

DO NOT SCALE FROM THIS PRINT

**THIS PRODUCT MANUFACTURED WITH LEAD-FREE PROCESSING**

**DESIGNED & DIMENSIONED IN MILLIMETERS(INCHES)**

ECUE-XX-XXX-XX-XX-XX-1-XX

No OF PAIRS  
-12 (T1 & C1 CABLE ONLY)  
-08 (T2 CABLE ONLY)

ASSEMBLY LENGTH  
007 - 999 cm (SEE NOTE 8)

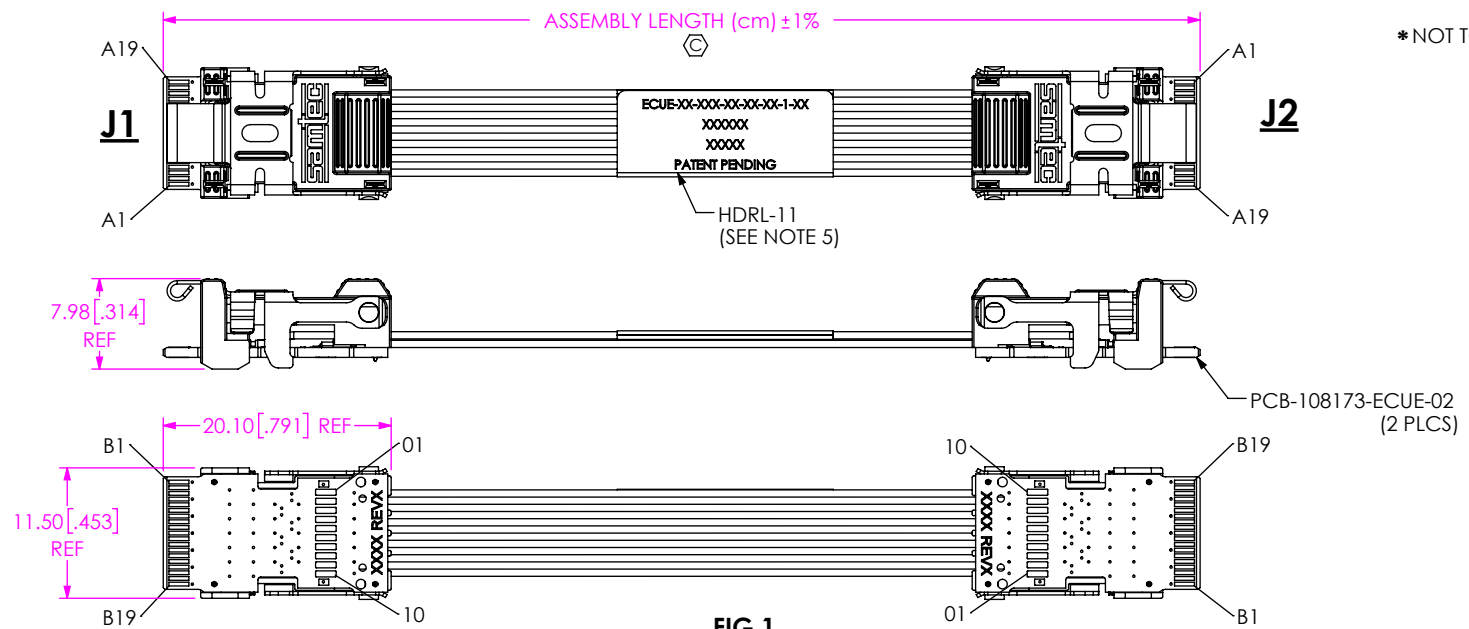
SHIELDED CABLE TYPE  
-C1: TCF-3850 (38AWG COAX, 12 PAIRS ONLY)  
-T1: TTF-36100 (36AWG TWINAX, 12 PAIRS ONLY)  
-T2: TTF-34100 (34AWG TWINAX, 8 PAIRS ONLY)

OPTION  
BLANK: STANDARD FIREFLY  
-D1: DECOUPLING CAPACITORS (SEE NOTE 7)  
ONLY AVAILABLE WITH -02 & -B4 WIRE OPTION  
NOT AVAILABLE WITH -EC OPTION

