



THCV215/216-8LANE Evaluation Kits

SerDes transmitter and receiver evaluation board

1. General Discription

THCV215/216-8LANE Evaluation Kits are designed to evaluate THCV215 and THCV216 for transmission of video data. Each has four THCV215's or four THCV216's.

This kits can transmit video data of "Full-HD / 240 Hz / 30 bit" and "4Kx2K / 60 Hz / 30 bit".

The supply voltage range are "3.0V to 3.6V" or "5.0V to 12.0V".

2. Block Diagram

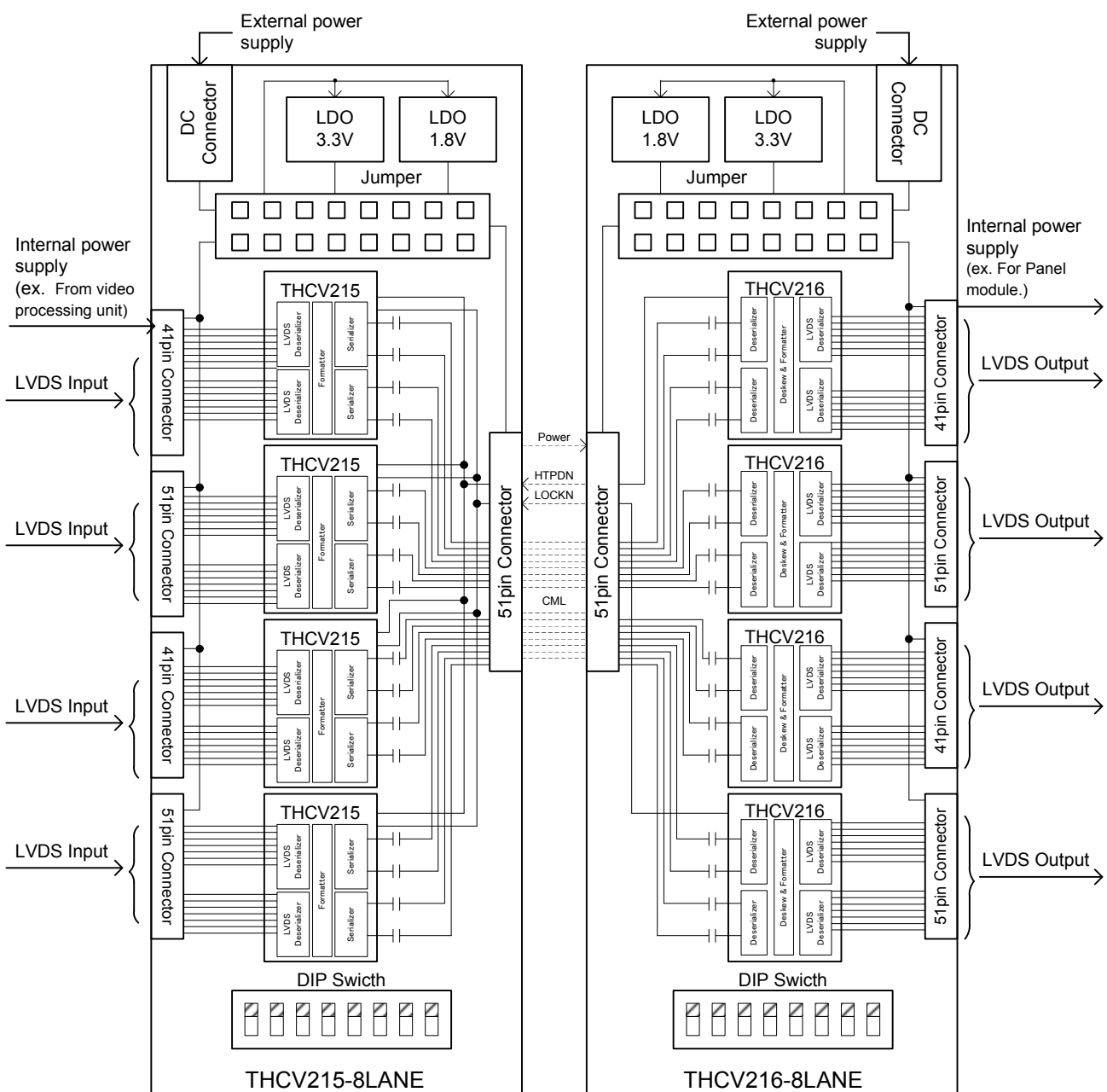


Figure 2-1. Block Diagram



THCV215/216-8LANE Evaluation Kits

SerDes transmitter and receiver evaluation board

3. Connector

This chapter shows the connector to connect the THCV215 and THCV216.

Table 3-1. Pin assignments of LVDS connector
(41 pin)

THCV215 CN101 & CN301		Descriptions	THCV216 CN102 & CN104	
Pin No.	Symbol		Symbol	Pin No.
1	Vcc	Supply voltage from video processing unit, And for Panel module (Internal Supply)	Vcc	41
2				40
3				39
4				38
5	NC	Non Connected	NC	37
6				36
7				35
8				34
9	GND	Ground	GND	33
10				32
11				31
12				30
13	TLA0-	LVDS data input/output	RLA0-	29
14				28
15				27
16				26
17	GND	Ground	GND	25
18				24
19				23
20				22
21	TLD0+	LVDS data input/output	RLD0+	21
22				20
23				19
24				18
25	GND	Ground	GND	17
26				16
27				15
28				14
29	TLB0-	LVDS data input/output	RLB0-	13
30				12
31				11
32				10
33	GND	Ground	GND	9
34				8
35				7
36				6
37	TLC0+	LVDS data input/output	RLC0+	5
38				4
39				3
40				2
41	NC	Non Connected	NC	1

