

MEG-Array® 32 Gb/s High-Density BGA Connector

INDUSTRY-PROVEN BGA ARRAY CONNECTOR

The MEG-Array® Mezzanine Connector system provides the high-density and high-speed benefits of a large array supported by the reliability and low costs of standard surface mount PCB assembly.

1.27 mm x 1.27 mm array of discrete circuit contacts allows flexible ground distribution to optimize high-speed signal integrity at speeds up to 32 Gb/s. MEG-Array® is offered in a variety of PCB mezzanine stack heights.

Amphenol's advanced manufacturing supports a patented BGA interconnect design. Multiple in-process vision systems monitor BGA contact integrity including solder sphere size, location, and co-planarity plus other critical-to-function attributes.

- High-density, high-speed, dual-point contacts
- 32 Gb/s performance documented for 4 mm and 14 mm stack heights
- 1.27 mm x 1.27 mm grid provides 71 contacts per cm² density
- Wide range of sizes and PCB stack heights
- Self-alignment and leveling for multiple connector use



TARGET MARKETS



FEATURES

- High-density, high-speed, discrete contact, array connector in the revolutionary BGA platform
- Flexible ground distribution
- 32 Gb/s differential pair performance documented for 4 mm and 14 mm stack height
- Pin counts 81 to 528 positions
- Multiple in-process vision systems
- Online s-parameter files and signal integrity performance reports
- Dual-point, long wipe contacts
- Choice of six stack heights from 4 mm to 14 mm and choice of eight sizes from 81 to 528 positions
- Optimized PCB routing
- Qualifies Telcordia GR-1217-CORE and NPS-25298-2 options
- 22+ year-old solder joint reliability per IPC-SM-785A
- Precious metal plating options

BENEFITS

- Legacy market-proven and trusted solution
- Optimized for high-speed signal integrity
- Scalable, high data rates
- Fits a large range of customer applications
- BGA and contact integrity
- Improves design accuracy and time-to-market
- Easy, reliable mating
- The wide range of sizes and PCB stack heights increase mechanical design flexibility
- Enhances electrical performance
- Time-tested reliability record
- Long-term reliability assurance from quality organizations
- Satisfies varying customer needs for environmental resistance

TECHNICAL INFORMATION

MATERIAL

- Housing: Liquid crystal polymer
- Contact: Copper Alloy
- Solder sphere: Lead-free

ELECTRICAL PERFORMANCE

- Insulation resistance: 1000 mΩ min.
- Dielectric withstanding voltage: 200 VAC max.
- 2.0 A < 30 °C Δ T (single contact energized)

MECHANICAL PERFORMANCE

- Durability: 50, 100, or 200 cycles
- Contact Wipe: 0.80 mm Nominal
- IPC-SM-785 Solder Joint Reliability: 22.1 year product end-of-life

ENVIRONMENTAL

- Telcordia GR-1217-CORE

APPROVALS AND CERTIFICATIONS

- UL File Number: E66906

SPECIFICATIONS

- Product specification: GS-12-100
- Application specification: GS-20-033

PACKAGING

- Tape and Reel

TARGET MARKETS/APPLICATIONS



Automotive



Transmission
Access
Switching
Optics
Networking



Consumer



Servers
Storage



Industrial controls & equipment
Analytical & diagnostic



Medical

PART NUMBER

SIZE	TYPE	MATED HEIGHT							
		4.0 mm	5.5 mm	6.0 mm	8.0 mm	10.0 mm	11.5 mm	12.0 mm	14.0 mm
81 POSITION (9X9)	Plug	55714 / 0 mm							
	Receptacle	55715 / 4 mm							
100 POSITION (10X10)	Plug	84512 / 0 mm							
	Receptacle	84513 / 4 mm							
200 POSITION (10X20)	Plug	84516 / 0 mm		84516 / 0 mm	84516 / 0 mm	84530 / 6 mm		84530 / 6 mm	84530 / 6 mm
	Receptacle	84517 / 4 mm		55724 / 6 mm	84535 / 8 mm	84517 / 4 mm		55724 / 6 mm	84535 / 8 mm
240 POSITION (8X30)	Plug	74213 / 0 mm		74213 / 0 mm					
	Receptacle	74217 / 4 mm		55755 / 6 mm					
300 POSITION (10X30)	Plug	84500 / 0 mm	84500 / 0 mm		84500 / 0 mm	84578 / 6 mm	84578 / 6 mm		84578 / 6 mm
	Receptacle	84501 / 4 mm	84502 / 5.5 mm		84553 / 8 mm	84501 / 4 mm	84502 / 5.5 mm		84553 / 8 mm
320 POSITION (10X32)	Plug	10123981 / 0 mm							
	Receptacle	10123982 / 4 mm							
400 POSITION (10X40)	Plug	84740 / 0 mm		84740 / 0 mm	84740 / 0 mm	84520 / 6 mm		84520 / 6 mm	84520 / 6 mm
	Receptacle	74221 / 4 mm		74388 / 6 mm	74390 / 8 mm	74221 / 4 mm		74388 / 6 mm	74390 / 8 mm
528 POSITION (12X44)	Plug			10022671 / 0 mm					
	Receptacle			10026846 / 6 mm					

Find part number details using the search box on www.amphenol-cs.com

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