



**Ironwood  
Electronics, Inc.**



# Giga-snaP Socket & Adaptor

High Performance  
IC Sockets  
And Adaptors

# Giga-snaP Socket/Adaptor

- An economical and reliable alternative to soldering BGA devices directly to the motherboard
- Same footprint as BGA device
- Compact, low-profile design maximizes PC board space.
- Ironwood has Fastest Delivery
- Soldering Very Similar to Soldering IC Package
- PCB can be reflowed with Giga-snaP

## **Giga-snaP Socket/Adaptor**

- Access to BGA Pads for Test & Interconnection
- Pin Counts from 36 to 1936
- Available Pitches from 1.27, 1, 0.8 mm
- Smaller Pitch Adaptor In Development
- Connection via Gold-Plated Terminals
- Soldered Using Conventional BGA Method

## **Giga-snaP Socket/Adaptor**

- Substrate Material: FR4/G10
- Pin Material: Brass 360, ½ Hard
- Contact material: Be Cu 172
- Finish: Gold over Nickel
- Pins Bonded w/ Epoxy Overmold

## **Giga-snaP Socket/Adaptor**

- Pick & place support, reflow profiles
- Tape and reel support
- Solders same as IC it emulates
- No Warp Epoxy Over-mold
- Patent Pending

## **Giga-snaP Socket/Adaptor**

- No CTE mismatch
- Component heat dissipation does not affect solder connections
- Short electrical path
- Co-planarity: < 100 micro meter

# Giga-snaP Socket/Adaptor

- **Insertion Force:**
  - $\leq 0.12\text{N}$  Initial insertion force (0.2mm diameter pin)
  - $\leq 0.2\text{N}$  Initial insertion force (0.254mm diameter pin)
- **Extraction Force:**
  - $\leq 0.12\text{N}$  Extraction force (0.2mm diameter pin)
  - $\leq 0.2\text{N}$  Extraction force (0.254mm diameter pin)

## Giga-snaP Socket/Adaptor

- Contact-durability: > 100 cycles
- Operating Temperature: -40°C - 125°C
- Socket: Mass
  - 388 position Female Receptacle: 4.25g
  - 388 position Male Land Socket: 3.5g

## Giga-snaP Socket/Adaptor - RoHS

- Current per contact 1A@85C
- Contact resistance  $\leq 15$  milliohms
- Isolation resistance  $1E10$  ohms
- Self inductance 2.4nH
- Mutual inductance 0.4nH
- Capacitance 67fF

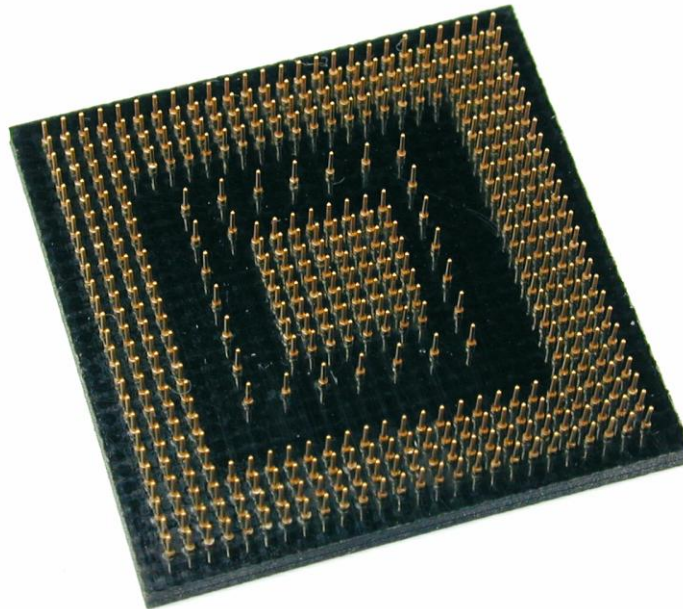
## Giga-snaP Socket/Adaptor - RoHS

- Substrate with  $T_d > 350C$
- SAC305 solder balls
- Withstands high temp solder profile
- Quick delivery
  - 3 days for standard part
  - 5 days for custom part