Table 3-2. Pin assignments of LVDS connector
(51 pin)

THCV215 CN201 & CN401		Descriptions	THCV216 CN103 & CN105	
Pin No.	Symbol		Symbol	Pin No.
1	Vcc	Supply voltage from video processing unit, And for Panel module (Internal Supply)	Vcc	51
2				50
3				49
4				48
5	NC	Non Connected	NC	47
6				46
7				45
8				44
9	GND	Ground	GND	43
10				42
11				41
12				40
13	TLA0-	LVDS data input/output	RLA0-	39
14				38
15				37
16				36
17	GND	Ground	GND	35
18				34
19				33
20				32
21	TLD0+	LVDS data input/output	RLD0+	31
22				30
23				29
24				28
25	GND	Ground	GND	27
26				26
27				25
28				24
29	TLB0-	LVDS data input/output	RLB0-	23
30				22
31				21
32				20
33	GND	Ground	GND	19
34				18
35				17
36				16
37	TLC0+	LVDS data input/output	RLC0+	15
38				14
39				13
40				12
41	NC	Non Connected	NC	11
42				10
43				9
44				8
45	NC	Non Connected	NC	7
46				6
47				5
48				4
49	NC	Non Connected	NC	3
50				2
51				1



THCV215/216-8LANE Evaluation Kits

SerDes transmitter and receiver evaluation board

3. Connector and Cable (Continued)

Table 3-3. Pin assignments of CML connector
(51 pin)

THCV215_CN501		Descriptions	THCV216_CN101	
Pin No.	Symbol		Symbol	Pin No.
51	Vcc	Supply voltage from THCV215 to THCV216	Vcc	1
50				2
49				3
48				4
47				5
46				6
45				7
44				8
43				9
42				10
41	GND	Ground	GND	11
40				12
39				13
38				14
37				15
36	HTPDN	Hot plug detect	HTPDN	16
35	LOCKN	Lock detect	LOCKN	17
34	GND	Ground	GND	18
33	Tx0n	V-by-One® HS	Rx0n	19
32	Tx0p	Channel 0 (CML)	Rx0p	20
31	GND	Ground	GND	21
30	GND		GND	22
29	Tx1n	V-by-One® HS	Rx1n	23
28	Tx1p	Channel 1 (CML)	Rx1p	24
27	GND	Ground	GND	25
26	GND		GND	26
25	Tx2n	V-by-One® HS	Rx2n	27
24	Tx2p	Channel 2 (CML)	Rx2p	28
23	GND	Ground	GND	29
22	GND		GND	30
21	Tx3n	V-by-One® HS	Rx3n	31
20	Tx3p	Channel 3 (CML)	Rx3p	32
19	GND	Ground	GND	33
18	GND		GND	34
17	Tx4n	V-by-One® HS	Rx4n	35
16	Tx4p	Channel 4 (CML)	Rx4p	36
15	GND	Ground	GND	37
14	GND		GND	38
13	Tx5n	V-by-One® HS	Rx5n	39
12	Tx5p	Channel 5 (CML)	Rx5p	40
11	GND	Ground	GND	41
10	GND		GND	42
9	Tx6n	V-by-One® HS	Rx6n	43
8	Tx6p	Channel 6 (CML)	Rx6p	44
7	GND	Ground	GND	45
6	GND		GND	46
5	Tx7n	V-by-One® HS	Rx7n	47
4	Tx7p	Channel 7 (CML)	Rx7p	48
3	GND	Ground	GND	49
2	NC	Non Connected	NC	50
1				51



THCV215/216-8LANE Evaluation Kits

SerDes transmitter and receiver evaluation board

4. Power supply setting

This chapter shows the power supply setting with the jumper.

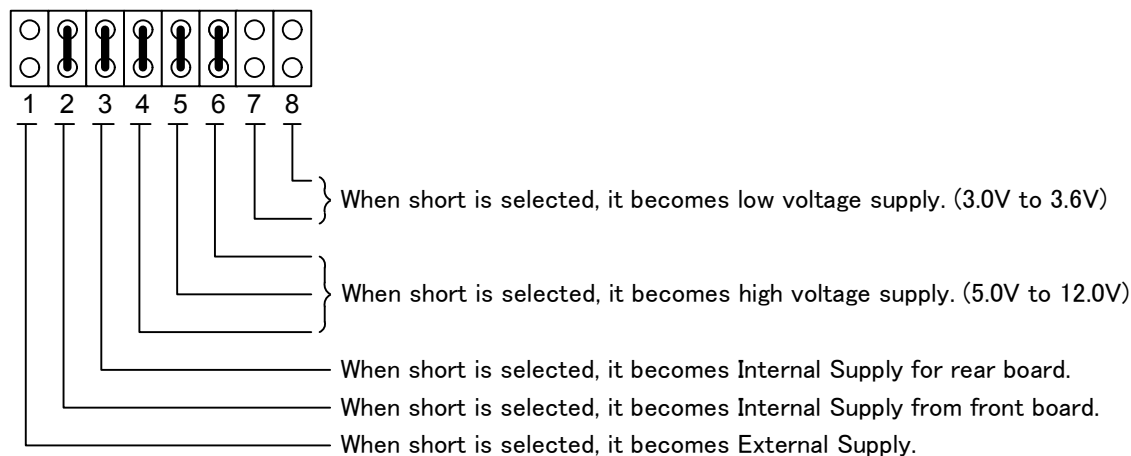


Figure 4. power supply setting with the jumper

Example4-1 : Internal Supply 5.0 V to 12.0V (Default Setting)

