

Applications



Industrial Automation



Medical Imaging



Mil-Aero



High-Speed



Low Profile



Stacking

Introducing Hirose's IT18 Series—an advanced mezzanine connector for next-generation COM-HPC® embedded computing. With a 0.635mm pitch and 400 positions, it achieves high density while supporting PCIe Gen5, Gen6, & 100Gb Ethernet.

Stacking height options of 5mm and 10mm, combined with an open pin-field, give designers layout flexibility. A BGA pin-in-ball structure enhances mounting reliability, making the IT18 ideal for embedded computing, servers, industrial automation, and medical imaging systems where space-saving, high-speed connectivity is critical.

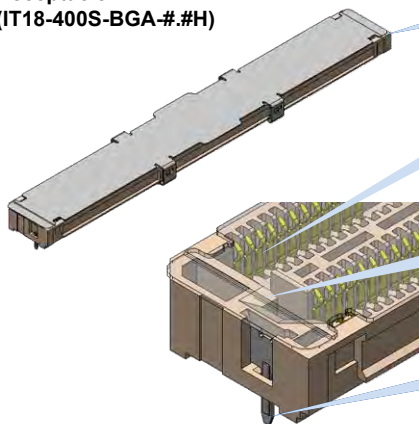
KEY BENEFITS OF THE IT18 SERIES INCLUDE:

- COM-HPC® standard compatible mezzanine connector for next-gen embedded systems.
- Supports PCIe Gen5 (32GT/s), Gen6 (64GT/s PAM4), and 100Gb (4x25Gb) Ethernet.
- Ultra-fine 0.635mm pitch with 400 positions, delivering super high-density connectivity in compact board layouts.
- Flexible 5mm and 10mm stacking heights with an open pin-field design, adaptable to a wide range of board layouts.
- BGA ball attachment with pin-in-ball structure provides high mounting reliability.



Features of Hirose Design COM-HPC® Connectors

Receptacle
(IT18-400S-BGA-#. #H)



Metal Cap to

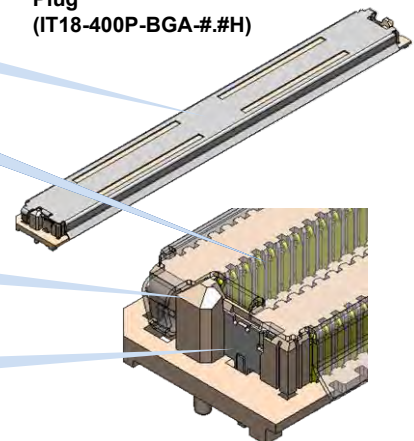
- Reduce warpage
- Protect contacts from flux

Contact protection design

Large guide shape to support proper mating operation

Retention tabs to prevent cracks to solder balls
✓ Designed to match the COM-HPC® recommended footprint

Plug
(IT18-400P-BGA-#. #H)



CLICK HERE TO ORDER
SAMPLE NUMBER:
US-IT18SAMPLE-26

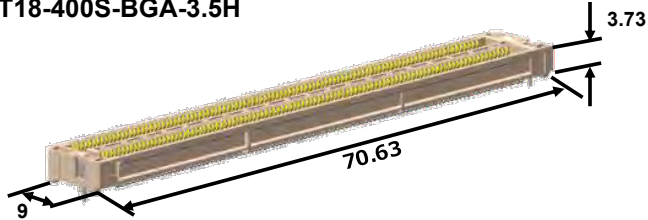
Other Features

- High-speed Performance: Excellent Insertion Loss and Return Loss
- Current Capacity: High-conductivity materials help reduce temperature rise.

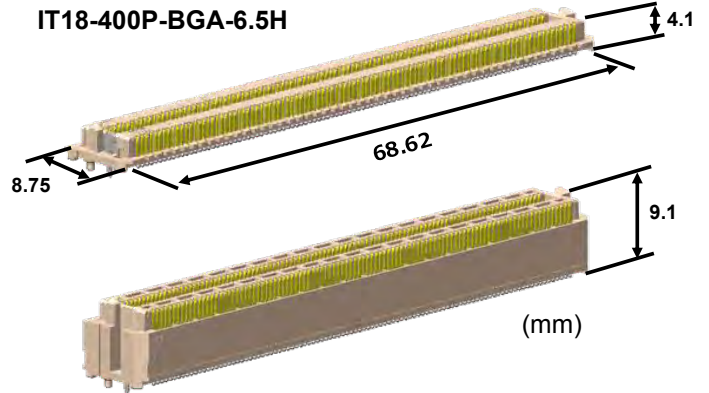
CLICK HERE
FOR MORE INFORMATION

Dimensions

Receptacle
IT18-400S-BGA-3.5H



Plug
IT18-400P-BGA-1.5H
IT18-400P-BGA-6.5H



Mating Combination	IT18-400S-BGA-3.5H	
	IT18-400P-BGA-1.5H	IT18-400P-BGA-6.5H
Stacking Height	5	10

Specifications

Material and Finish

COMPONENT	MATERIAL	FINISH, REMARKS
Housing	LCP	Natural Color (Beige)
Contact	Copper Alloy	Contact Area: Nickel + Gold Other: Nickel
Solder Ball (BGA)	Sn(96.5)-Ag(3)-Cu(0.5)	-
Retention Tab	Copper Alloy	Nickel + Gold
Metal Cap	Stainless Steel	-

Performance Characteristics

Rated Current	0.25A, 1.2A* ¹
Rated Voltage	150V AC
Operating Temperature	-55°C to +125°C
Contact Resistance* ²	△15mΩ from initial
Withstanding Voltage	460V AC for 1 min.
Insulation Resistance	5,000MΩ Min. (100V DC)
Mating Durability	100 times

*¹ One pin powered per row

*² Include conductor resistance



For additional information please go to
www.hirose.com/product/series/IT18

Specifications herein are subject to change without notice.
Contact Hirose for latest specifications, drawings, or availabilities.

STAY CONNECTED

