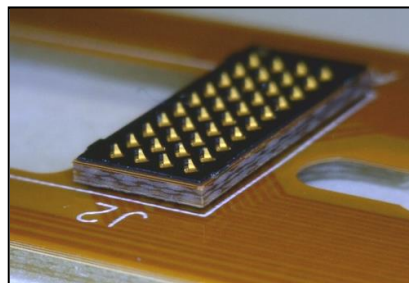


40-Position BGA/LGA PCBeam™ Connector for Texas Instruments® Series 310 DMD

Neoconix P/N: FBX0040CMFF6AU00

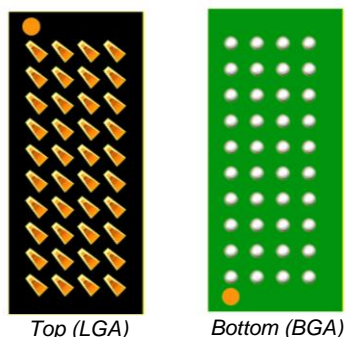
FEATURES

- High density 0.7424mm area-array pitch
- Low profile, 1.06mm mated height
- PCBeam™ high reliability LGA spring contacts
- Hard gold-plated contact interface to DMD
- Standard SMT assembly
- ROHS 2011/65/EU compliant
- IPC-4101B compliant (halogen free)

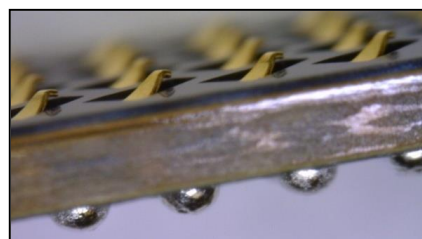


OVERVIEW

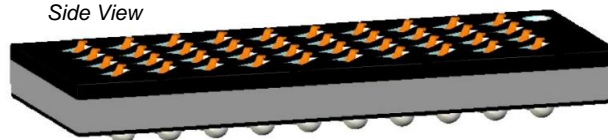
This one-piece, high density connector product was developed specifically for the Texas Instruments Series 310 DMD. Featuring Neoconix's patented PCBeam™ interconnect technology, this product offers high performance and high reliability in an extremely compact form factor. Solder balls are pre-attached for ease of assembly onto the target flex circuit or rigid circuit board.



PCBeam™ Technology



Side View



ORDERING INFORMATION:

- | | |
|----------------------------------|--|
| • Part Number: | FBX0040CMFF6AU00 |
| • Production Packaging: | Jedec Compliant Low Profile Matrix Trays |
| • Minimum Production Order Size: | 2,352 units (8 trays) |

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SPECIFICATIONS**MECHANICAL**

Contact Configuration.....	single-beam
Contact Pitch.....	0.7424mm x 0.7424mm
Contact Count.....	40 (10x4)
Target Load / Contact.....	0.4N (approx. 40g)
Contact Deflection.....	0.10mm typical

ELECTRICAL

Current Rating.....	0.5A per position
Resistance.....	< 50mΩ per position
Dielectric Withstanding Voltage.....	100VDC
Insulation Resistance.....	100MΩ

ENVIRONMENTAL

Operating Temperature.....	-20°C to 85°C
Storage Temperature.....	-40°C to 85°C
Humidity.....	96 hrs, 90%-95% RH, 40°C
Heat Resistance.....	96 hrs, 85°C
Cold Resistance.....	96 hrs, -20°C
Temperature Cycling.....	5 cycles, -20°C to 85°C
Solder Heat Resistance.....	260-265°C, 10 sec
Salt Spray.....	48 hrs, 5% salt mist & air
Durability.....	50 mating cycles
Random Vibration.....	6 hrs, 1.5mm, 10-55-10Hz, 3 axis