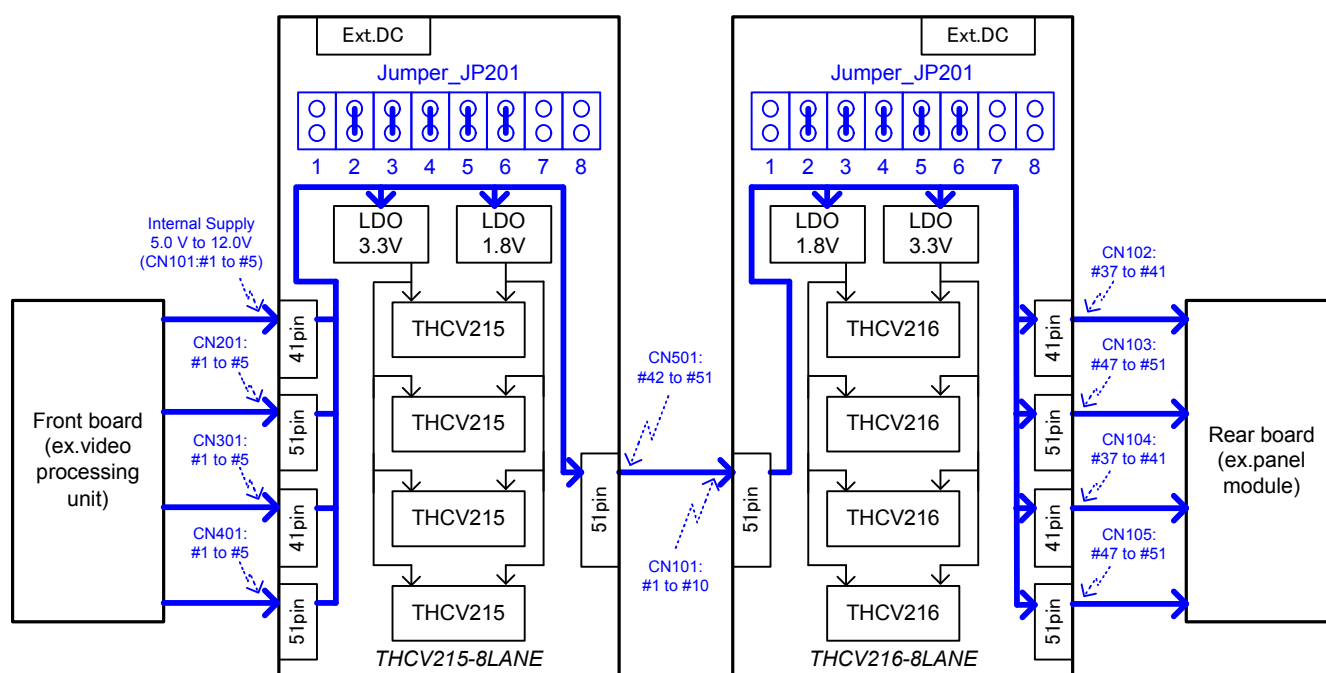


Figure 4-1. Internal Supply 5.0V to 12.0V



THCV215/216-8LANE Evaluation Kits

SerDes transmitter and receiver evaluation board

4. Power supply setting (Continued)

Example4-2 : External Supply 5.0V to 12.0V

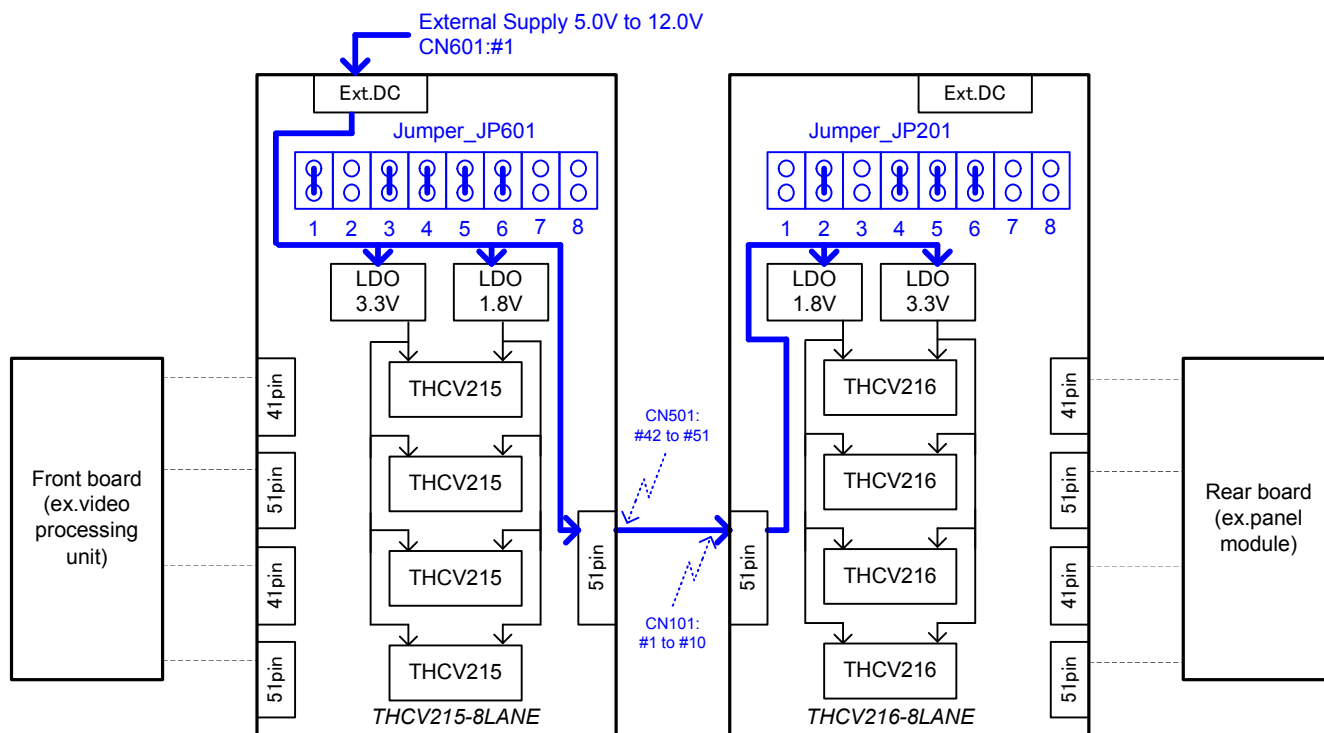


Figure 4-2. External Supply 5.0V to 12.0V