WIRING OPTION (SEE TABLE 1)  
-01 "A1 TO A19"  
-02 "A1 TO B1"  
-B4 (8 PAIR ONLY) "A1 TO B19"

END 2 OPTION  
-FF: ECUE  
\*-EC: ECDP

\* NOT TOOLED



**TABLE 1**

WIRING OPTION	END 1		END 2	
	-FF	-FF	-FF	*-EC
	ECUE PIN #	ECUE PIN #	ECUE PIN #	ECDP PIN #
01	A1	A19		1
02	A1	B1		38
B4	A1	B19		NA

\* NOT TOOLED

**FIG 1**  
WIRING OPTION -01  
ECUE-12-XXX-C1-FF-01-1 SHOWN

**TABLE 2**  
ECUE-12-XXX-X1-FF-01-1 SIGNAL MAPPING  
(12 PAIRS, -01 WIRING OPTION)

J1	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19			
NAME	G	S	S	G	S	S	G	S	S	G	S	S	G	S	S	G	S	S	G	G	S	S	G	S	S	G	S	S	G	S	S	G	S	S	G	S	S	G	S	S	G
J2	A19	A18	A17	A16	A15	A14	A13	A12	A11	A10	A9	A8	A7	A6	A5	A4	A3	A2	A1	B19	B18	B17	B16	B15	B14	B13	B12	B11	B10	B9	B8	B7	B6	B5	B4	B3	B2	B1			

NOTES:

- ⊙ REPRESENTS A CRITICAL DIMENSION
- PARTS TO BE PROCESSED PER SAMTEC WORKMANSHIP GUIDELINES
- ALL ASSEMBLIES TO BE 100% ELECTRICALLY TESTED
- ALL ASSEMBLIES TO BE 100% HI-POT TESTED AT 300V
- LABEL TO BE CENTERED ON CABLE AS SHOWN. LABEL TO CONTAIN:  
LINE 1 - PART NUMBER "ECUE-XX-XXX-XX-XX-1-XX"  
LINE 2 - SHOP ORDER NUMBER "XXXXXX"  
LINE 3 - DATE CODE "XXXXXX"  
LINE 4 - PATENT PENDING
- FOR SUB-ASSEMBLY AND FINISHED GOOD PACKAGING REQUIREMENTS, REFERENCE SAMTEC PACKAGING STANDARD
- D1 OPTION USES 0.1μF DECOUPLING CAPACITORS
- CABLE LENGTHS LONGER THAN 150 cm NOT SUPPORTED BY SI TEST DATA
- PIN 3 ON UCC8 CONNECTION TIED TO GROUND, REMAINDER ARE NO CONNECT.
- REFER TO PREP-SPEC.PDF FOR CABLE PREP DIMENSIONS.  
ASSEMBLY USES HIGH SPEED PCB PREP.

F:\DWG\MISC\MKTG\ECUE-XX-XXX-XX-XX-1-XX-MKT.SLDDRW

TOLERANCES DO NOT APPLY TO REFERENCE DIMENSIONS.  
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS.  
TOLERANCES ARE:  
DECIMALS: X: ±.3[.01]  
XX: ±.13[.005]  
XXX: ±.051[.0020]

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MATERIAL: DO NOT SCALE DRAWING  
HOUSING: LCP  
LATCH: STAINLESS STEEL  
WELD TAB: BRASS  
CABLE: JACKET: PVC  
DIELECTRIC: FEP  
CONDUCTORS: SILVER PLATED COPPER  
SHIELD: SERVED SILVER PLATED COPPER  
PCB: FR4, COPPER

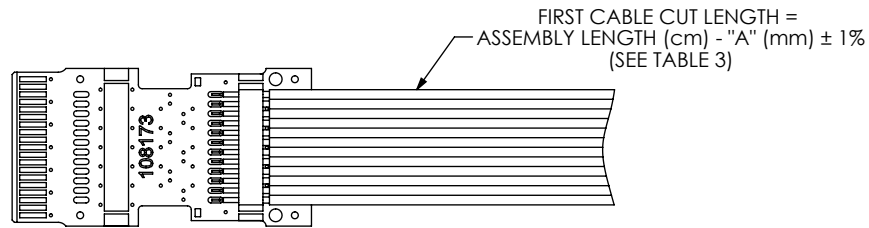
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520 PARK EAST BLVD, NEW ALBANY, IN 47150  
PHONE: 812-944-6733 FAX: 812-948-5047  
e-Mail info@SAMTEC.com code 53322