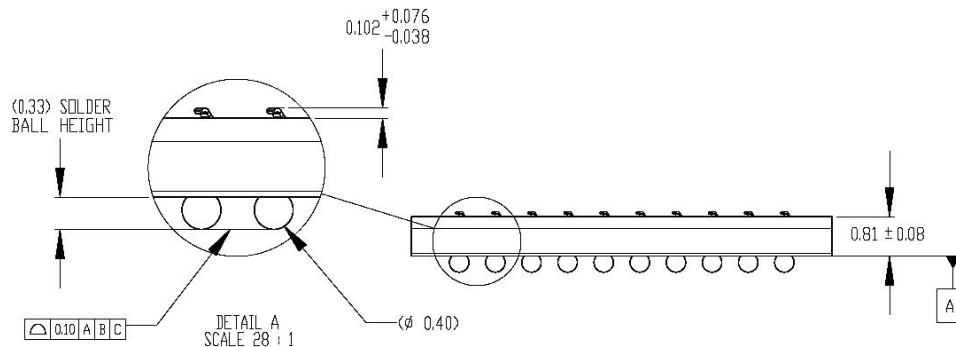
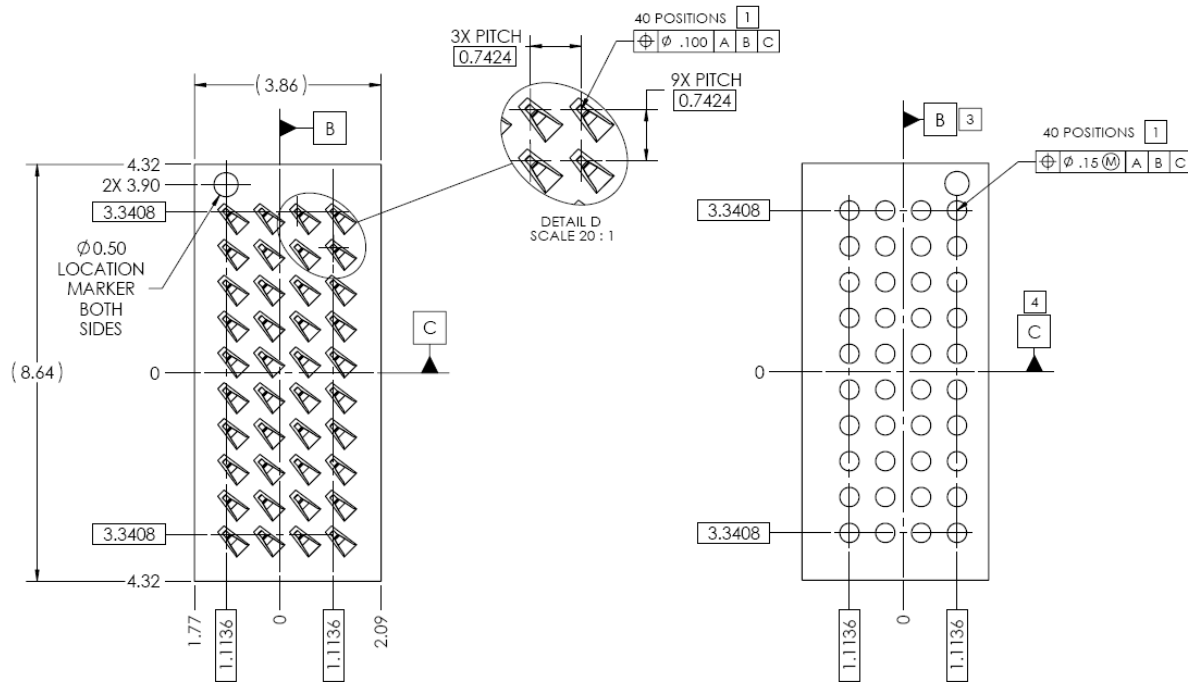
MATERIALS

Core Dielectric.....	MCL E-75G or equivalent
Contact Elements.....	copper alloy
Contact Plating.....	hard Au over Ni
Surface Insulator.....	polyimide or soldermask
RoHS Compliant.....	yes, per RoHS Dir. 2011/65/EU
Halogen free.....	yes, per IPC-4101B

NOTE: Specifications are subject to change without notice.

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DIMENSIONAL INFORMATION



NOTES: (UNLESS OTHERWISE SPECIFIED)