Example4-3 : External Supply 3.0V to 3.6V

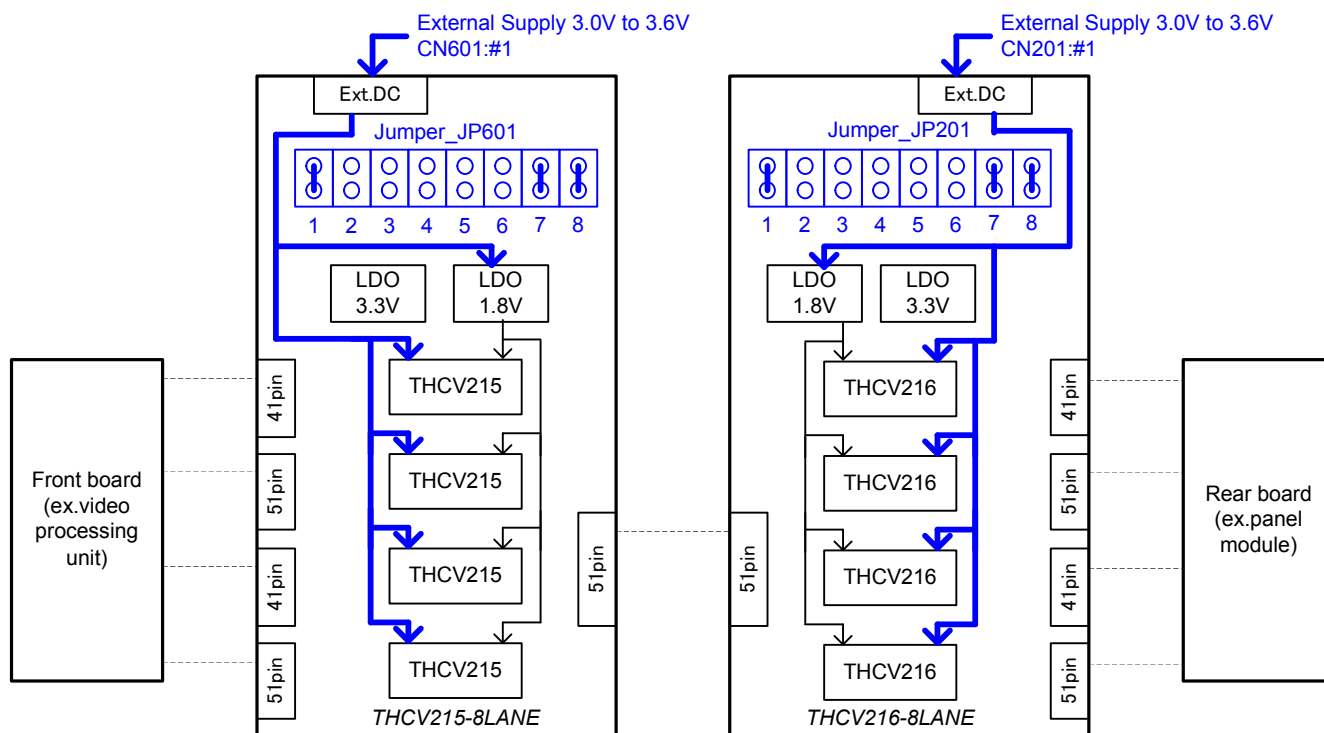


Figure 4-3. External Supply 3.0V to 3.6V



THCV215/216-8LANE Evaluation Kits

SerDes transmitter and receiver evaluation board

5. Function setting

This chapter shows the DIP switches of the control settings.