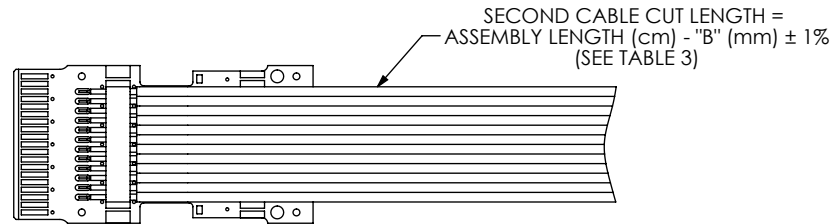
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DWG. NO. ECUE-XX-XXX-XX-XX-XX-1-XX

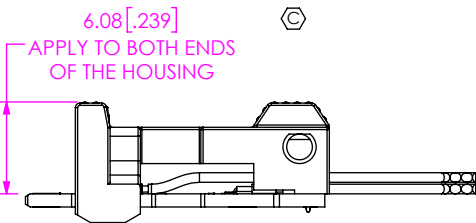
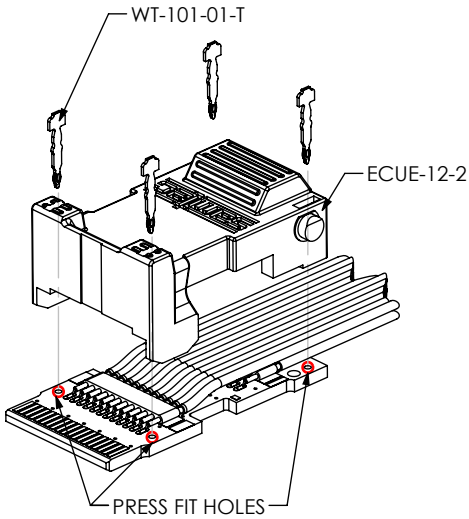
BY: RMSANTOS 10/9/2014 SHEET 1 OF 6



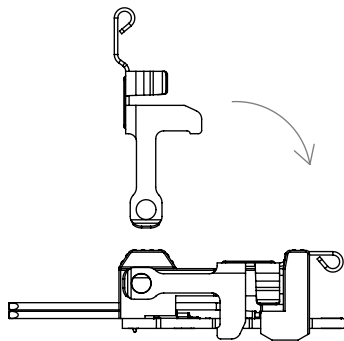
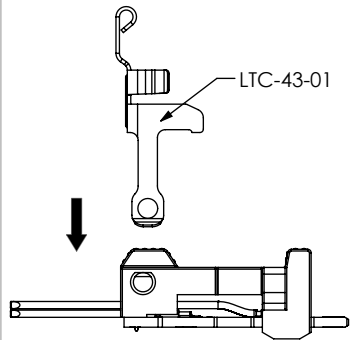
**IN PROCESS 1**  
SOLDER FIRST CABLE TO PCB



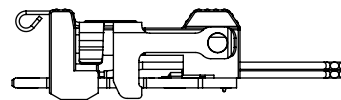
**IN PROCESS 2**  
SOLDER SECOND CABLE TO PCB



**IN PROCESS 3**  
INSERT WELD TABS & ATTACH TO BOARD



**IN PROCESS 4**  
ATTACH LATCH AND  
ROTATE INTO DOWN POSITION



**IN PROCESS 5**  
SOLDER WELD TABS

END 2 OPTION	TABLE 3 WIRING OPTION					
	-01		-02		-B4	
	"A" mm[in.]	"B" mm[in.]	"A" mm[in.]	"B" mm[in.]	"A" mm[in.]	"B" mm[in.]
-FF: ECUE	26.29 [1.035]	8.51 [0.335]	17.41 [0.685]	17.41 [0.685]	16.41 [0.646]	16.41 [0.646]
-EC: ECDP	22.32 [0.879]	12.91 [0.508]	22.32 [0.879]	12.91 [0.508]	22.32 [0.879]	12.91 [0.508]