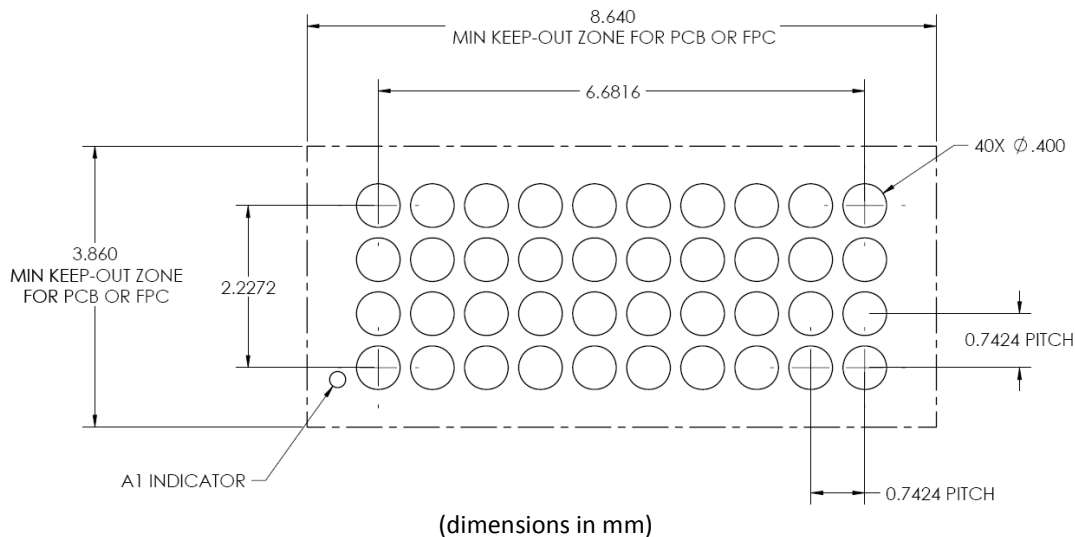
- 1 40 X .1016 ± .0254 WIDE CONTACT POSITIONS IS C₁ OF CONTACT BEAM AT THE COMPRESSED STATE.
- 2 (0.33) DIMENSION IS AT SOLDER BALL ATTACH. AFTER RE-FLOW, DIMENSION CHANGES TO APPROX 0.25 mm.
- 3 DATUM B IS A MID-PLANE OF THE SOLDER BALL ARRAY.
- 4 DATUM C IS A MID-PLANE OF THE SOLDER BALL ARRAY.
- 5 INTERPRET DRAWING PER ASME Y14.5-94.

DIMENSIONS ARE IN	
MM	INCHES
X	± .13
.XX	± .08
.XXX	± .025
ANGLE: NO DEC	± 1°
X	± 0.5°
.XX	± 0.25°

(FBX0040CMFF6AU00 rev08)

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RECOMMENDED FPC OR PCB LAYOUT



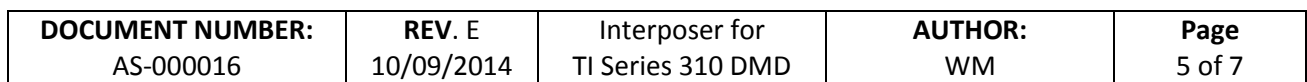
Note: If FPC is used, a 0.8mm thick FR4 (or similar) stiffener is recommended on backside of FPC to provide rigidity and reduce warp.

ASSEMBLY & HANDLING GUIDELINES

- The use of latex gloves is recommended when handling interposers. As with any normal force connector, avoid touching contact tips and handle the product only by its edges.
- When clamping the DMD device onto the connector, please ensure that the force is applied uniformly. Force should be applied vertically through the z-axis and not in an angled direction.
- Cleaning is typically not needed if the product is kept in original packaging. When necessary, cleaning can be employed with the use of compressed air. Direct the flow of air in the direction that the contact elements are pointing. Cleaning can also be performed with an ultrasonic bath of isopropyl alcohol (IPA). A 5 minute soak can be followed by a 10 minute bake at 65°C.
- When not in use, please keep product stored in original packaging.

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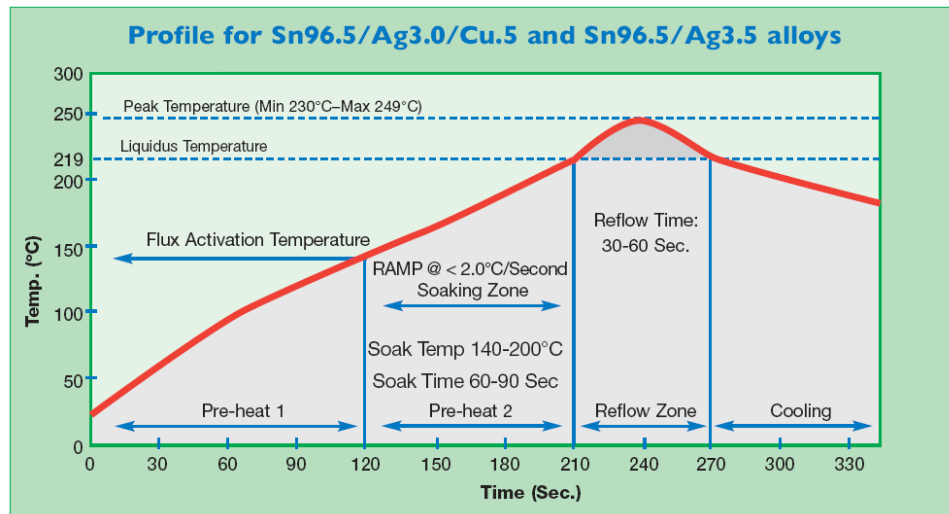
A protective pick and place cap has been developed to simplify surface mount assembly. A corner chamfer is used to identify the pin 1 location. All production interposers will be shipped with a pick & place cover pre-attached. Detailed dimensional information is below for reference.