Table 5-1. DIP switches on the THCV215-8LANE Board

SW#	Symbol	Default Setting	Function															
1	SDSEL	High (8 lane)	Selects the Lanes. Low : Not available High : 8 lane															
2	COL0	Low	Selects the color depth. <table><tr><th>COL0</th><th>COL1</th><th>Function</th></tr><tr><td>Low</td><td>Low</td><td>6 bit mode</td></tr><tr><td>High</td><td>Low</td><td>8 bit mode</td></tr><tr><td>Low</td><td>High</td><td>10 bit mode</td></tr><tr><td>High</td><td>High</td><td>Not available</td></tr></table>	COL0	COL1	Function	Low	Low	6 bit mode	High	Low	8 bit mode	Low	High	10 bit mode	High	High	Not available
COL0	COL1	Function																
Low	Low	6 bit mode																
High	Low	8 bit mode																
Low	High	10 bit mode																
High	High	Not available																
3	COL1	High																
4	PDN	High (Normal)																
5	DRV1	Low																
6	DRV0	High	Selects the drive strength. Must be set to DRV1=Low and to DRV0=High															
7	PRE1	Low (0%)	Selects the pre-emphasis level. Low : 0% High : 100%															
8	RES1	Low (Normal)	Selects the Field BET Mode. * Low : Normal operation (default) High : Field BET Mode enable															

* Please see the datasheet for details. (THCV215-THCV216_Rev.x.xx_E.pdf)

Table 5-2. DIP switches on the THCV216-8LANE Board

SW#	Symbol	Default Setting	Function															
1	SDSEL	High (8 lane)	Selects the Lanes. Low : Not available High : 8 lane															
2	COL1	High	Selects the color depth. <table><tr><th>COL1</th><th>COL0</th><th>Function</th></tr><tr><td>Low</td><td>Low</td><td>6 bit mode</td></tr><tr><td>Low</td><td>High</td><td>8 bit mode</td></tr><tr><td>High</td><td>Low</td><td>10 bit mode</td></tr><tr><td>High</td><td>High</td><td>Not available</td></tr></table>	COL1	COL0	Function	Low	Low	6 bit mode	Low	High	8 bit mode	High	Low	10 bit mode	High	High	Not available
COL1	COL0	Function																
Low	Low	6 bit mode																
Low	High	8 bit mode																
High	Low	10 bit mode																
High	High	Not available																
3	COL0	Low																
4	PDN	High (Normal)																
5	RES3	Low (Normal)																
6	NC	Low	Not connected															
7	NC	Low																
8	RS	Low (Normal)	Direction of RS pin depends on RES3. Selects the LVDS swing range when RES3=Low High : Normal swing (350 mV typ.) Low : Reduced swing (200mV typ.) Field BET output when RES3=High *															

* Please see the datasheet for details. (THCV215-216_Rev.x.xx_E.pdf)



THCV215/216-8LANE Evaluation Kits

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6. Other functional Descriptions

This chapter shows other function.

6-1. About LED on the board.

Board	Power On detect.	Lock detect.
THCV215-8LANE	D601	D701
THCV216-8LANE	D201	-

6-2. THCV215 Link Ready function (RDY)

This is a CMOS output for indicating the link status. If link is ready RDY = High.

6-3. THCV216 Field BET mode settings.

Please detach Jumper (JP101 to JP104) for Field BET mode.