F:\DWG\MISC\MKTG\ECUE-XX-XXX-XX-XX-1-XX-MKT.SLDDRW

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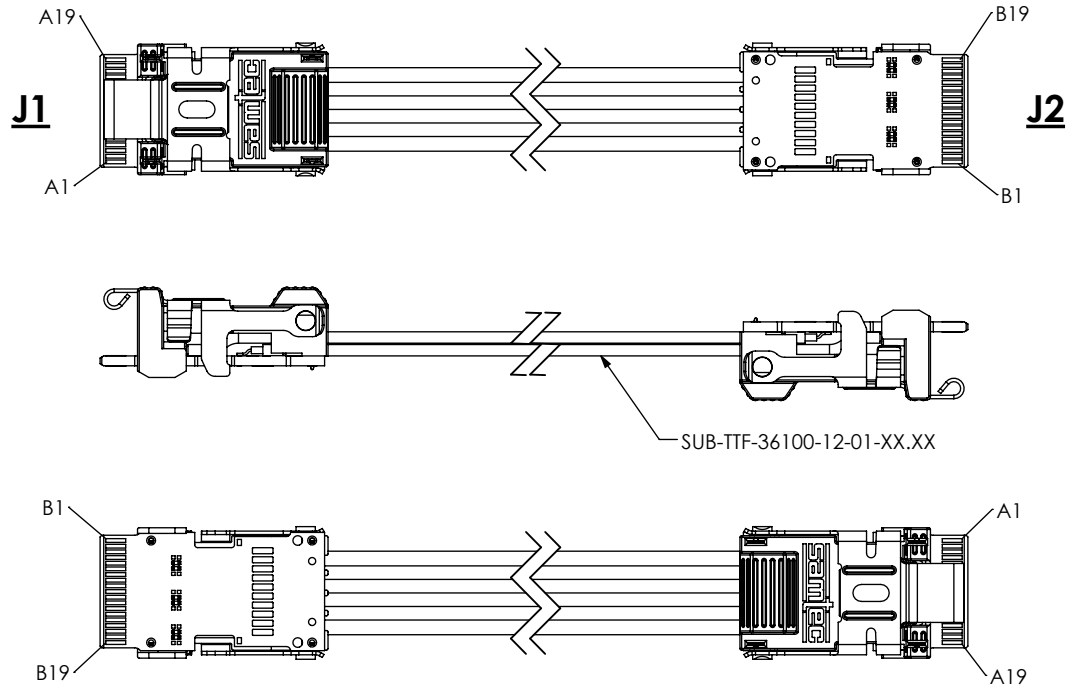
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PHONE: 812-944-6733 FAX: 812-948-5047  
e-Mail: info@SAMTEC.com code 55322

DESCRIPTION:  
FIREFLY CABLE ASSEMBLY  
DWG. NO.  
**ECUE-XX-XXX-XX-XX-1-XX**  
BY: RMSANTOS 10/9/2014 SHEET 2 OF 6

**FIG 2**  
 WIRING OPTION -02  
 ECUE-12-XXX-T1-FF-02-1-D1 SHOWN  
 (SAME AS FIG 1 EXCEPT AS NOTED)



**TABLE 4**  
 ECUE-12-XXX-X1-FF-02-1-XX SIGNAL MAPPING  
 (12 PAIRS, -02 WIRING OPTION)

J1	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19
NAME	G	S	S	G	S	S	G	S	S	G	S	S	G	S	S	G	S	S	G	G	S	S	G	S	S	G	S	S	G	S	S	G	S	S	G	S	S	G
J2	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19

