

Redstone™ D2020

10GbE Top of Rack Data Center Switch



Celestica's Redstone D2020 is a 64 port capable 10GbE switch in a compact 1U form factor, ideally suited for high performance and programmable data center environments. The D2020 provides 48 SFP+ 10GbE ports and 4 QSFP+ 40GbE ports, and each 40GbE port can be configured as 4x10GbE up to a total system limit of 64 10GbE ports. It delivers excellent low latency and power efficiency in a PHYless design, while offering high reliability features such as redundant and hot swappable power supplies and fans.

The Redstone D2020 supports current and future data center requirements with an ONIE installer for 3rd party network operating systems and compatibility with Software Defined Networks via OpenFlow 1.3.1¹.

PHYSICAL DIMENSIONS

Height	• 44 mm (1.73") 1 EIA unit
Width	• 438 mm (17.3")
Depth	• 431 mm (17")

FEATURES

Interfaces	• 48 SFP+ 10GbE Ports, 4 QSFP+ 40GbE Ports (64 10GbE ports optional), Management (RJ45) and Console Ports (RJ45), USB (Type A), optional 16 ports with 2/4/8G Fiber Channel ²
Switching Capacity	• 1.28Tbps, 9MByte Buffer
Latency	• <800ns port to port (cut-through mode)
EEE	• 802.3az
Data Center	• DCB, TRILL, Virtual Port (VM) Switching
CPU	• P2020 800MHz-1.2GHz Dual-core PowerPC, 2-4GB ECC DDR3-667, 1GB NAND Flash, 512Mb NOR Flash and optional internal eUSB or SD card expansion
Routing Tables	• MAC 128K, L3 16K, TRILL Bridges 4K, Virtual Ports 4K
Content Aware Processing	• Layer 2-7 packet classification, FCoE
Transceivers	• SFP: GbE optical / copper, SFP+: 10GbE SR to 300m, LR to 10km, and DAC (to 7m passive), QSFP+ (up to Class 4 power): SR4 to 150m, LR4 to 10km, and DAC (to 5m passive)

LAYER TWO HARDWARE SUPPORTED

- ETS, PFC, CN/QCN, FCOE
- 802.3ad LACP
- 802.1D STP, 802.1w RSTP, 802.1s MSTP, TRILL
- 802.1Q VLAN 4096, SVLAN, PVLAN
- 802.1 Q-in-Q double-tagged VLAN
- 802.1P L2 Prioritization
- 802.1AB LLDP
- 802.1x
- IGMP/MLD Snooping
- PBB/PBB-TE
- Mirroring
- Storm Control

LAYER THREE HARDWARE SUPPORTED

- Hardware-based IP Forward
- IPv4/v6 Routing Protocols: OSPF, RIP, IS-IS, BGP
- VRF
- ECMP/WCMP, VRRP
- MPLS, VPWS, VPLS, L3 MPLS
- IPv4/v6 Tunneling, GRE Tunneling
- IGMPv1/v2/v3
- IP Multicast: PIM-SM, PIM-DM, PIM-SSM

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TRAFFIC MANAGEMENT

- 10 CoS Queues per Port
- 2-Rate, 3-Color Policing
- SP, RR, WRR, WERR Queuing
- ACL-based packet classification, shaping and scheduling
- DSCP

POWER AND COOLING

- Power consumption 143W measured with SR/SR4 optics, 1 + 1 redundant, hot swap PSUs
- 100 - 240VAC auto-ranging, 47-63Hz or 180-300VDC auto input
- 4+1 redundant fans, front to back, or back to front system cooling

ENVIRONMENTAL: OPERATING

- | | |
|-------------|---------------------------|
| Temperature | • 0C to 45C |
| Humidity | • 5% - 90% non-condensing |

APPROVALS

- | | |
|--------|---|
| EMC | • CN(GB9254-2008), EU(EN55022, EN55024), FCC, VCCI, CCC |
| Safety | • IEC60950-1
• GB4943
• UL/CSA
• CB
• CCC |

ORDER INFORMATION

- D2020-1.2G-F2B Front to Back AC/HVDC
- D2020-1.2G-B2F Back to Front AC/HVDC

CONTACT US

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¹ Planned release.

² Available on D2012 model.

Note: All specifications and figures are subject to change without prior notice.