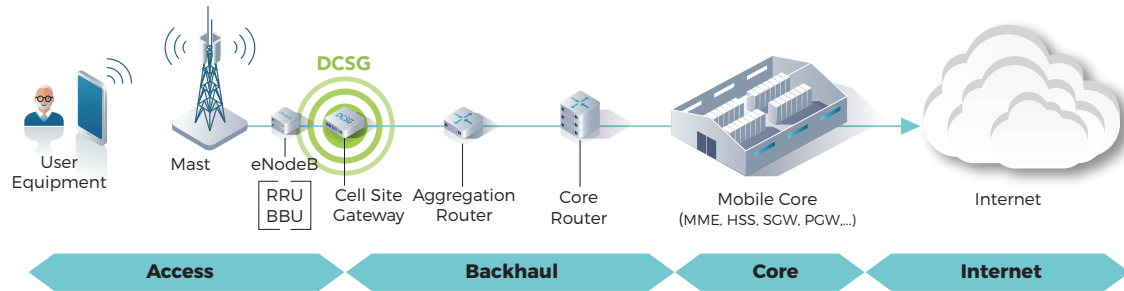


DCSG at a glance

Disaggregated Cell Site Gateways (DCSG) is a family of white-box aggregation routers based on an open and disaggregated architecture for existing 2G/3G/4G and 5G mobile infrastructures.



Picture: Edgecore Network's Odyssey-DCSG Router

Overview

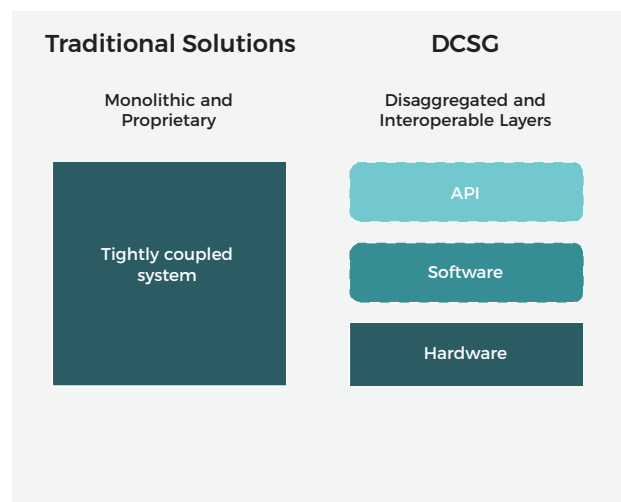
DCSG is a family of 1RU fully-featured cell site router with a wide range of Ethernet connectivity options for client and network sides. As a cell site gateway, DCSG supports Layer-2, Layer-3 and MPLS features - with native time synchronization protocols such as IEEE-1588 v2 and Synchronous Ethernet.

Mobile base stations typically connect to a cell site gateway using RJ45 or SFP Gigabit Ethernet interfaces. However, to accommodate the increased capacity required in modern 4G and 5G networks, base stations will also use 10 Gigabit Ethernet SFP+ interfaces. This makes most cell

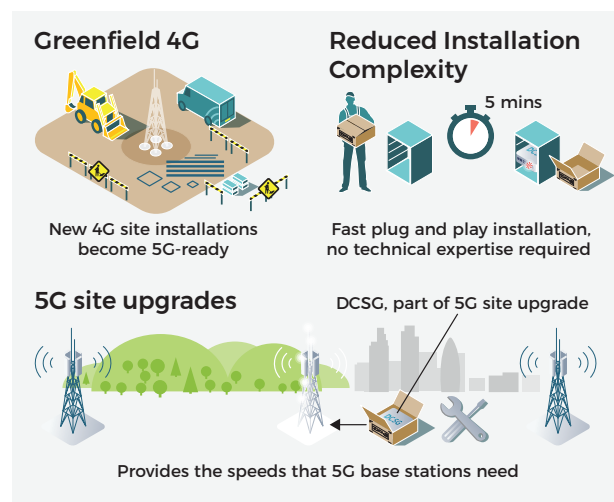
site routers currently deployed unsuitable to carry 5G base station traffic.

The Open Optical & Packet Transport (OOPT) Project Group within the Telecom Infra Project (TIP), in conjunction with several leading global mobile operators - Vodafone, Telefonica, TIM Brasil, BT, and Orange - produced the definition of an open white-box cell site gateway device that operators can widely deploy in their current 2G/3G/4G cell sites, but that also supports the port speeds and densities which will be required for 5G networks.

The developments



Use cases



At a glance

- **What:** A white-box cell site gateway device based on an open and disaggregated architecture for existing 2G/3G/4G and 5G mobile infrastructures.
 - Small physical form factor of 1RU
 - Optimized for 1GE, 10GE, 25GE connectivity; 100GE connectivity
 - Extended operating temperature range for cell sites
 - Front panel display for system operational status and easy deployment
 - Zero-Touch Provisioning
 - Deep packet buffering
 - Pay-As-You-Grow software packaging
- **Costs:** Designed and offered with cost sensitivity for a large number of cell sites in mind, Odyssey-DCSG aims to reduce both CAPEX and OPEX without compromising features, performance, and quality
- **How:** Built based on published DCSG specifications
- **When:** GA solutions ready for production deployments

- **Why:**
 - **5G Readiness:** Current gateways in 4G/3G/2G networks require capacity and connectivity upgrades because 5G base stations will require 10Gbps interfaces and backhaul traffic will grow exponentially
 - **Open & Disaggregated Architecture:** With the open hardware platform architecture, operators now have the options to choose one of several network operating systems offered by software supplier of choice
 - **Ease of Commissioning:** Odyssey-DCSG enables an optimized commissioning experience for field engineers, simplifying the installation process and reducing operational costs

What next

- **Learn more at** telecominfraproject.com
- **Join the Open Optical Packet Transport Project Group, DCSG sub-group:** telecominfraproject.com/open-optical-packet-transport/ to learn and contribute
- **Contact us** with questions or comments: OOPT-Info@telecominfraproject.com

