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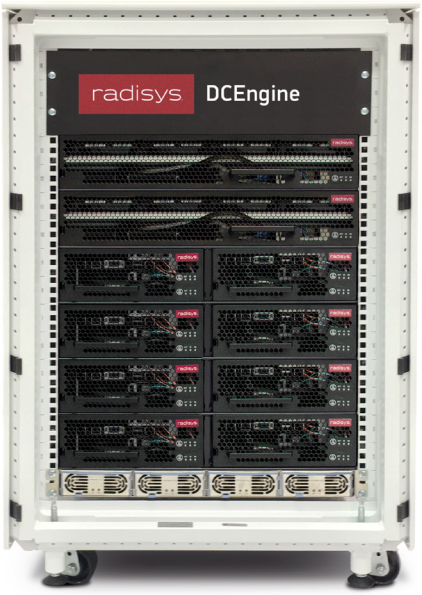
DCEngine
16U System

Datasheet



FEATURES

- **16U Integrated Rack, with flexible configuration of compute sleds or storage sleds**
- **Based on OCP CG-OpenRack-19 specifications**
- **Pre-integrated open source platform and orchestration software**
- **Industry standard 16U x 19" telco rack**
- **Blind mate rear IO simplifies changing of units**
- **NEBS level 3 GR-63-CORE and GR-1089-CORE capable**

BENEFITS

- **Configurable compute, storage, and networking resources for SDN and NFV applications**
- **Higher density, lower cost - delivering hyperscale NFVi**
- **Fast MTTR (mean time to repair)**
- **Pre-integrated open source platform and management software delivers faster service rollout**
- **Can be installed and turned up in days instead of months**

Hyperscale Infrastructure for Communication Service Providers

The new DCEngine framework transforms service provider central offices into SDN-enabled virtualized data centers. DCEngine provides a multi-rack level network functions virtualization (NFVi) and container based infrastructure for hosting thousands of virtualized network functions (VNFs) and applications under open software-defined networking (SDN) control. Service providers use DCEngine to provide pools of compute and storage resources that they can quickly scale to meet their evolving service requirements while improving agility in their service delivery.

DCEngine utilizes the principles of highly efficient open compute platform (OCP) architectures and integrates fully supported open source software. Radisys designed DCEngine to address telco central office demands for seismic, power, emissions and NEBS, which are above and beyond the traditional data center requirements. Radisys' wealth of telecom platform expertise, along with 25+ years of experience providing telecom professional services, makes us the ideal partner for service providers transitioning to the hyperscale data center.

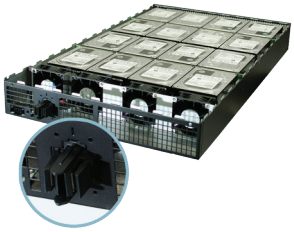
DCEngine 16U System Highlights

- 16U Integrated Rack designed for power, space, and weight limited deployments
- Up to 10 shelves (2U each), configurable with Compute Sleds or Storage Sleds depending on your SDN or NFV application requirements
- Configurable up to 1.2 Petabytes of storage
- Configurable up to 48 Intel® Xeon® processors
- Radisys Professional Services can also pre-integrate your required open source or commercial host OS, hypervisor, container, platform and / or orchestration software
- Recommended platform for Central Office Re-architected as a Datacenter (CORD) Proof-of-Concept (PoC) deployments

Component Overview

- Top of Rack
  32 QSFP28 100GbE ports (32x40GbE, or 128 10/25GbE capable ports)

- Compute Sled
  2U half wide rear view (top opened) showing blind mate connector



- Storage Sled
  2U full width rear view (top opened) showing blind mate connector

Configuration Specifications

CONFIGURATION		DC-ENGINE FEATURES
Rack Configurations	Dimensions	16U Telco rack 1000mm depth, 600mm width
	Power	1U power conversion shelf, with 4 PSU bays, each rated at 2500W, 90-264VAC Input
	Dataplane Switch	1U (1 or 2), 32x 40GbE, or 128 10/25GbE for network traffic
	Management Switch	1U (1) Management / IPMI switches, 48 SFP+ 1/10GbE, 6 QSFP+ 40GbE Ports (up to 72 10Gbe available ports)
	Payload Shelves	Frame supports up to 6 x 2U shelves, selectable for server or storage sleds
	Compute Shelf	2U shelf holds to 2 x 2U half wide server sleds
	Storage Shelf	2U full width carrier
Compute Sled	Server Board	Dual socket Intel Server Board
	Configuration	Each half width sled supports 2 server boards, each server has 2 CPU sockets
	CPU	2 x Intel E5-26xx processors per server board to suit specific deployment power limits
	RAM	8 DIMM sockets per processor. DDR4 288-pin PC4-2133, 1.2V with ECC, up to 512GB / sled
	Storage	2 x 2TB 2.5" SSD plus 1 x M.2 for boot / OS per server board
	NIC (per server)	Dual 10 / 25G NICs (data) 1GbE IPMI interface per server.
Storage Sled	Server Board	1 x Intel Server Board S2600TP
	CPU	2 x Intel E5-26xx processors
	RAM	8 DIMM sockets per processor. DDR4 288-pin PC4-2133, 1.2V with ECC, up to 256GB per sled
	RAID Controller	LSI / Intel 24 channel RAID / JBOD controller
	Local Storage	2 x 1TB 2.5" SSD plus 1 x M.2 for boot / OS
	Mass Storage	16 x 3.5" HDD or SSD, up to 160TB per sled
	NIC	Dual 10 / 25G NICs (data) 1GbE IPMI interface per server.
Software	Operating System	Linux : Redhat, CoreOS, Ubuntu, others available on request
	Switching	Cumulus 2.5.4
	Management Tools	System information retrieval (sys-info, sys-cfg), firmware tools (flsh-updt), diagnostics and event logging, console. BMC supporting including IPMI2.0, DCMI, Smash, WebUI Restful API
Operation and Compliance	Environmental	Designed for NEBS level 3, 0-50 deg C operating (short term). Target requirements of GR-63-CORE and GR-1089-CORE
	Regulatory	FCC and CE compliant to class A (safety and emissions/immunity)
Part Numbers (others available on request)	DCE-CORE-2-2-16U	Rack, 1x power shelf each with 4x PSU, Power Cables, 1x IPMI Switch, 2x 3.2Tbps dataplane switch, 4 compute + 2 storage shelves. Configuration supports up to 32 processors and 388Terabyte of storage

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