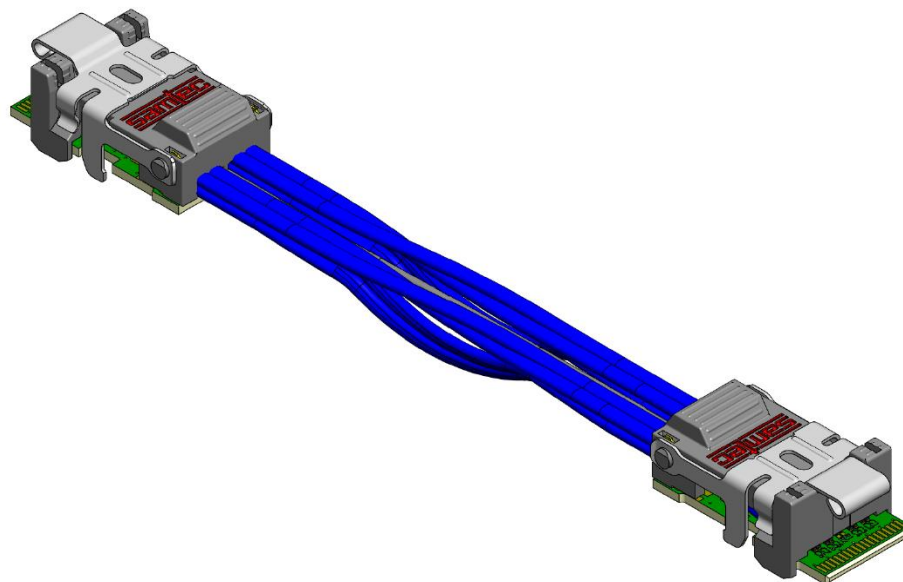
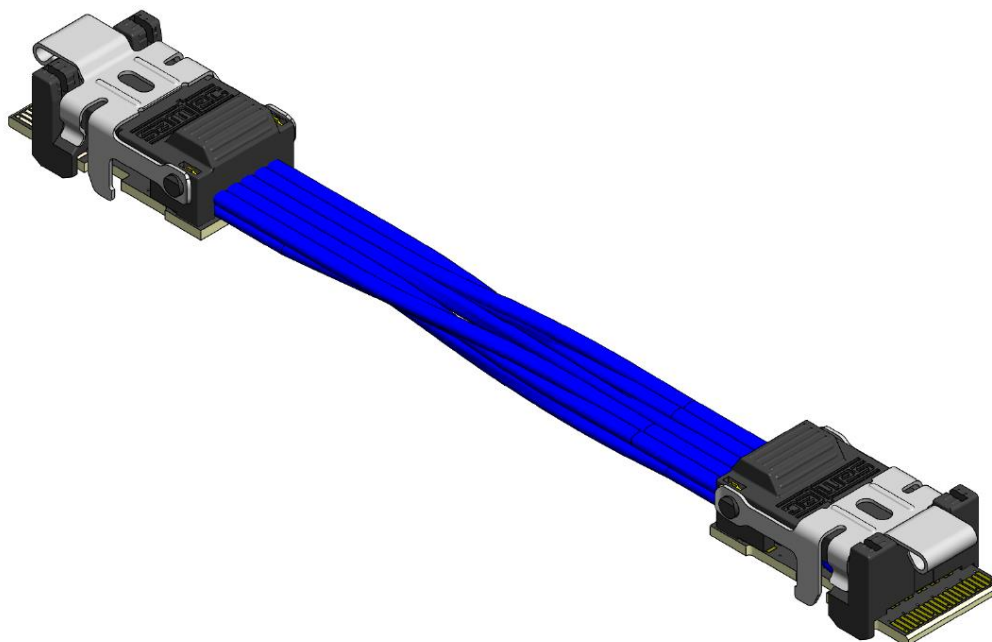


Series: PCIe<sup>®</sup> Twinax Flyover<sup>®</sup> Cable Assembly

PCUE Series – G3, FIREFLY END



PCUE Series – G4, FIREFLY END



See [www.samtec.com](http://www.samtec.com) for more information.

**Series:** PCIe® Twinax Flyover® Cable Assembly

## 1.0 SCOPE

1.1 This specification covers performance, testing and quality requirements for Samtec PCIe® Twinax Flyover® Cable Assembly. This cable assembly is available in PCIe Gen 3 and Gen 4 applications.

## 2.0 DETAILED INFORMATION

2.1 Product prints, catalog pages, test reports and other specific, detailed information can be found at <https://www.samtec.com/products/pcue>.

