Product Description: ZX127HSEC6-28V is Samtec HSEC6 0.6mm pitch also referred as Mini Cool Edge IO, MCIO / SFF-TA-1002, breakout adapter. ZX127HSEC6-28V is designed for test & measurements of Add-In-Card, AIC, in real-time electrical test & measurements, signal integrity, characterization, manufacturing loopback test applications.

ZX127HSEC6-28V is breakout adapter, supporting Samtec GENERATE HSEC6 / MCIO edge card 0.6mm pitch connectors using 1.6mm PCB thickness. It provides full access to all HSEC6 / MCIO connector's signals via onboard headers for purpose of test & measurement of AIC.

- 1- Provides access to all Samtec HSEC6 / MCIO signals via onboard headers.
- 2- The headers are standard 0.1" (2.54mm) pitch.
- 3- Listed number adjacent to each header's pin is in reference to the Samtec HSEC6 / MCIO connector's pin.
- 4- All traces are impedance controlled.
- 5- Four, 4, layers PCB design, inner layers are GND planes.
- 6- Accessible GND test point, The test point is connected to inner GND planes.
- 7- Ease of interface with single channel and differential scope probes.
- 8- Facilitates Add in Card, AIC, testing & development.
- 9- Flying lead wire assembly or similar is recommended See ordering information

Electrical: Insertion loss > -2dB @6GHz

Trace impedance: 50Ω

Operating Temperature: -55°C to +125°C

Connector: Samtec HSEC6 / MCIO 0.60mm pitch

Mates with: Add in Card, edge card test board

Pitch: 0.60mm pin to pin pitch Thickness: 1.6mm (0.062") Plating: 10μ " (0.25μ m)

Header:

Pitch: 0.1" (2.54mm) pin to pin pitch Pin: Square 0.025" (0.635mm)

Height: 0.24" (6mm) Plating: Gold Flash

Application: Manufacturing test measurement & re-use, design, testing, debugging

loopback test, characterization, pre-bringup, bringup, interface

Mates with: Samtec GENERATE High Speed Edge Card Add in card HSEC6 & GC6 cable assembly Industry standard Mini Cool Edge IO, MCIO, SFF-TA-1016, SFF-TA 1002, GEN-Z 1C

Amphenol G97, GH01 series. ACES Electronics, LOTES

MET005610101011 ME1005610203071 ME1005610201091 ME1005611201041 ME1005611202041 ME1005610211081 ME1005610205081 ME1005613401101

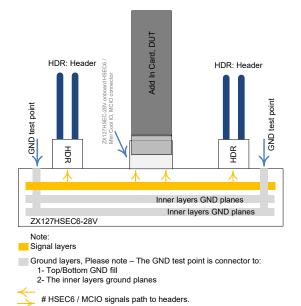
ME1005634478101

Industry Standard: HSEC6 & MCIO connectors have been adopted by industry standards such as:

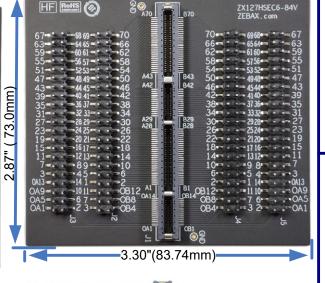
SFF-TA 1002, SFF-TA-1016, PCI Express Gen 3.0, 4.0, 5.0, 6.0, OCP DC-MHS (HSIO recommended)

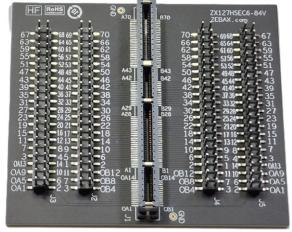
Supporting Up to 64 Gbps PAM4 performance. PCIe, NVMe, SAS, SFP(+), SFP 28

ZX127HSEC6-28V simplified cross section diagram









ZX127HSEC6-28V package includes:

Part number ZX127HSEC6-28V ZX100ACC-SS

Quantity Description

MCIO Breakout Adapter

Flying lead wire assembly

ALL ZEBAX products are RoHS compliant and Lead Free unless otherwise indicated

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SPECIFIED DIMENSIONS ARE INCHES (MM). ROHS COMPLIANT

ASSEMBLY DRAWING

ITEM: ZX127HSEC6-28V

DESCRIPTION:

Samtec HSEC6 / Mini Cool IO, MCIO, **Breakout Adapter**

CHECKED:

DRAWN: M. MAHIN

REVISSION: 1.0 SHEET: 1 OF 2

ZX100ACC-SS Flying leads wire assembly

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Compliance:

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RoHs - Lead Free EU RoHS2

UL E111594 document

RoHs Directive 2011/65/EU WEEE Directive (2012/12/EU)

Certificate REACH SVHC

ELV- Vehicle Directive (Directive 2000/EC)

European Union Directive (203/11/EC)

Certificate of Compliance for Asbestos

Certificate of Compliance RoHS EN CoC

Halogen Free per IEC-61249-2.21 : 2003

Certificate of Compliance for Radioactive substances

Certificate of Compliance for Ozone Depleting Substances, ODS

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ZX127HSEC6-28V Samtec GENERATE HSEC6 / Mini Cool Edge IO, MCIO, breakout adapter - Page 2 OF 2 **Product Name:** Ground: ZX127HSEC6-28V is 4 layers PCB design where the inner layers are Ground layers. They are connected to the GND test point as well as top & bottom GND fills. For improved signal integrity, please connect the GND test point to system GND reference point. See Cross Section diagram for details. Typical Application: ZX127HSEC6-28V is designed for purpose of test and debugging at full connector's bandwidth. It provides new approach in usage of breakout adapters by: 1- Utilizing single or differential scope probe. 2-Test and measurement, manufacturing loopback test, validation, pre-bringup applications. **Scope Probe wire Installation:** 1- It is recommended to keep the probe wire length at 0.5" (1.2cm) long. 2- In order to avoid ground loop problems, please use the shortest Ground probe wire interfacing to the nearest GND reference point. ZX127HSEC6-28V provides GND test point to be utilized as GND reference interface with host. SFF-TA-1002 1C (2 rows x 28 pins/row) 56 pins standard- Below are listed signals and Ground pins assignments for the SFF-TA-1002 standard, please refer to the standard for formal signals map naming. This table denotes "SIG" or "GND" PIN geometry locations. The Grounds are not bussed together in the connector or the ZX127HSEC6-28V breakout adapter. The listed GND signals are routed similar to the SIG signals, they are all individually routed signals. ZX127HSEC6-28V Pin Geometry Pattern (1C) SFF-TA_1002 Standard D 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 Header pin access configuration: Table below is header's pin configuration ZX127HSEC6-28V header pin assignments J3 Header pin numbers refer to the HSEC6 / MCIO connector's pin numbers В HSEC6 / MCIO footprint: ZX127HSEC6-28V mates with industry standard footprint for SFF-TA-1002 1C (2rows x 28 pins per row) 56 pins connectors. ALL ZEBAX products are RoHS compliant and Lead Free unless otherwise indicate ZEBAX TECHNOLOGIES SANTA CRUZ, CA U.S.A (831) 2 2 2 - 0717 WWW.ZEBAX.COM ASSEMBLY DRAWING SPECIFIED DIMENSIONS ARE INCHES (MM). ITEM: ZX127HSEC6-28V ROHS COMPLIANT Samtec HSEC6 / Mini Cool IO, MCIO, **DESCRIPTION:** ALL ZEBAX TECHNOLOGIES DESIGN SPECIFICATIONS, DRAWINGS, PUBLICATIONS, AND OTHER DOCUMENTS (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS." ZEBAX MAKES NO WARRANTIES, EXPRESSED, **Breakout Adapter** IMPLIED, STATUTORY, OR OTHERWISE WITH RESPECT TO THE MATERIALS, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES OF NO INFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE Information furnished is believed to be accurate and reliable. However, Zebax Technologies assumes no responsibility for the consequences of use of such information or for any infringement of patents or other rights of third parties that may result from its use CHECKED: DRAWN: REVISSION: 1.0Specifications mentioned in this publication are subject to change without notice. This publication replaces all other information previously supplied. Zebax Technologies products are not authorized as in life support devices or system M. MAHIN **KADIJEH** SHEET: 2 OF 2

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