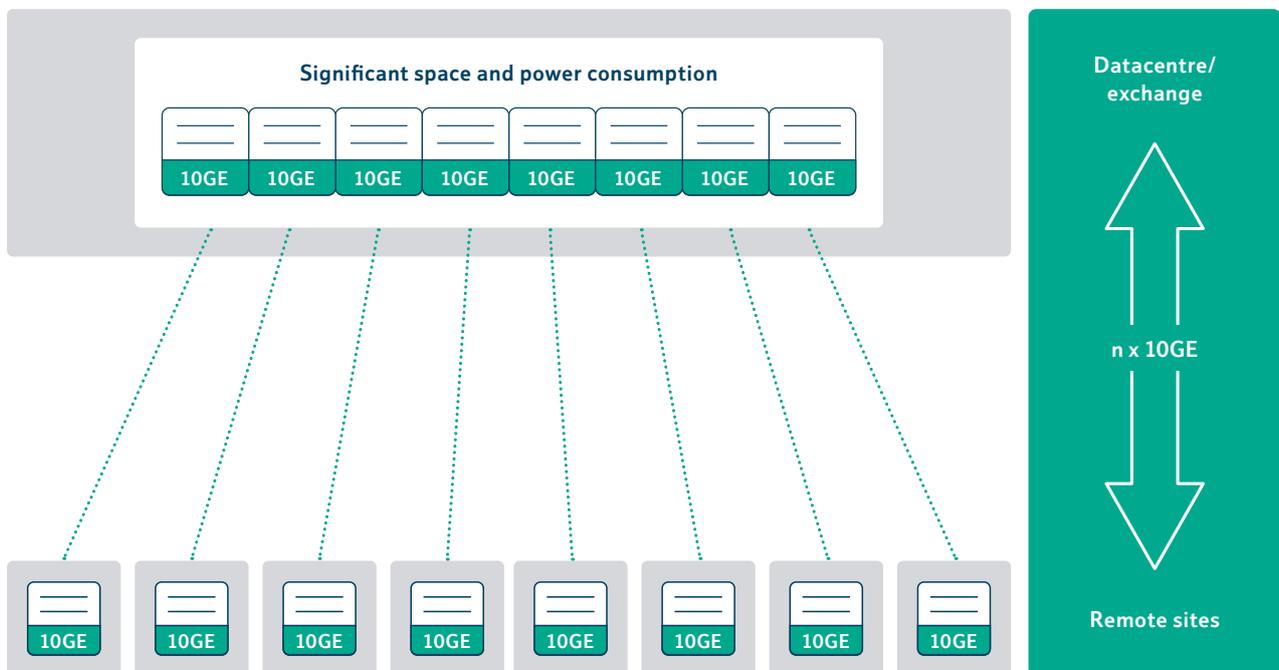
With traditional network architectures, each 10Gbps or 100Gbps Customer Premises Equipment (CPE) connects to a mirrored device co-located at the datacentre.

As your end-customers' bandwidth requirements increase, you often need to stack additional co-located devices on top of one another in the datacentre, increasing your infrastructure footprint and your real-estate, power and cooling and other associated costs.

High infrastructure costs and limited datacentre space ultimately make this approach to network scaling inefficient and unsustainable.

Current set up

10GE traffic from remote sites to datacentre/exchange (aggregation site)

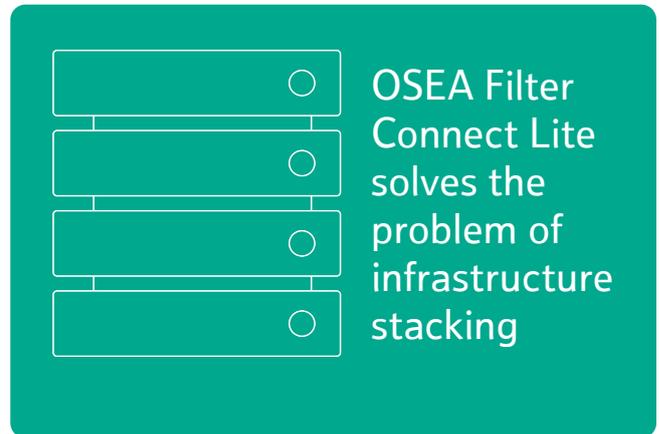


How does OSEA Filter Connect Lite bring an end to device ‘stacking’?

OSEA Filter Connect Lite is a new hub and spoke aggregation solution that helps you solve the challenge of stacking devices at the datacentre.

