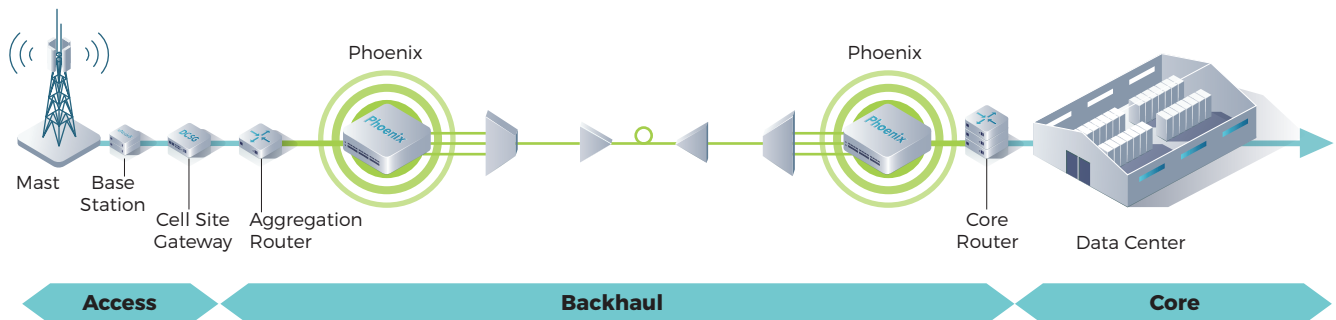# Phoenix at a glance

Phoenix is the first open and disaggregated 400G-capable transponder/muxponder solution for large scale DWDM networks. Compatible with any line system, Phoenix increases MNOs and ISPs transport layer capacity and scalability.

| Access | Backhaul | Core |

Picture: Phoenix the new disaggregated transponder/muxponder

Overview

Phoenix is an open and disaggregated optical transponder/muxponder which transforms traditionally closed DWDM networks into a fully flexible transport layer, easy to operate, control and provision for accelerated time-to-service and optimized total cost of ownership.

Phoenix will allow Operators to implement a Pay-As-You-Grow model where one or more Phoenix(s) can be added to an existing Operator optical network, without service disruption, just connecting Phoenix to any free Mux/Demux port. Phoenix can be used to serve not only internal traffic demands but also to provide customer connectivity services (capacity).

Phoenix consist of commercial off-the-shelf HW,

carrier grade software (NOS) and open/standard based APIs.

The HW system does not restrict or limit the SW that can run on it. In other words, the system allows users to install arbitrary operating systems on it, even if those are implementations from a third-party.

Phoenix is designed to face the current growth for bandwith demand. The device form factor and modularity is envisaged for direct applicability in DCI scenarios, although more and more operators and carrier networks are moving to DC form factors (racking & stacking, power, etc).

In the network

Metro/Backhaul Network

Data Center Interconnection (DCI)
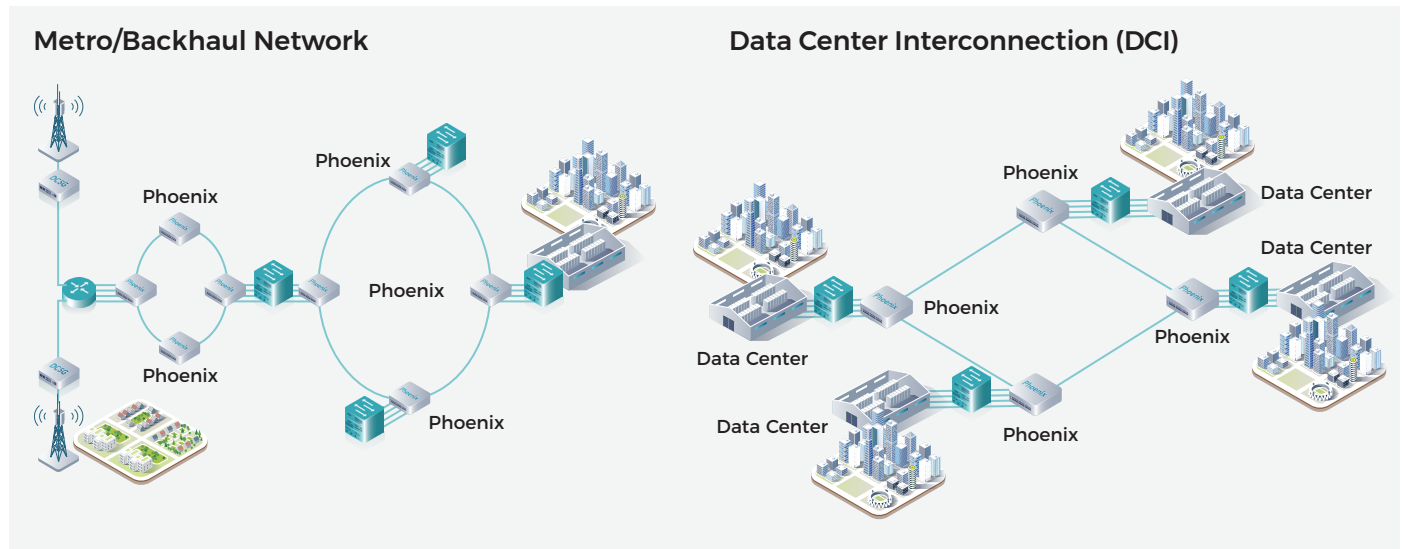
At a glance

What: A 400G Capable layer 1 white box device based on open and disaggregated architecture for exiting metro/backhaul, Backbone network and Data Center Interconnection:

- 1RU pizza box
- Disaggregated components (HW and SW from different technology providers)
- Configurable high-speed line interfaces from 100G to 400G, with different modulation formats & baud rates.
- FEC options
- High speed client interfaces (100G and 400G)
- Full interoperability with 3rd party pluggable modules
- Open APIs for automation: Like Netconf, gRPC and standard models support (OpenConfig/OpenROADM)
- Commercial off the shelf hardware and optimized design to reduce the platform cost (CAPEX)
- Reduced power consumption

Line Interfaces

- 60km to 1750km with 100KM increments
- C&L Band
- 100/200G BPSK, QPSK
- 8/16/32/64 QAM
- 200/300/400G 16 QAM

Client Interfaces

Phoenix shall offer different client interface combinations of 100GE and 400G ports. The solution shall include different sled modules that can be installed based on the customer requirements.

Management Interfaces

- In band management without OSC and using GCC channels
- Out of band management (Using RJ45 port)
- Netconf API, supporting YANG modelling language
- gRPC API for streaming telemetry
- OpenConfig/OpenROADM data models
- T-API data models

What next

- **Join the Open Optical Packet Transport Project Group:** https://telecominfraproject.com/oopt/ **to learn and contribute**
- **Contact us** OOPT-Info@telecominfraproject.com