FIREFLY™
HIGH-DENSITY COPPER FLYOVER® SYSTEM

FEATURES & BENEFITS

- Pin compatible with optical FireFly™ using the same connector system
- Data connection is taken "off board" for easier routing
- Low-cost solution for seamless integration of new and existing designs
- Low-profile housing for space savings
- x4 bidirectional or x12 unidirectional
- Variety of end 2 termination options

14 Gbps	x4 Bidirectional ECUE x12 Unidirectional ECUE
PAM4	
56 Gbps	x4 Bidirectional ECUE-2

Standard Copper (ECUE)

- 14 Gbps
- 100 Ω, 34 AWG or 36 AWG Eye Speed® twinax cable

Optimized Copper (ECUE-2)

- 28 Gbps card design
- 100 Ω, 34 AWG Eye Speed® ultra low skew twinax cable
- Optimized for use with connector UEC5-2

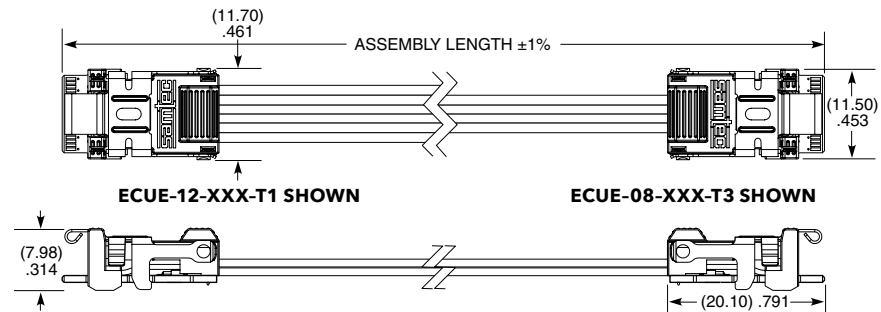### PCI Express®-Over-FireFly™ Copper (PCUE)

- PCIe® 4.0
- 100 Ω, 34 AWG Eye Speed® ultra low skew twinax cable
- Optimized for use with connector UEC5-2

samtec.com/FireFly

SERIES	NO OF PAIRS	ASSEMBLY LENGTH	CABLE TYPE	END 2 OPTION	WIRING OPTION	DATA RATE	OPTION
ECUE = Rugged FireFly™ Cable Assembly	**–08** = Eight Pair (– T2 & –T3 cable only) **–12** = Twelve Pair (–T1 cable only)	**–"XXX"** = Assembly Length in Centimeters (007 cm to 999 cm)	**–T1** = 36 AWG twinax (–12 pairs only) **–T2** = 34 AWG twinax (–08 pairs only) **–T3** = 34 AWG ultra low skew twinax (–08 pairs only)	**–FF** = FireFly™ (Mates with UEC5/UCC8)	**–01** = Pin A1 to Pin A19 **–02** = Pin A1 to Pin B1 **–B4** = Pin A1 to Pin B19 (–08 pair only)	**–1** = 14 Gbps (–T1 or –T2 only) **–2** = 28 Gbps (–T3 only)	Leave blank for standard FireFly™ **–D1** = Decoupling Capacitors (only available with –02 & –B4 wire options)

ECUE

Board Mates:
UEC5, UCC8

Notes:
All FireFly™ designs, specifications and components are preliminary and subject to change without notice.

Cable lengths longer than 150 cm (59.06 ") are not supported with S.I. test data.

(11.70) .461

ASSEMBLY LENGTH ±1%

(11.50) .453

ECUE-12-XXX-T1 SHOWN   **ECUE-08-XXX-T3 SHOWN**

(7.98) .314

(20.10) .791

View complete specifications at: **samtec.com?ECUE**

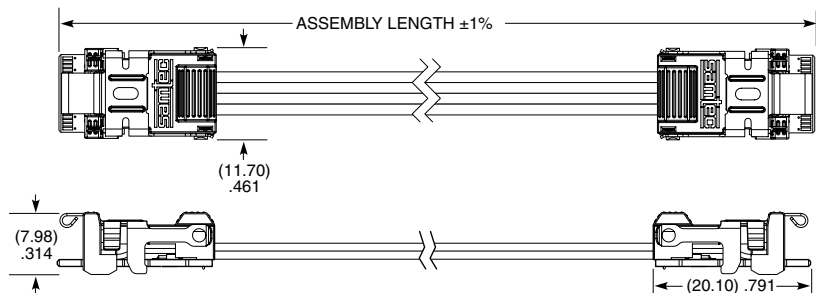| SERIES	SPEED	NO. OF CHANNELS	CABLE LENGTH	END 2
PCUE = PCIe®-over-FireFly™ Copper Flyover®	**–G4** = Gen 4 Speed	**–04** = 8 pairs	**–"XXX"** = Overall Length in Centimeters (010 cm to 999 cm)	**–FF** = FireFly™ (Mates with UEC5/UCC8)

PCUE

Board Mates:
UEC5, UCC8

Notes:
Supports PCIe® sideband signals

Two additional low speed channels compatible with PCUO or custom usage

Decoupling capacitors in-line with signals on PCB.

PCI-SIG®, PCI Express® and the PCIe® design marks are registered trademarks and/or service marks of PCI-SIG.

Some sizes, styles and options are non-standard, non-returnable.

ASSEMBLY LENGTH ±1%

(11.70) .461

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PCUE-G4-04-XXX-FF

View complete specifications at: **samtec.com?PCUE**