

The Embedded I/O Company



TA310

RJ45 Twinax Cable Kit

**Cable Kit for Modules with Samtec Edge Rate®
Connector**

Version 1.0

User Manual

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TA310-10R

Cable Kit for Modules with Samtec Edge Rate® Connector

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Style Conventions

Hexadecimal characters are specified with prefix 0x, i.e. 0x029E (that means hexadecimal value 029E).

For signals on hardware products, an 'Active Low' is represented by the signal name with # following, i.e. IP_RESET#.

Access terms are described as:

W	Write Only
R	Read Only
R/W	Read/Write
R/C	Read/Clear
R/S	Read/Set

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1 Product Description

The TA310 cable kit combines the TA206 RJ45 Terminal Block and the TA112 32 Pair Twinax Cable. It is used as a standard interface to connect TEWS modules with Samtec EdgeRate® connector to other system devices. The TA310 Cable Kit is therefore an essential wiring interface for prototyping and in the same way for machines and peripheral equipment.

The TA206 is used as a standard interface for a switch cabinet to connect a TEWS module with a Samtec 0.8mm EdgeRate® Twinax Cable via 8 RJ48 connectors with other system devices. Two mounting holes of UNC4-40 are provided for the cable connection.

The TA206 has a universal socket and may simply mount on standard EM mounting rails as a compact terminal strip.

An additional screw connector provides a possibility to connect the shield of the 8 port RJ45 connector to external case ground.

The TA112 is a 32 Pair Twinax Ribbon cable that allows easy access to TEWS modules with Samtec Rugged EdgeRate® female connector like TXMC638 or TXMC636. It provides Pin 1 to Pin N-1 connection between its connectors. Always two wires are constructed as twinax cable.

The differential impedance of the twinax cable is 100 Ohm and the operating temperature is -25 °C to +125°C.

The cable length is 0.6 m and the permissible maximum voltage for the TA112 is 30V DC.

2 Pin Assignment

2.1 TA112 32 Pair Twinax Cable

The 32 Pair Twinax cable provides a Pin 1 to Pin N-1 connection between the ERDP male connectors P1 and P2. Always two pins are connected to one Twinax cable.

	P1 ERDP male	P2 ERDP male
usage	Pin No.	Pin No.
CASE	1	97
Diff. Pair 01	3	95
	5	93
CASE	7	91
Diff. Pair 03	9	89
	11	87
CASE	13	85
Diff. Pair 05	15	83
	17	81
CASE	19	79
Diff. Pair 07	21	77
	23	75
CASE	25	73
Diff. Pair 09	27	71
	29	69
CASE	31	67
Diff. Pair 11	33	65
	35	63
CASE	37	61
Diff. Pair 13	39	59
	41	57
CASE	43	55
Diff. Pair 15	45	53
	47	51
CASE	49	49
Diff. Pair 17	51	47
	53	45
CASE	55	43
Diff. Pair 19	57	41
	59	39
CASE	61	37
Diff. Pair 21	63	35

	P1 ERDP male	P1 ERDP male
usage	Pin No.	Pin No.
CASE	2	98
Diff. Pair 02	4	96
	6	94
CASE	8	92
Diff. Pair 04	10	90
	12	88
CASE	14	86
Diff. Pair 06	16	84
	18	82
CASE	20	80
Diff. Pair 08	22	78
	24	76
CASE	26	74
Diff. Pair 10	28	72
	30	70
CASE	32	68
Diff. Pair 12	34	66
	36	64
CASE	38	62
Diff. Pair 14	40	60
	42	58
CASE	44	56
Diff. Pair 16	46	54
	48	52
CASE	50	50
Diff. Pair 18	52	48
	54	46
CASE	56	44
Diff. Pair 20	58	42
	60	40
CASE	62	38
Diff. Pair 22	64	36

	P1 ERDP male	P2 ERDP male
usage	Pin No.	Pin No.
	65	33
CASE	67	31
Diff. Pair 23	69	29
	71	27
CASE	73	25
Diff. Pair 25	75	23
	77	21
CASE	79	19
Diff. Pair 27	81	17
	83	15
CASE	85	13
Diff. Pair 29	87	11
	89	9
CASE	91	7
Diff. Pair 31	93	5
	95	3
CASE	97	1