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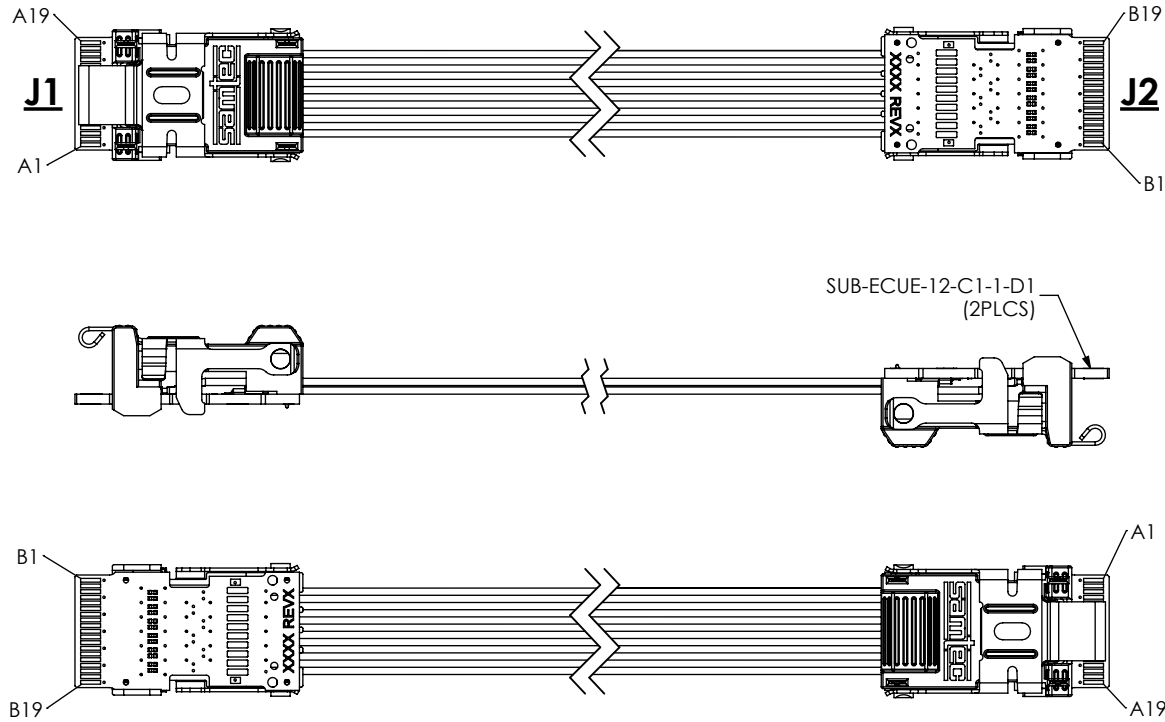
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 520 PARK EAST BLVD, NEW ALBANY, IN 47150  
 PHONE: 812-944-6733 FAX: 812-948-5047  
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DESCRIPTION:  
 FIREFLY CABLE ASSEMBLY

DWG. NO.  
**ECUE-XX-XXX-XX-XX-XX-1-XX**

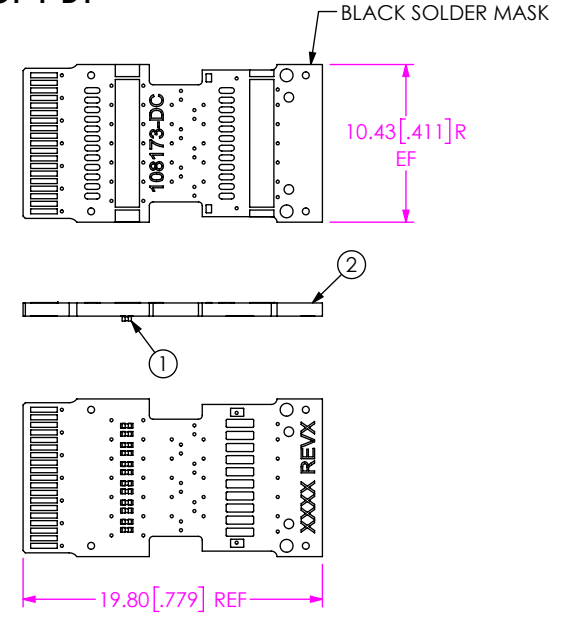
BY: RMSANTOS 10/9/2014 SHEET 3 OF 6

**FIG 3**  
ECUE-12-XXX-C1-FF-02-1-D1 SHOWN  
(SAME AS FIG 1 EXCEPT AS NOTED)



**Pb** THIS PRODUCT MANUFACTURED WITH LEAD-FREE PROCESSING

**J1 & J2**  
SUB-ECUE-12-C1-1-D1



SUB-ECUE-12-C1-1-D1 BOM			
ITEM NO.	PART NUMBER	QUANTITY	MATERIAL
1	CAP-0201-104-K-06.3-SM	12	CAP
2	PCB-108173-ECUE-DC-01	0.05	PCB