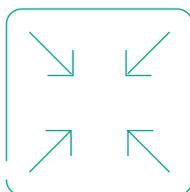
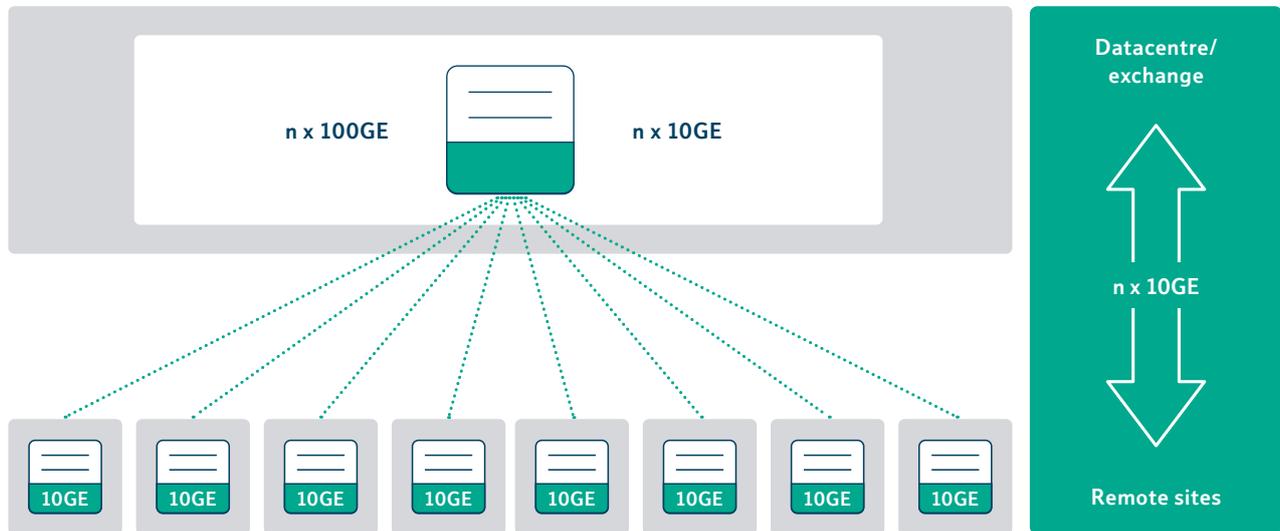
It does this by replacing multiple 10Gbps or 100Gbps devices with a single chassis that aggregates multiple 10Gbps and 100Gbps traffic flows from branch locations, cell sites or head-ends.

Traffic from these sites is delivered directly over our nationwide, Ciena-powered optical network to a single, highly scalable aggregation device at the datacentre.



OSEA Filter Connect Lite

Aggregator configuration



Space reduction



Power consumption optimisation

The OSEA Filter Connect Lite device architecture

To help you maximise the efficiency and scalability of your edge and aggregation networks, we have built OSEA Filter Connect Lite on Ciena's portfolio of Routing and Switching solutions.

The Ciena portfolio includes the Ciena 3928 Ethernet switch, and the Ciena 5160, 5164, and 5171 aggregation switches. In a typical OSEA Filter Connect Lite reference architecture, a number of Ciena 3928 devices are deployed at your (or your customers') branch sites, head-ends, or cell sites – providing up to 2x 10Gbps connections in a single rack unit.

The Ciena 5000-series devices, which are used to aggregate traffic at designated locations such as exchanges or datacentres, offer a maximum of 800Gbps non-blocking capacity (depending on the device). This enables them to support a combination of 10Gbps and 100Gbps lines in a single device as needed.

By consolidating multiple end-customer services on a single device architecture, you can further reduce real-estate and power costs, while also simplifying management and support requirements.

OSEA Filter Connect Lite

Device specifications and capabilities

IRU	IRU	IRU	2RU
  3928 DC DC	  5100 DC DC	  5164	  5171
<div style="border: 1px solid #008080; padding: 5px; background-color: #e0f0f0;"> 10GE aggregation in 1RU 252mm front to rear depth </div> <div style="background-color: #008080; color: white; padding: 5px; text-align: center;"> 2x10GE Client – 2x10G Line </div>	<div style="border: 1px solid #008080; padding: 5px; background-color: #e0f0f0;"> 10GE aggregation in 1RU 252mm front to rear depth </div> <div style="background-color: #008080; color: white; padding: 5px; text-align: center;"> 2x10GE Client – 2x10G Line </div>	<div style="border: 1px solid #008080; padding: 5px; background-color: #e0f0f0;"> 10GE to 100GE aggregation in 1RU 252mm front to rear depth </div> <div style="background-color: #008080; color: white; padding: 5px; text-align: center;"> 1x100GE Client – 20x10G Line 16x25GE Client – 2x200G Line </div>	<div style="border: 1px solid #008080; padding: 5px; background-color: #e0f0f0;"> 10GE to 100GE aggregation in 2RU 100GE Coherent Optics for longer reach 254mm front to rear depth </div> <div style="background-color: #008080; color: white; padding: 5px; text-align: center;"> 4x100GE Client – 40x10G Line 20x10GE + 2x100GE Client – 20x10G + 1x200G Line </div>

Optional IP Router Capability (Adaptive IP)

IP

Temperature Hardened -20C to +65C



***Ext – BITS/1pps/GPS
SyncE – Freq/ToD
1588v2(PTP) – Freq/Phase/ToD
Hybrid 1588v2(PTP)/SyncE**



*Possible future options

Why OSEA Filter Connect Lite for your edge and aggregation network?

