

# MicroBeam Connectors and Cable Assemblies >

Delivering low-profile and high-performance connectivity for high-density, near-chip applications, MicroBeam Connectors and Cable Assemblies deliver up to 112Gbps with exceptional signal integrity (SI) and 12 or 16 differential pairs (DPs). The compact design, with a low overall mated height of less than 7.00mm, reduces interference with other components while improving airflow and thermal management.

## ADVANTAGES AND FEATURES

### Optimizes thermal management

The low-profile mated height of less than 7.00mm enables the conductor to sit underneath heat sink components, maximizing airflow to improve cooling.

### Ensures stable performance

With a robust design featuring a metal cage and cover, the connector can withstand high mechanical forces to help prevent damage and maintain consistent operation.

### Simplifies assembly and maintenance operations

The easy and intuitive design can be inserted, mated and unmated without tools or specialized training, reducing system downtime and helping eliminate mis-mating errors.

Number of Circuits	12 or 16 DPs
Data Rates	Up to 112Gbps
Mated Height	<7.00mm
Current (max.)	0.75A per pin
Cable Wire Gauge	31 AWG twinax
Operating Temperatures	-40 to +85°C

### Delivers high data rates and excellent signal integrity

Data rates of up to 112Gbps, supported by twinax cable that optimizes SI, enable customers to meet market demands with BiPass cabled connectivity.

### Supports high-density architecture

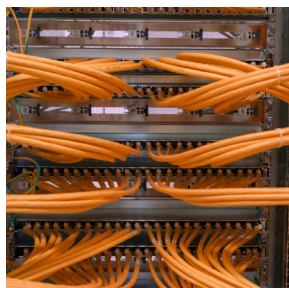
The miniaturized design enables placement of several connectors around the chip, offering more high-speed channels.



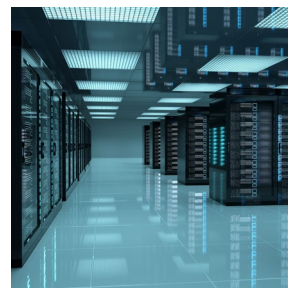
## APPLICATIONS

### Networking

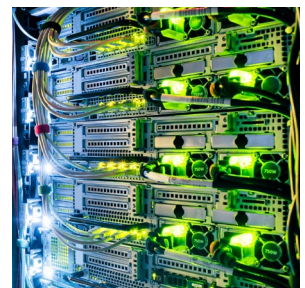
Ethernet switches  
AI hardware  
High-speed cabling to the panel



Ethernet Switches



AI Hardware



High-Speed Cabling to the Panel

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## SPECIFICATIONS

### Reference Information

Part Series: Socket—219030  
Cable Assembly—221633, 221635  
Packaging: Tape and reel (socket)  
Designed in: Millimeters  
RoHS: Yes  
Halogen Free: Yes

### Electrical

Voltage (max.): 29.9V RMS  
Current (max.): 0.75A per pin  
Contact Resistance (max.):  
20 milliohms (from initial)  
Dielectric Withstanding Voltage: 300V AC RMS  
Insulation Resistance: 1,000 Megohms  
Impedance: 92.5 Ohms

### Environmental

Temperature Rise (max.): 85°C (0.75A through  
all signal contacts connected in series)  
Temperature Life: EIA-364-17 method A, cond. 4  
Thermal Shock: EIA-364-32 method A, cond. 1  
Mechanical Vibration: EIA-364-28, cond. VII  
Mechanical Shock: EIA-364-27, cond. A  
Cyclic Temperature and Humidity: EIA-364-31,  
method IV  
Mixed Flowing Gas: EIA-364-65 class IIA  
Thermal Disturbance: EIA-364-110, cond. A,  
duration A  
Dust: EIA-364-91

### Mechanical

Mating Force (max.): 50N  
(socket cover closing force)  
Unmating Force (max.): 30N  
(socket cover opening force)  
Durability (min.): 100 cycles

### Physical

Housing: LCP  
Wafers: LCP  
Cable Header Cover: Stainless Steel  
Socket Cover and Side Shields: Stainless Steel  
Cable Header Protective Cover: PET transparent  
Contact Terminals: Copper Alloy  
Plating: Contact Area—0.76µm min. Gold over Nickel  
Socket SMT Tail Area—Flash Gold over Nickel  
Socket Side Shields—Solderable Nickel  
Cable: 31 AWG twinax  
Operating Temperatures: -40 to +85°C