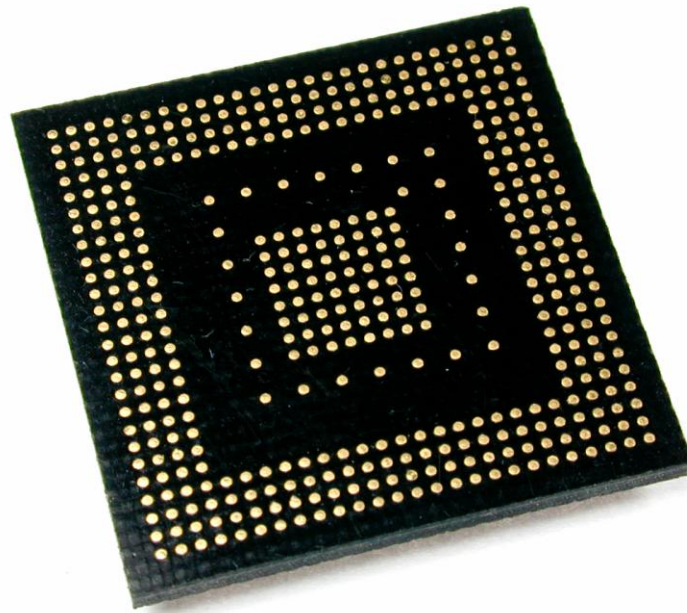
# Giga-snaP Socket/Adaptor - xRef

SMD Adapter	Land Socket	Ball Count	Xilinx Compatible Package
SF-BGA1148A-B-42	LS-BGA1148A-41	1148	FF1148
SF-BGA1517A-B-42	LS-BGA1517A-41	1517	FF1517
SF-BGA1696A-B-42	LS-BGA1696A-41	1696	FF1696
SF-BGA1704A-B-42	LS-BGA1704A-41	1704	FF1704
SF-BGA896A-B-42	LS-BGA896A-41	896	FF896
SF-BGA1156A-B-42	LS-BGA1156A-41	1156	FG1156
SF-BGA256E-B-42	LS-BGA256E-41	256	FG256
SF-BGA456C-B-42	LS-BGA456C-41	456	FG456
SF-BGA556A-B-42	LS-BGA556A-41	556	FG556
SF-BGA676C-B-42	LS-BGA676C-41	676	FG676
SF-BGA680C-B-42	LS-BGA680C-41	680	FG680
SF-BGA860A-B-42	LS-BGA860A-41	860	FG860
SF-BGA900A-B-42	LS-BGA900A-41	900	FG900
SMD Adapter	Land Socket	Ball Count	Altera Compatible Package
SF-BGA780A-B-42	LS-BGA780A-41	780	780-FBGA
SF-BGA1020A-B-42	LS-BGA1020A-41	1020	1020-FBGA