With OSEA Filter Connect Lite, you can increase the efficiency of your edge and aggregation operations by orders of magnitude. At the same time, you can scale services for end-customers on demand with no need to ‘stack’ chassis in the datacentre. And you can deliver new 10Gbps and 100Gbps services quickly and simply, based on a predictable OPEX cost model.

As well as all this, you can also deliver a wide range of customer services on the same device infrastructure, future-proofing your business and allowing you to support the next-generation of low-latency and high-bandwidth services – including 5G mobile services.

Key benefits for your organisation include:

✔ Reduce network costs

Replace multiple ‘stacked’ Ethernet devices with a single, highly scalable unit to deliver major efficiency savings and dramatically increase your capacity at datacentres where no space is available for co-locating additional equipment.

✔ Scale services for customers quickly and easily

Aggregate traffic from new sites without adding additional equipment in the datacentre, up to the specified capacity limit of each Ciena 3928 or 5160/5171 device. For example, the Ciena 5171 allows you to aggregate 2 x 100Gbps lines, or combinations of 10Gbps or 100Gbps lines up to the device’s 200Gbps capacity.

✔ Optimise network efficiency

OSEA Filter Connect Lite (100Gbps version) is built on Ciena’s WaveLogic 5 Nano pluggable optics, which delivers the industry’s leading coherent technology in a footprint- and power-optimised form factor. This technology means you can also deliver traffic further without amplification, helping you minimise the overall equipment footprint of your long-haul network, while delivering major cost and efficiency gains for your business.

✔ Combine managed services with Filter Connect

With OSEA Filter Connect Lite, we’ll manage at least one wavelength for you, but you can also gain direct access to the Openreach optical filter if you choose. This gives you the best of both worlds, with us looking after the fibre and managing the wavelengths, while you develop your own services over spare channels.

✔ Adapt easily to future network demands

Implement changes in your network quickly and easily, such as replacing multiple 10Gbps lines with a single 100Gbps line. This helps future-proof your network, as you can increase capacity and change your topology with no need for disruptive, expensive infrastructure upgrades.

✔ Support emerging 5G services

Potential future developments of OSEA Filter Connect Lite will enable you to deploy the 25G connections needed for 5G applications and services.

The solution also offers the synchronisation capabilities needed for 5G, which will help you to roll out new 5G services on your network quickly and easily.

✔ Accelerate time to market for new services

With OSEA Filter Connect Lite, you can order and deliver new 10Gbps and 100Gbps services for your customers in just 35 working days (subject to survey).

This allows you to maximise customer satisfaction, reduce churn, and differentiate your brand in the marketplace based on the time to market and quality of customer service.

✔ Deliver next-generation, low-latency services

With ultra-low-latency connections that support a range of innovative services, you can support consumer-facing services such as augmented and virtual reality, and specific low-latency industry vertical business services in demanding sectors such as financial services and healthcare.

Rapid time to market for new, revenue-generating services

With OSEA Filter Connect Lite, you can deliver new 10Gbps or 100Gbps services to your enterprise customers quickly, with no need to dedicate internal resources to the task.

Simply order the service from us through your existing order process, and we'll arrange for all of the required equipment to be delivered, installed, and configured by Ciena.

The standard lead-time for delivering a new OSEA Filter Connect Lite service is currently just 35 working days, so you can keep pace with your customers' rapidly increasing bandwidth demands, while differentiating your brand based on speed of delivery.

Example use cases



Optimised WAN networking for enterprise offices or branches

Based on efficient transport and aggregation of traffic from multiple corporate sites to a single co-located CPE device (1RU, or 2RU) at the datacentre



Streamlined footprint for mobile backhaul networks

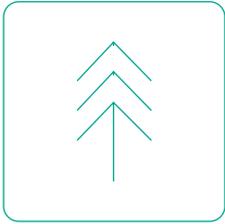
Based on efficient transport and aggregation of traffic from multiple 10Gbps and 25Gbps macro and small cell sites into a single co-located MNO CPE device at the datacentre



Space, power, and feed savings at mobile head-ends

With 10Gbps lines from multiple head-ends running into one or two CPE devices (1 to 4 RU) at the datacentre





Increase your network efficiency and performance – and enhance your customer experience

By addressing the issue of infrastructure stacking, and by supporting multiple end-customer services on a single device architecture, OSEA Filter Connect Lite helps you streamline your network footprint and significantly reduce your real-estate, power, cooling, management, and support costs. What's more, you can deliver new 10Gbps and 100Gbps services for your customers much more quickly and simply, bringing you new competitive advantage in the marketplace.

With options for managed services, or just one managed service on each device, OSEA Filter Connect Lite is ideal for both larger carriers and smaller operators without the internal teams needed to manage network infrastructure in-house.

Finally, but critically, our partnership with Ciena optimises the quality, reliability, performance, and scalability of OSEA Filter Connect Lite – ensuring that the solution meets both your technology and business needs.

If you'd like to know more about how OSEA Filter Connect Lite can benefit your business, please fill in our [contact form](#), or visit openreach.co.uk/optical

openreach.co.uk

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