THCV215/216-8LANE Evaluation Kits

SerDes transmitter and receiver evaluation board

7. Schematic

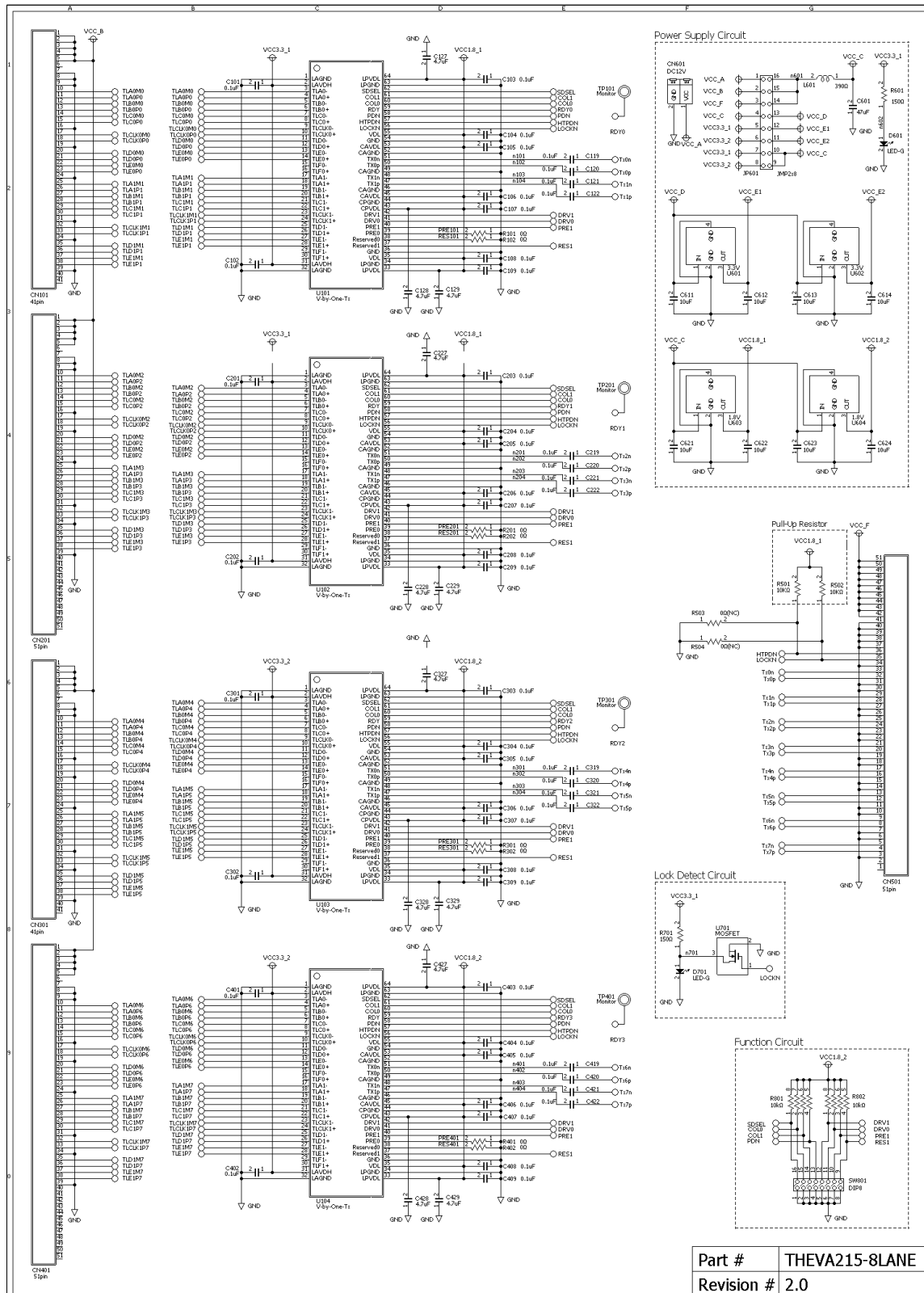


Figure 7-1. THCV215-8LANE schematic

SerDes transmitter and receiver evaluation board

Power Supply Circuit

DC12V
VCC_A
VCC_B
VCC_C
VCC_D
VCC_E
VCC_F
VCC_G
VCC_H
VCC_I
VCC_J
VCC_K
VCC_L
VCC_M
VCC_N
VCC_O
VCC_P
VCC_Q
VCC_R
VCC_S
VCC_T
VCC_U
VCC_V
VCC_W
VCC_X
VCC_Y
VCC_Z
VCC_1
VCC_2
VCC_3
VCC_4
VCC_5
VCC_6
VCC_7
VCC_8
VCC_9
VCC_10
VCC_11
VCC_12
VCC_13
VCC_14
VCC_15
VCC_16
VCC_17
VCC_18
VCC_19
VCC_20
VCC_21
VCC_22
VCC_23
VCC_24
VCC_25
VCC_26
VCC_27
VCC_28
VCC_29
VCC_30
VCC_31
VCC_32
VCC_33
VCC_34
VCC_35
VCC_36
VCC_37
VCC_38
VCC_39
VCC_40
VCC_41
VCC_42
VCC_43
VCC_44
VCC_45
VCC_46
VCC_47
VCC_48
VCC_49
VCC_50
VCC_51
VCC_52
VCC_53
VCC_54
VCC_55
VCC_56
VCC_57
VCC_58
VCC_59
VCC_60
VCC_61
VCC_62
VCC_63
VCC_64
VCC_65
VCC_66
VCC_67
VCC_68
VCC_69
VCC_70
VCC_71
VCC_72
VCC_73
VCC_74
VCC_75
VCC_76
VCC_77
VCC_78
VCC_79
VCC_80
VCC_81
VCC_82
VCC_83
VCC_84
VCC_85
VCC_86
VCC_87
VCC_88
VCC_89
VCC_90
VCC_91
VCC_92
VCC_93
VCC_94
VCC_95
VCC_96
VCC_97
VCC_98
VCC_99
VCC_100