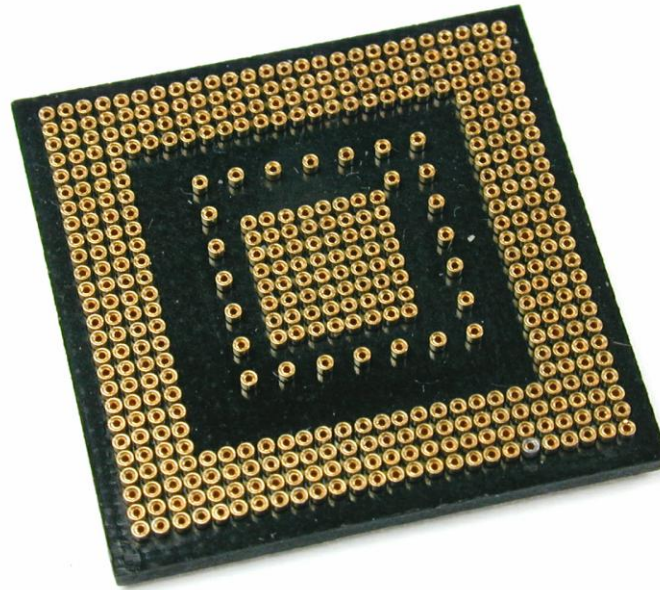
# Giga-snaP Adaptor – Bottom view



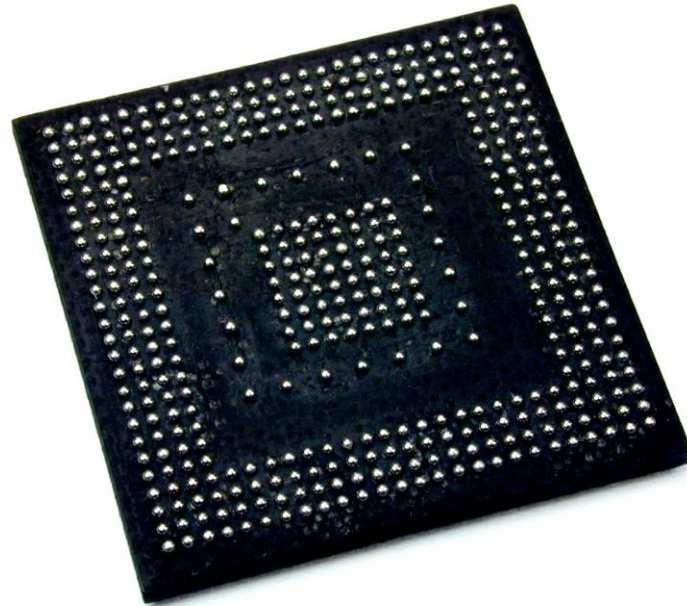
# Giga-snaP Adaptor – Top view



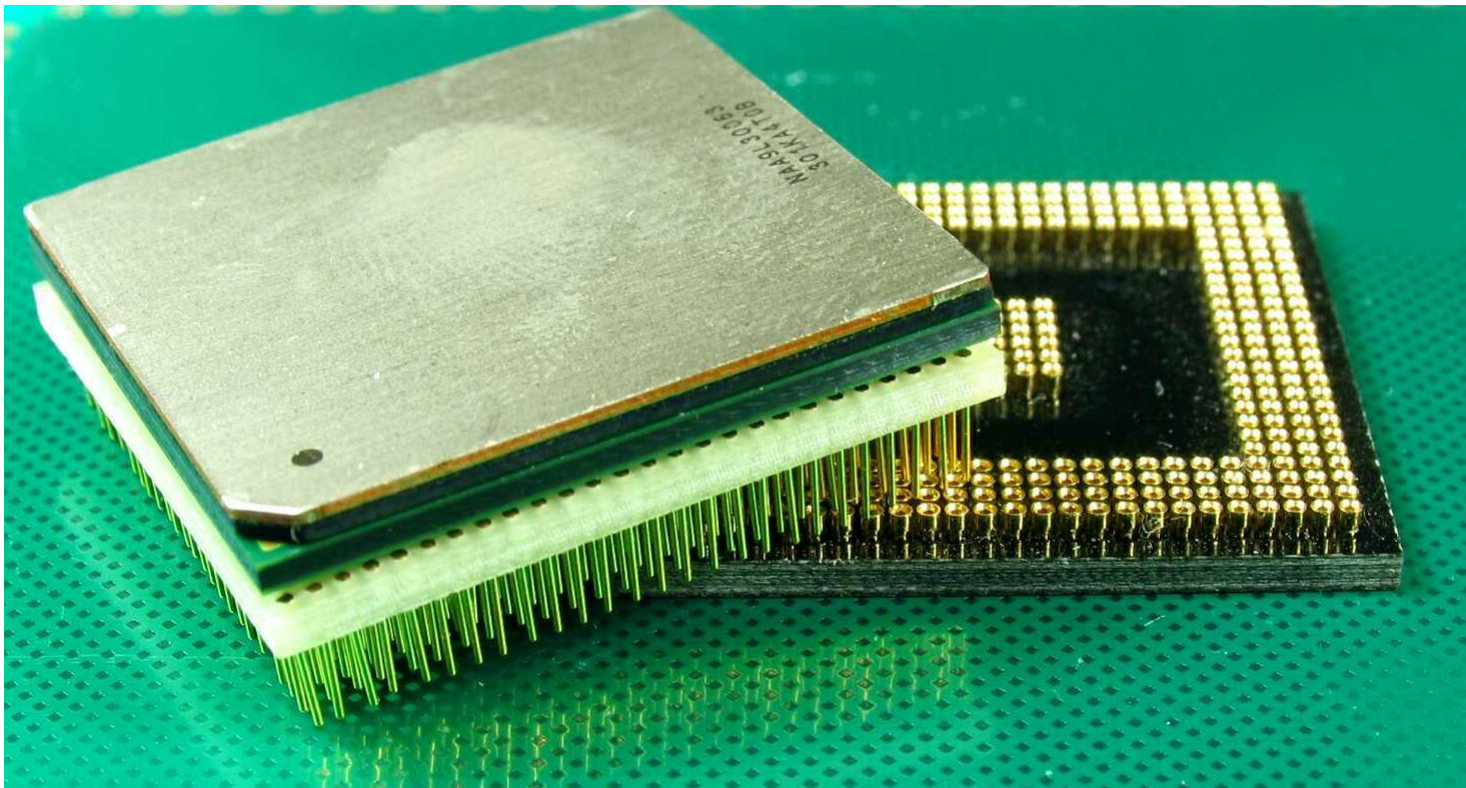
# Giga-snaP Socket – Top view

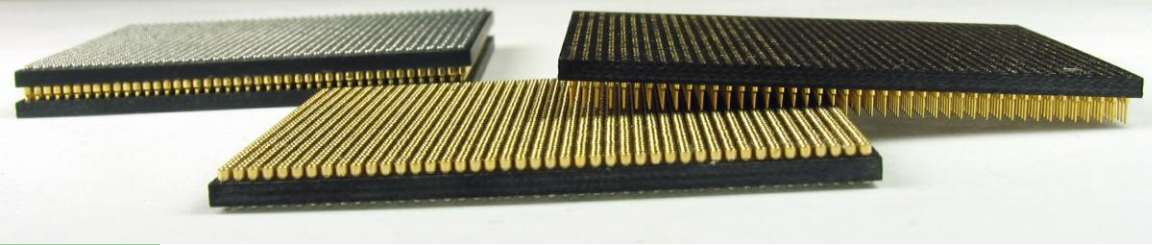


## Giga-snaP Socket – Bottom view

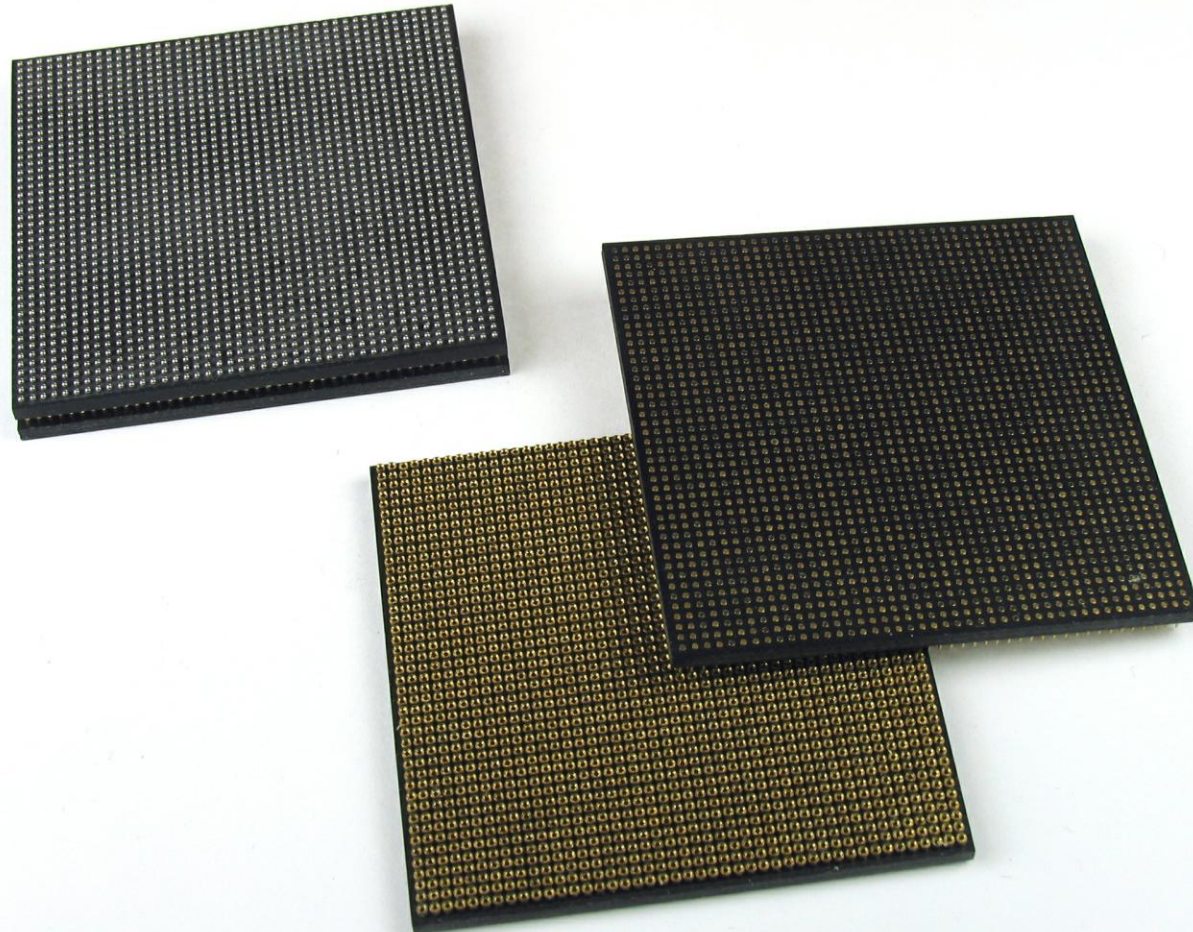


# Giga-snaP Socket/Adaptor





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**Thanks for your time and attention !!**



**B.C.E. s.r.l.**  
Via Regina Pacis, 54/c - 41049 SASSUOLO (MO) Italy  
Tel. +39 0536 811.616 r.a. - Fax +39 0536 811.500  
www.bce.it - E-mail: bce@bce.it