**TABLE 5**

No OF PAIRS	CABLE TYPE	END 2 OPTION	DC OPTION	PCBX-XXXXXX		SUB-TXF-XXXX
				END 1	END 2	
-08	-T2	-FF	(BLANK)	PCB-108175-ECUE-02	PCB-108175-ECUE-02	SUB-TTF-34100-04-01-XX.XX
			-D1	PCBA-199848-ECUE-DC-01	PCBA-199848-ECUE-DC-01	SUB-TTF-34100-04-01-XX.XX
-12	-C1	-FF	(BLANK)	PCB-108173-ECUE-02	PCB-108173-ECUE-02	SUB-TCF-3850-12-01-DP-XX.XX
			-D1	SUB-ECUE-12-C1-1-D1	SUB-ECUE-12-C1-1-D1	SUB-TCF-3850-12-01-DP-XX.XX
		-EC*	(BLANK)	PCB-108173-ECUE-02	PCB-104465-HDR-01	SUB-TCF-3850-12-01-DP-XX.XX
			-D1	N/A	N/A	SUB-TCF-3850-12-01-DP-XX.XX
-T1	-FF	(BLANK)	PCB-108177-ECUE-02	PCB-108177-ECUE-02	SUB-TTF-36100-06-01-XX.XX	
		-D1	PCBA-199130-ECUE-E-03	PCBA-199130-ECUE-E-03	SUB-TTF-36100-06-01-XX.XX	

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520 PARK EAST BLVD, NEW ALBANY, IN 47150  
PHONE: 812-944-6733 FAX: 812-948-5047  
e-Mail info@SAMTEC.com code 55322

DESCRIPTION: FIREFLY CABLE ASSEMBLY  
DWG. NO. ECUE-XX-XXX-XX-XX-XX-1-XX  
BY: RMSANTOS 10/9/2014 SHEET 4 OF 6

**TABLE 6**  
**ECUE-08-XXX-T2-FF-01-1 SIGNAL MAPPING**  
**(8 PAIRS, -01 WIRING OPTION)**

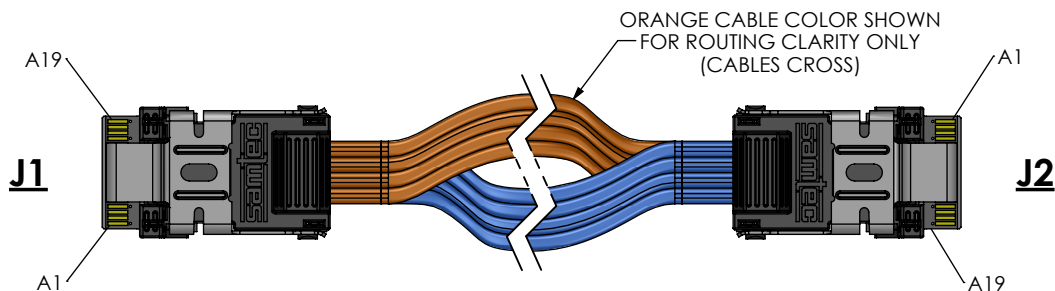
J1	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19
NAME	G	S	S	G	S	S	G	NC	NC	NC	NC	NC	G	S	S	G	S	S	G	G	S	S	G	S	S	G	NC	NC	NC	NC	NC	G	S	S	G	S	S	G
J2	A19	A18	A17	A16	A15	A14	A13	A12	A11	A10	A9	A8	A7	A6	A5	A4	A3	A2	A1	B19	B18	B17	B16	B15	B14	B13	B12	B11	B10	B9	B8	B7	B6	B5	B4	B3	B2	B1