Function Circuit

LOCKND - PDN1 Circuit

Part # THEVA216-8LANE
Revision # 2.0

Figure 7-2. THCV216-8LANE schematic



THCV215/216-8LANE Evaluation Kits

SerDes transmitter and receiver evaluation board



8. Bill of Materials (BOM)

Table 8-1. BOM for THCV215-8LANE

Designator	Description	PKG	Part Number	Manufacturer
C101	0.1uF	1005	GRM155B31C104KA87	Murata
C102	0.1uF	1005	GRM155B31C104KA87	Murata
C103	0.1uF	1005	GRM155B31C104KA87	Murata
C104	0.1uF	1005	GRM155B31C104KA87	Murata
C105	0.1uF	1005	GRM155B31C104KA87	Murata
C106	0.1uF	1005	GRM155B31C104KA87	Murata
C107	0.1uF	1005	GRM155B31C104KA87	Murata
C108	0.1uF	1005	GRM155B31C104KA87	Murata
C109	0.1uF	1005	GRM155B31C104KA87	Murata
C110	0.1uF	1005	GRM155B31C104KA87	Murata
C111	0.1uF	1005	GRM155B31C104KA87	Murata
C112	0.1uF	1005	GRM155B31C104KA87	Murata
C113	0.1uF	1005	GRM155B31C104KA87	Murata
C114	0.1uF	1005	GRM155B31C104KA87	Murata
C115	0.1uF	1005	GRM155B31C104KA87	Murata
C116	0.1uF	1005	GRM155B31C104KA87	Murata
C117	0.1uF	1005	GRM155B31C104KA87	Murata
C118	0.1uF	1005	GRM155B31C104KA87	Murata
C119	0.1uF	1005	GRM155B31C104KA87	Murata
C120	0.1uF	1005	GRM155B31C104KA87	Murata
C121	0.1uF	1005	GRM155B31C104KA87	Murata
C122	0.1uF	1005	GRM155B31C104KA87	Murata
C123	0.1uF	1005	GRM155B31C104KA87	Murata
C124	0.1uF	1005	GRM155B31C104KA87	Murata
C125	0.1uF	1005	GRM155B31C104KA87	Murata
C126	0.1uF	1005	GRM155B31C104KA87	Murata
C127	0.1uF	1005	GRM155B31C104KA87	Murata
C128	0.1uF	1005	GRM155B31C104KA87	Murata
C129	4.7uF	1608	GRM188R60J475KE19D	Murata
C130	4.7uF	1608	GRM188R60J475KE19D	Murata
C131	4.7uF	1608	GRM188R60J475KE19D	Murata
C132	4.7uF	1608	GRM188R60J475KE19D	Murata
C133	4.7uF	1608	GRM188R60J475KE19D	Murata
C134	4.7uF	1608	GRM188R60J475KE19D	Murata
C135	4.7uF	1608	GRM188R60J475KE19D	Murata
C136	4.7uF	1608	GRM188R60J475KE19D	Murata
C137	0.1uF	1005	GRM155B31C104KA87	Murata
C138	0.1uF	1005	GRM155B31C104KA87	Murata
C139	0.1uF	1005	GRM155B31C104KA87	Murata
C140	0.1uF	1005	GRM155B31C104KA87	Murata
C141	0.1uF	1005	GRM155B31C104KA87	Murata
C142	0.1uF	1005	GRM155B31C104KA87	Murata
C143	0.1uF	1005	GRM155B31C104KA87	Murata
C144	0.1uF	1005	GRM155B31C104KA87	Murata
C145	0.1uF	1005	GRM155B31C104KA87	Murata
C146	0.1uF	1005	GRM155B31C104KA87	Murata
C147	0.1uF	1005	GRM155B31C104KA87	Murata
C148	0.1uF	1005	GRM155B31C104KA87	Murata
C149	0.1uF	1005	GRM155B31C104KA87	Murata
C150	0.1uF	1005	GRM155B31C104KA87	Murata
C151	0.1uF	1005	GRM155B31C104KA87	Murata
C152	0.1uF	1005	GRM155B31C104KA87	Murata
C153	0.1uF	1005	GRM155B31C104KA87	Murata
C154	0.1uF	1005	GRM155B31C104KA87	Murata
C155	0.1uF	1005	GRM155B31C104KA87	Murata
C156	0.1uF	1005	GRM155B31C104KA87	Murata
C157	0.1uF	1005	GRM155B31C104KA87	Murata
C158	0.1uF	1005	GRM155B31C104KA87	Murata
C159	0.1uF	1005	GRM155B31C104KA87	Murata
C160	0.1uF	1005	GRM155B31C104KA87	Murata
C161	0.1uF	1005	GRM155B31C104KA87	Murata
C162	0.1uF	1005	GRM155B31C104KA87	Murata
C163	0.1uF	1005	GRM155B31C104KA87	Murata
C164	0.1uF	1005	GRM155B31C104KA87	Murata
C165	4.7uF	1608	GRM188R60J475KE19D	Murata
C166	4.7uF	1608	GRM188R60J475KE19D	Murata
C167	4.7uF	1608	GRM188R60J475KE19D	Murata
C168	4.7uF	1608	GRM188R60J475KE19D	Murata
C169	4.7uF	1608	GRM188R60J475KE19D	Murata
C170	4.7uF	1608	GRM188R60J475KE19D	Murata
C171	4.7uF	1608	GRM188R60J475KE19D	Murata
C172	4.7uF	1608	GRM188R60J475KE19D	Murata
C201	47uF	3225	GRM32EB31A476ME20L	Murata
C211	10uF	2012	GRM21BB31C106KE15	Murata
C212	10uF	2012	GRM21BB31C106KE15	Murata
C213	10uF	2012	GRM21BB31C106KE15	Murata
C214	10uF	2012	GRM21BB31C106KE15	Murata
C221	10uF	2012	GRM21BB31C106KE15	Murata
C222	10uF	2012	GRM21BB31C106KE15	Murata
C223	10uF	2012	GRM21BB31C106KE15	Murata
C224	10uF	2012	GRM21BB31C106KE15	Murata
CN101	51pin	3804	FX15SC-51S-0.5SH	HRS
CN301	41pin	3404	FX15SC-41S-0.5SH	HRS
CN401	51pin	3804	FX15SC-51S-0.5SH	HRS
CN501	31pin	3804	FX16-51S-0.5SH	HRS
DN601	DC12V	1105	ML-800-51H-2P	Sato-parts
D801	LED-G	1608	SML-310MT	ROHM
D701	LED-G	1608	SML-310MT	ROHM
JP601	JMP2x8	2.54mm	2x8-PinHeaders	-
L601	390Ω	1608	MPZ1608R391A	TDK
R101	0Ω	1005	MCR01M2PJ000	ROHM
R102	0Ω	1005	MCR01M2PJ000	ROHM
R103	0Ω (NC)	1005	MCR01M2PJ000	ROHM
R104	0Ω (NC)	1005	MCR01M2PJ000	ROHM
R201	0Ω	1005	MCR01M2PJ000	ROHM
R202	0Ω	1005	MCR01M2PJ000	ROHM
R203	0Ω (NC)	1005	MCR01M2PJ000	ROHM
R204	0Ω (NC)	1005	MCR01M2PJ000	ROHM
R301	0Ω	1005	MCR01M2PJ000	ROHM
R302	0Ω	1005	MCR01M2PJ000	ROHM
R303	0Ω (NC)	1005	MCR01M2PJ000	ROHM
R304	0Ω (NC)	1005	MCR01M2PJ000	ROHM
R401	0Ω	1005	MCR01M2PJ000	ROHM
R402	0Ω	1005	MCR01M2PJ000	ROHM
R403	0Ω (NC)	1005	MCR01M2PJ000	ROHM
R404	0Ω (NC)	1005	MCR01M2PJ000	ROHM
R501	10KΩ	1005	MCR01M2PF103	ROHM
R502	10KΩ	1005	MCR01M2PF103	ROHM
R503	0Ω (NC)	1005	MCR01M2PJ000	ROHM
R504	0Ω (NC)	1005	MCR01M2PJ000	ROHM
R601	150Ω	1608	MCR03E2PFX151	ROHM
R701	150Ω	1608	MCR03E2PFX151	ROHM
R801	10KΩ	2010	EXB-28V103JX	Panasonic
R802	10KΩ	2010	EXB-28V103JX	Panasonic
SW801	DIP8	2206	AGS-8104-H	Courten
U101	V-by-One-Tx	TSSOP64	THCV215	Thine
U102	V-by-One-Tx	TSSOP64	THCV215	Thine
U103	V-by-One-Tx	TSSOP64	THCV215	Thine
U104	V-by-One-Tx	TSSOP64	THCV215	Thine
U601	3.3V	SC-63	uPC2933BT-AZ	NEC
U602	3.3V	SC-63	uPC2933BT-AZ	NEC
U603	1.8V	SC-63	uPC2918BT-AZ	NEC
U604	1.8V	SC-63	uPC2918BT-AZ	NEC
U701	MOSFET	1616	SSM3K16FS	Toshiba