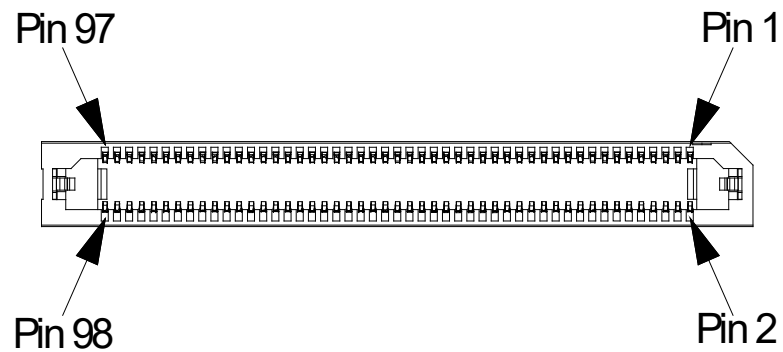
	P1 ERDP male	P1 ERDP male
usage	Pin No.	Pin No.
	66	34
CASE	68	32
Diff. Pair 24	70	30
	72	28
CASE	74	26
Diff. Pair 26	76	24
	78	22
CASE	80	20
Diff. Pair 28	82	18
	84	16
CASE	86	14
Diff. Pair 30	88	12
	90	10
CASE	92	8
Diff. Pair 32	94	6
	96	4
CASE	98	2

Table 2-1 : TA112 Cable 1 to X2 Pin Assignment

2.2 TA206 RJ45 Terminal Block

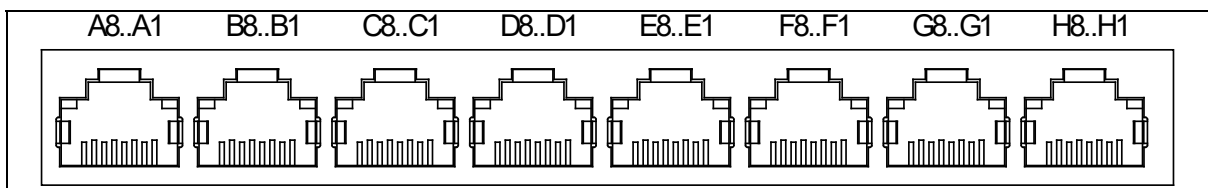
2.2.1 X1 Connector Type

Pin-Count	98
Connector Type	Rugged EdgeRate female connector
Source & Order Info	Samtec – ERF8-049-07.0-L-DV-L



2.2.2 X2 Connector Type

Pin-Count	64
Connector Type	8 Port High Speed Modular Jack (RJ45)
Source & Order Info	Amphenol RJHSE-5380-08



2.2.3 Pin Assignment

X2 RJ46 Terminal	X1 EdgeRate Terminal	
CASE	2	GND
D7	4	-
D8	6	-
CASE	8	GND
D4	10	-
D5	12	-
CASE	14	GND
D3	16	-
D6	18	-
CASE	20	GND
D1	22	-
D2	24	-
CASE	26	GND
C7	28	-
C8	30	-
CASE	32	GND
C4	34	-
C5	36	-
CASE	38	GND
C3	40	-
C6	42	-
CASE	44	GND
C1	46	-
C2	48	-
CASE	50	GND
B7	52	-
B8	54	-
CASE	56	GND
B4	58	-
B5	60	-
CASE	62	GND
B3	64	-
B6	66	-
CASE	68	GND
B1	70	-
B2	72	-
CASE	74	GND

X2 RJ45 Terminal	X1 EdgeRate Terminal	
CASE	1	GND
H7	3	-
H8	5	-
CASE	7	GND
H4	9	-
H5	11	-
CASE	13	GND
H3	15	-
H6	17	-
CASE	19	GND
H1	21	-
H2	23	-
CASE	25	GND
G7	27	-
G8	29	-
CASE	31	GND
G4	33	-
G5	35	-
CASE	37	GND
G3	39	-
G6	41	-
CASE	43	GND
G1	45	-
G2	47	-
CASE	49	GND
F7	51	-
F8	53	-
CASE	55	GND
F4	57	-
F5	59	-
CASE	61	GND
F3	63	-
F6	65	-
CASE	67	GND
F1	69	-
F2	71	-
CASE	73	GND

X2 RJ46 Terminal	X1 EdgeRate Terminal	
A7	76	-
A8	78	-
CASE	80	GND
A4	82	-
A5	84	-
CASE	86	GND
A3	88	-
A6	90	-
CASE	92	GND
A1	94	-
A2	96	-
CASE	98	GND