## 3.0 TESTING

3.1 **Current Rating:** 1.1A (1 Pin Powered per Row)

3.2 **Voltage Rating:** 170 VAC

3.3 **Operating Temperature Range:** -25°C to +105°C

3.4 **Operating Humidity:** Up to 95% (Per EIA-364-31)

3.5 **Electrical:**

ITEM	TEST CONDITION	REQUIREMENT	STATUS
Withstanding Voltage	EIA-364-20 (No Flashover, Sparkover, or Breakdown)	170 VAC	Pass
Insulation Resistance	EIA-364-21 (1000 MΩ minimum)	1,000 MΩ	Pass
Contact Resistance (LLCR)	EIA-364-23	Δ 15 mΩ (Samtec defined)/ No damage	Pass

3.6 **Mechanical:**

ITEM	TEST CONDITION	RESULT	STATUS
Durability	EIA-364-09C	100 cycles	Pass
Random Vibration	EIA-364-28 Condition V, Letter B 7.56 G 'RMS', 50 to 2000 Hz, 2 hours per axis, 3 axis total, PSD 0.04 Nanosecond Event Detection: EIA-364-87	Visual Inspection: No Damage LLCR: Δ 15 mΩ No Events	Pass
Mechanical Shock	EIA-364-27 100 G, 6 milliseconds, Half Sine wave, 12.3 fps, 3 shocks/direction, 3 axis (18 total shocks) Nanosecond Event Detection: EIA-364-87	Visual Inspection: No Damage LLCR: Δ 15 mΩ No Events	Pass
Normal Force	EIA-364-04	30 grams minimum for Gold interface	Pass

Series: PCIe<sup>®</sup> Twinax Flyover<sup>®</sup> Cable Assembly

**3.7 Environmental:**

ITEM	TEST CONDITION	RESULT	STATUS
Thermal Shock	EIA-364-32 Thermal Cycles: 100 (30 minute dwell) Hot Temp: +85°C Cold Temp: -55°C Hot/Cold Transition: Immediate	Visual Inspection: No Damage LLCR: $\Delta$ 15 m $\Omega$ DWV: 170 VAC IR: >1,000 M $\Omega$	Pass
Thermal Aging (Temp Life)	EIA-364-17 Test Condition 4 @ 105°C Condition B for 250 hours	Visual Inspection: No Damage LLCR: $\Delta$ 15 m $\Omega$	Pass
Cyclic Humidity	EIA-364-31 Test Temp: +25°C to +65°C Relative Humidity: 90 to 95% Test Duration: 240 hours	Visual Inspection: No Damage LLCR: $\Delta$ 15 m $\Omega$ DWV: 170 VAC IR: >1,000 M $\Omega$	Pass
Gas Tight	EIA-364-36 Gas Exposure: Nitric Acid Vapor Duration: 60 min. Drying Temp.: 50°C +/- 3°C Measurements: Within 1 hour of Exposure	LLCR: $\Delta$ 15 m $\Omega$	Pass

Series: PCIe<sup>®</sup> Twinax Flyover<sup>®</sup> Cable Assembly

## 4.0 HIGH SPEED PERFORMANCE

### 4.1 Channel Simulation - Channel Performance Metric (CPM)



**Note:** CPM is a channel simulation-based approach to understanding connector performance. For further information on CPM please visit [Introducing Channel Performance](#).

CPM is simulated using a Samtec specific channel. Connector performance may improve based on specific applications. Please email the Samtec Signal Integrity Group [SIG@samtec.com](mailto:SIG@samtec.com) to determine performance in your system.

**4.2 System Impedance:** 100 Ohm for differential pair

## 5.0 APPLICATION INFORMATION

### 5.1 Min Cable Bend Radius:

PCUE-G3: TTF-34100-XX-01 = .125" [3.175mm];

PCUE-G4: TTF-34100C-XX-S-T-TB = .125" [3.175mm].

**5.2 Cable Management:** Samtec recommends some form of cable management to prevent non-axial forces being applied to the connector.

## 6.0 ADDITIONAL RESOURCES

**6.1** For additional mechanical testing or product information, contact our Customer Engineering Support Group at [CES@samtec.com](mailto:CES@samtec.com)

**6.2** For additional information on high speed performance testing, contact our Signal Integrity Group at [SIG@samtec.com](mailto:SIG@samtec.com)

**6.3** For additional application information, contact our High Speed Cable Group at [HDR@samtec.com](mailto:HDR@samtec.com)

**6.4** For RoHS, REACH or other environmental compliance information, contact our Product Environmental Compliance Group at [PEC@samtec.com](mailto:PEC@samtec.com)



Series: PCIe<sup>®</sup> Twinax Flyover<sup>®</sup> Cable Assembly

**USE OF PRODUCT SPECIFICATION SHEET**

This Product Specification Sheet (“PSS”) is a brief summary of information related to the Product identified. As a summary, it should only be used for the limited purpose of considering the purchase/use of Product. For specific, detailed information, including but not limited to testing and Product footprint, refer to Section 2.0 of this document and the links there provided to test reports and prints. This PSS is the property of Samtec, Inc. (“Samtec”) and contains proprietary information of Samtec, our various licensors, or both. Samtec does not grant express or implied rights or license under any patent, copyright, trademark or other proprietary rights and the use of the PSS for building, reverse engineering or replication is strictly prohibited. By using the PSS, the user agrees to not infringe, directly or indirectly, upon any intellectual property rights of Samtec and acknowledges that Samtec, our various licensors, or both own all intellectual property therein. The PSS is presented “AS IS”. While Samtec makes every effort to present excellent information, the PSS is only provided as a guideline and does not, therefore, warrant it is without error or defect or that the PSS contains all necessary and/or relevant information about the Product. The user agrees that all access and use of the PSS is at its own risk. **NO WARRANTIES EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY KIND WHATSOEVER ARE PROVIDED.**