**TABLE 7**  
**ECUE-08-XXX-T2-FF-02-1-XX SIGNAL MAPPING**  
**(8 PAIRS, -02 WIRING OPTION)**

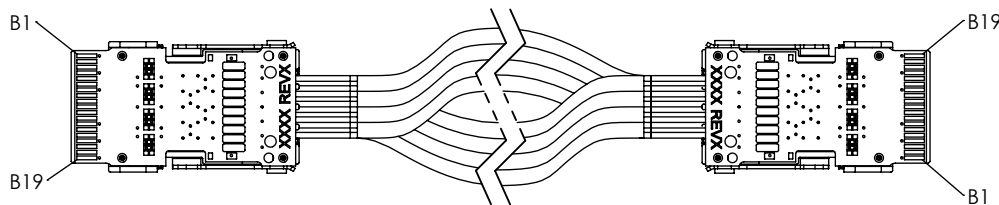
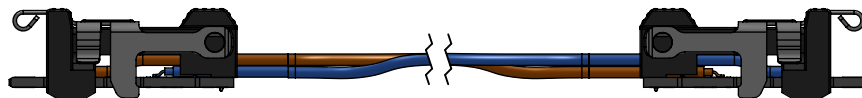
J1	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19
NAME	G	S	S	G	S	S	G	NC	NC	NC	NC	NC	G	S	S	G	S	S	G	G	S	S	G	S	S	G	NC	NC	NC	NC	NC	G	S	S	G	S	S	G
J2	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19

**TABLE 8**  
**ECUE-08-XXX-T2-FF-B4-1-XX SIGNAL MAPPING**  
**(8 PAIRS, -B4 WIRING OPTION)**

J1	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19
NAME	G	S	S	G	S	S	G	NC	NC	NC	NC	NC	G	S	S	G	S	S	G	G	S	S	G	S	S	G	NC	NC	NC	NC	NC	G	S	S	G	S	S	G
J2	B19	B18	B17	B16	B15	B14	B13	B12	B11	B10	B9	B8	B7	B6	B5	B4	B3	B2	B1	A19	A18	A17	A16	A15	A14	A13	A12	A11	A10	A9	A8	A7	A6	A5	A4	A3	A2	A1



**FIG 4**  
**WIRING OPTION -B4**  
**ECUE-08-XXX-T2-FF-B4-1-D1 SHOWN**  
**(SAME AS FIG1 EXCEPT AS NOTED)**



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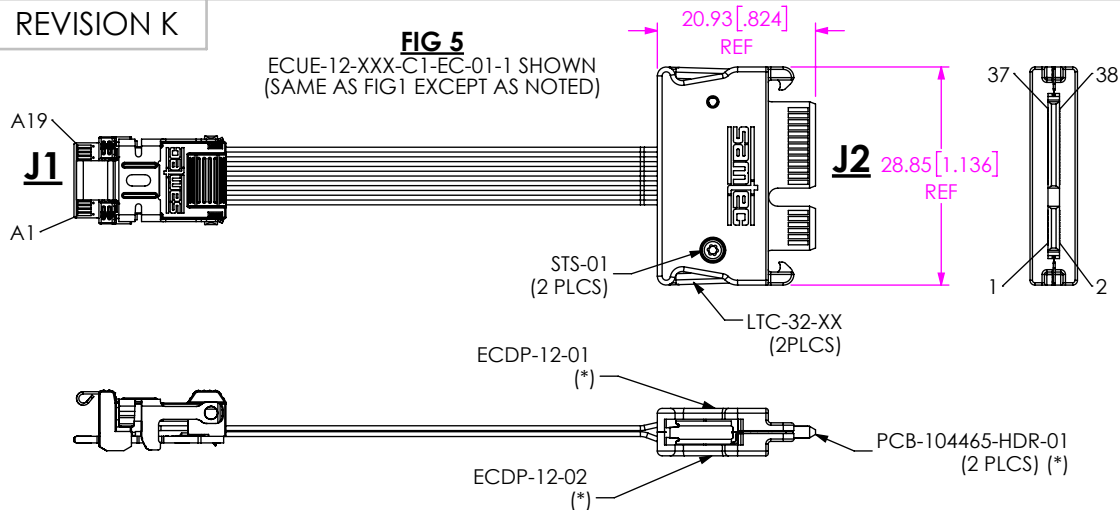
DESCRIPTION:  
 FIREFLY CABLE ASSEMBLY