SOLDER REFLOW GUIDELINES

The Neoconix interposer is provided with Pb-free solder balls for assembly onto the target FPC or PCB. Below is a recommended reflow profile for reference only. A cool-down rate of 2-4°C/second is recommended. Some optimization may be required for your specific assembly.

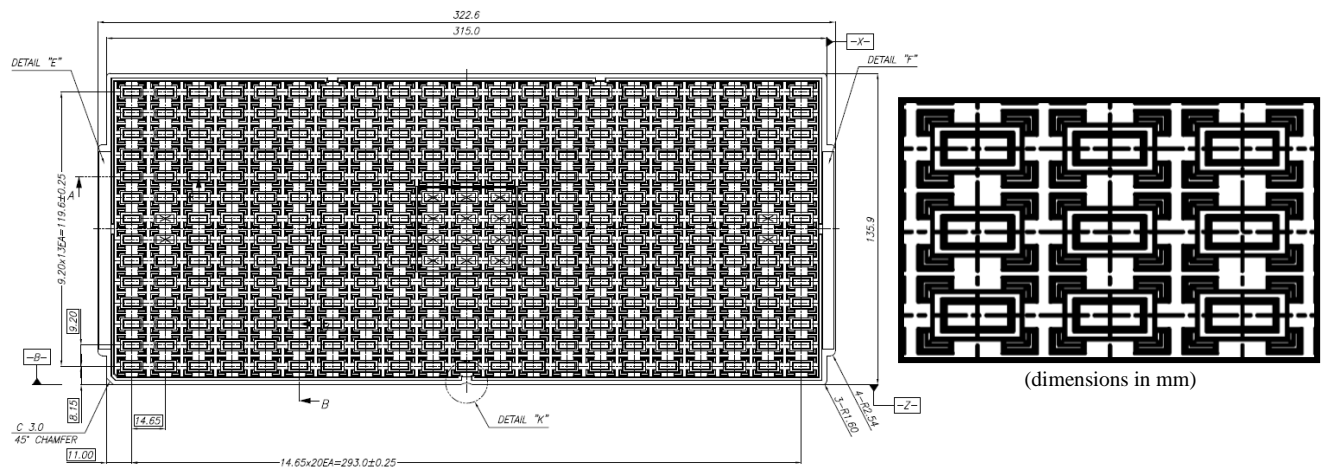
The recommended solder paste has composition Sn96.5/Ag3.0/Cu0.5. Recommended stencil thickness is 0.15mm and recommended stencil aperture is 0.40 mm.



Courtesy: Amtech LF-4300 Product Datasheet, 3/06

PACKAGING INFO

Production parts are provided in Jedec Low Profile Matrix Trays (variation AG) with 294 pockets per tray. Detailed drawings are available upon request.



CONTACT INFO

For any additional questions, please contact Neoconix at the address below:

Neoconix, Inc.
2355-C Paragon Dr.
San Jose, CA 95131 USA
(408) 530-9393 (phone)
sales@neoconix.com

ADDITIONAL REFERENCES

Assembly Services: Flex One Technologies
1963 Concourse Drive
San Jose, CA 95131 USA
(408) 321-3502
www.flexone.com
sales@flexone.com

Texas Instruments® is a registered trademark of Texas Instruments Incorporated.
PCBeam™ is a trademark of Neoconix Incorporated.

REVISION HISTORY

Rev A	11/3/2010	Initial Release
Rev B	2/20/2011	Removed info on prototype pick & place adapter. Added detail on pick & place cap. Changed Jedec tray to accommodate pick & place cap. Changed MOQ based on different parts/tray in new tray design. Added solder mask as another surface insulator material Increased operating temperature to 85C
Rev C	4/27/2011	Corrected pockets / tray to 294 Minor changes to pick & place cap drawing (slightly increased width of one tab)
Rev D	3/7/2012	Updated to reference drawing rev8.
Rev E (ECN1151)	10/9/2014	Updated company contact info. Confirmed RoHS & halogen-free compliance. Clarified specific cap material. Incorporated product-specific environmental test specs.

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