X2 RJ45 Terminal	X1 EdgeRate Terminal	
E7	75	-
E8	77	-
CASE	79	GND
E4	81	-
E5	83	-
CASE	85	GND
E3	87	-
E6	89	-
CASE	91	GND
E1	93	-
E2	95	-
CASE	97	GND

Table 2-2 : X1 to X2 Pin Assignment

X3 RJ46 Terminal	
1	CASE
2	CASE

Table 2-3 : X3 Pin Assignment

3 Assembly Drawing

3.1 TA112 32 Pair Twinax Cable

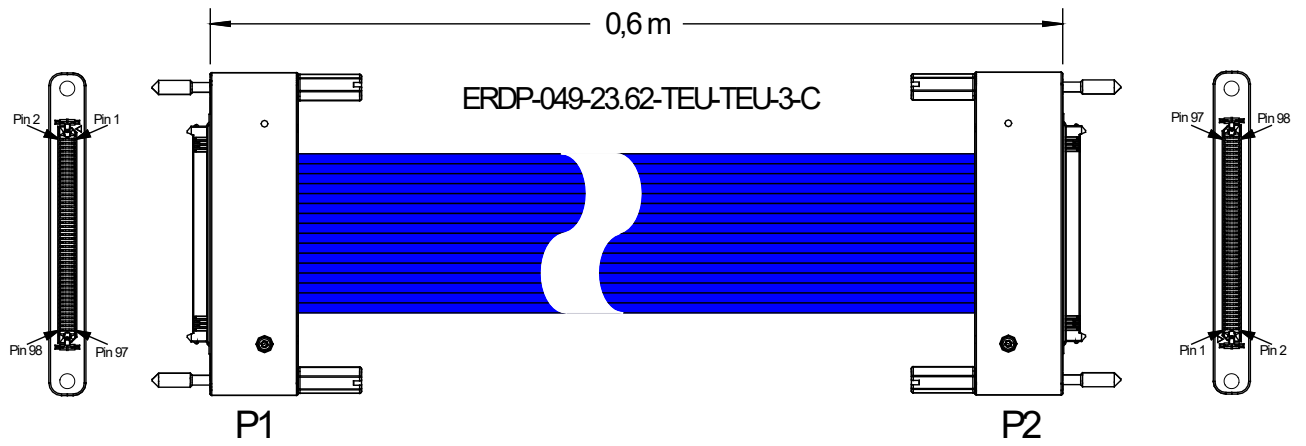


Figure 3-1 : TA112 Assembly Drawing

3.2 TA206 RJ45 Terminal Block

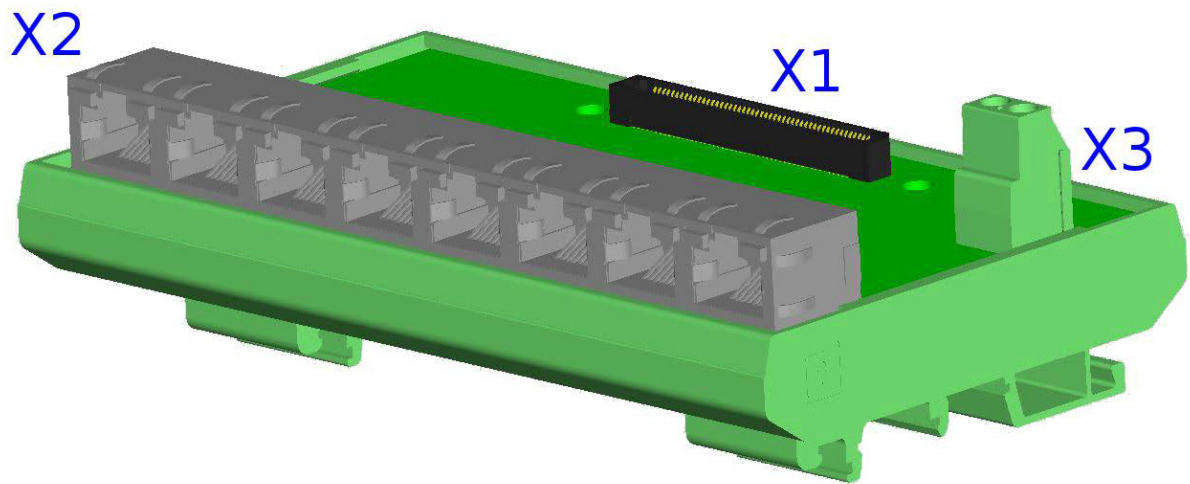


Figure 3-2 : TA206 Assembly Drawing