SHEET SCALE: 1:1

DWG. NO.  
**ECUE-XX-XXX-XX-XX-XX-1-XX**

BY: RMSANTOS 10/9/2014 SHEET 5 OF 6

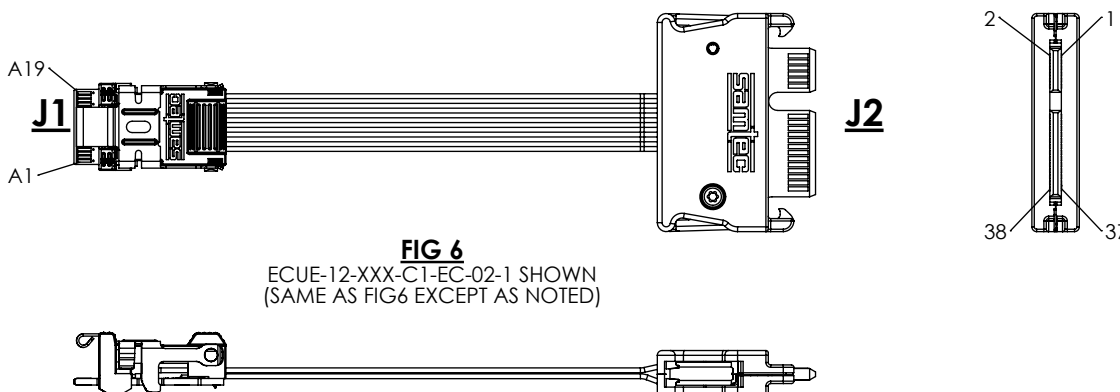
**FIG 5**  
ECUE-12-XXX-C1-EC-01-1 SHOWN  
(SAME AS FIG1 EXCEPT AS NOTED)



**TABLE 9**  
**ECUE-12-XXX-C1-EC-01-1 SIGNAL MAPPING**  
(12 PAIRS, -EC-01 WIRING OPTION)

J1	A1	A2	A3	~	A17	A18	A19	B1	B2	B3	~	B17	B18	B19
NAME	G	S	S	~	S	S	G	G	S	S	~	S	S	G
J2	1	3	5	~	33	35	37	2	4	6	~	34	36	38

**FIG 6**  
ECUE-12-XXX-C1-EC-02-1 SHOWN  
(SAME AS FIG6 EXCEPT AS NOTED)



**TABLE 10**  
**ECUE-12-XXX-C1-EC-02-1 SIGNAL MAPPING**  
(12 PAIRS, -EC-02 WIRING OPTION)

J1	A1	A2	A3	~	A17	A18	A19	B1	B2	B3	~	B17	B18	B19
NAME	G	S	S	~	S	S	G	G	S	S	~	S	S	G
J2	38	36	34	~	6	4	2	37	35	33	~	5	3	1

**TABLE 13**  
\*ECDP POSITIONS

No OF PAIRS	*ECDP POSITIONS																			
-12	1	3	5	7	9	11	<b>KEY</b>	13	15	17	19	21	23	25	27	29	31	33	35	37
	G	S	S	G	S	S		G	S	S	G	S	S	G	S	S	G	S	S	G
	G	S	S	G	S	S		G	S	S	G	S	S	G	S	S	G	S	S	G
	2	4	6	8	10	12		14	16	18	20	22	24	26	28	30	32	34	36	38

\*NOT TOOLED

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520 PARK EAST BLVD., NEW ALBANY, IN 47150  
PHONE: 812-944-6733 FAX: 812-948-5047  
e-Mail info@SAMTEC.com code 55322

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DESCRIPTION:  
FIREFLY CABLE ASSEMBLY

SHEET SCALE: 1:1

DWG. NO.  
**ECUE-XX-XXX-XX-XX-XX-1-XX**  
BY: RMSANTOS 10/9/2014 SHEET 6 OF 6