

SAS-3 and U.2* (SFF-8639) Backplane Connectors

molex[®]

Developed for optimized cost savings and design flexibility, Molex SAS-3 and U.2 Backplane Connectors provide high-speed compatibility for future upgrades without the need for footprint revisions

Features and Benefits

Dual-port, SAS-3 connectors meeting 12 Gbps data rates

Makes possible 1 million IOPS (Input/Output Operations Per Second), leaving ample headroom for further speed advancements in storage devices

12 Gbps SAS and 8 GT/s[†] PCI Express (PCIe) signalling (all U.2 Connectors)

Combine the latest enhancements of SAS 3.0 and U.2 technologies to suit Solid State Device (SSD) applications

Common PCB footprint for right-angle SAS-3 and U.2 receptacles

Enables footprint compatibility for future connector upgrades without PCB revision costs

Wide range of mating height and PCB-mounting and retention configurations

Offers greater flexibility in designing host-side server storage applications

Drop-in replacement for competing makes in the storage device market

Available for multi-sourcing

Applications

Data/Computing

High-end computing
RAID/Storage

Telecommunications/Networking

Infrastructure
Networking



Data Centers



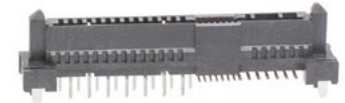
Telecommunication Infrastructure



RAID / Storage

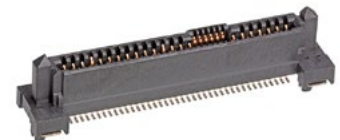


A



B

SAS-3 Dual-Port Vertical Backplane Receptacles:
A. SMT (Series 78715)
B. Hybrid (Series 78716)



C



D

U.2 (SFF-8639) Connectors, SMT:
C. Vertical Receptacle (Series 78757)
D. Right-Angle Plug (Series 78758)

[†]The SSD Form Factor Working Group renamed the SFF-8639 (or SAS/PCIe) connector to U.2 (pronounced as "U-dot-2.")

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Specifications

REFERENCE INFORMATION

Packaging: Tray or Tape and Reel
UL File No.: E29179
CSA File No.: LR19980
Mates With: series 78719 / 78720 / 78728 / 78795 / 78715 / 78716 mates with SFF 8482, SAS 8680 Plug, SATA Plug; series 78758 mates with Molex SAS or U.2 receptacles
Designed In: Millimeters
RoHS: Yes
Halogen Free: Yes

ELECTRICAL

Voltage (max.): 30V
Current (max.): 1.5 per contact
Contact Resistance: 30 milliohms
Dielectric Withstanding Voltage: 500V AC
Insulation Resistance: 500V DC; 1000 Megohms

MECHANICAL

Contact Retention to Housing (min.): 90N
Mating Force (max.): 25N
Unmating Force (min.): 5N
Durability (max.): 500

PHYSICAL

Housing: Liquid Crystalline Polymer, Glass Filled
Contact: Copper (Cu) Alloy
Plating:
Contact Area (min.) — 0.76µm Gold (Au)
Solder Tail Area (min.) — 2.54 Matte Tin (Sn)
Underplating — 1.27µm Nickel (Ni)
PCB Thickness: 1.60 to 3.00mm
Operating Temperature: -0 to +55°C

Ordering Information

Series No.	Product Name	Component	Configuration	Termination
78715	SAS-3	Receptacle	Vertical	SMT (Inline Footprint)
78716				Hybrid (Through-Hole and SMT)
78719				Through-Hole
78720				Press-Fit
78728				SMT (Gull-Wing Footprint)
78795				SMT (Inline Footprint)
151039				SMT (Gull-Wing Footprint)
78757	U.2	Receptacle	Right Angle	SMT
78758		Plug		

www.molex.com/link/12gsas.html