Table 8-2. BOM for THCV216-8LANE

Designator	Description	PKG	Part Number	Manufacturer
C101	0.1uF	1005	GRM155B31C104KA87	Murata
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C103	0.1uF	1005	GRM155B31C104KA87	Murata
C104	0.1uF	1005	GRM155B31C104KA87	Murata
C105	0.1uF	1005	GRM155B31C104KA87	Murata
C106	0.1uF	1005	GRM155B31C104KA87	Murata
C107	0.1uF	1005	GRM155B31C104KA87	Murata
C108	0.1uF	1005	GRM155B31C104KA87	Murata
C109	0.1uF	1005	GRM155B31C104KA87	Murata
C110	0.1uF	1005	GRM155B31C104KA87	Murata
C111	0.1uF	1005	GRM155B31C104KA87	Murata
C112	0.1uF	1005	GRM155B31C104KA87	Murata
C113	0.1uF	1005	GRM155B31C104KA87	Murata
C114	0.1uF	1005	GRM155B31C104KA87	Murata
C115	0.1uF	1005	GRM155B31C104KA87	Murata
C116	0.1uF	1005	GRM155B31C104KA87	Murata
C117	0.1uF	1005	GRM155B31C104KA87	Murata
C118	0.1uF	1005	GRM155B31C104KA87	Murata
C119	0.1uF	1005	GRM155B31C104KA87	Murata
C120	0.1uF	1005	GRM155B31C104KA87	Murata
C121	0.1uF	1005	GRM155B31C104KA87	Murata
C122	0.1uF	1005	GRM155B31C104KA87	Murata
C123	0.1uF	1005	GRM155B31C104KA87	Murata
C124	0.1uF	1005	GRM155B31C104KA87	Murata
C125	0.1uF	1005	GRM155B31C104KA87	Murata
C126	0.1uF	1005	GRM155B31C104KA87	Murata
C127	0.1uF	1005	GRM155B31C104KA87	Murata
C128	0.1uF	1005	GRM155B31C104KA87	Murata
C129	4.7uF	1608	GRM188R60J475KE19D	Murata
C130	4.7uF	1608	GRM188R60J475KE19D	Murata
C131	4.7uF	1608	GRM188R60J475KE19D	Murata
C132	4.7uF	1608	GRM188R60J475KE19D	Murata
C133	4.7uF	1608	GRM188R60J475KE19D	Murata
C134	4.7uF	1608	GRM188R60J475KE19D	Murata
C135	4.7uF	1608	GRM188R60J475KE19D	Murata
C136	4.7uF	1608	GRM188R60J475KE19D	Murata
C137	0.1uF	1005	GRM155B31C104KA87	Murata
C138	0.1uF	1005	GRM155B31C104KA87	Murata
C139	0.1uF	1005	GRM155B31C104KA87	Murata
C140	0.1uF	1005	GRM155B31C104KA87	Murata
C141	0.1uF	1005	GRM155B31C104KA87	Murata
C142	0.1uF	1005	GRM155B31C104KA87	Murata
C143	0.1uF	1005	GRM155B31C104KA87	Murata
C144	0.1uF	1005	GRM155B31C104KA87	Murata
C145	0.1uF	1005	GRM155B31C104KA87	Murata
C146	0.1uF	1005	GRM155B31C104KA87	Murata
C147	0.1uF	1005	GRM155B31C104KA87	Murata
C148	0.1uF	1005	GRM155B31C104KA87	Murata
C149	0.1uF	1005	GRM155B31C104KA87	Murata
C150	0.1uF	1005	GRM155B31C104KA87	Murata
C151	0.1uF	1005	GRM155B31C104KA87	Murata
C152	0.1uF	1005	GRM155B31C104KA87	Murata
C153	0.1uF	1005	GRM155B31C104KA87	Murata
C154	0.1uF	1005	GRM155B31C104KA87	Murata
C155	0.1uF	1005	GRM155B31C104KA87	Murata
C156	0.1uF	1005	GRM155B31C104KA87	Murata
C157	0.1uF	1005	GRM155B31C104KA87	Murata
C158	0.1uF	1005	GRM155B31C104KA87	Murata
C159	0.1uF	1005	GRM155B31C104KA87	Murata
C160	0.1uF	1005	GRM155B31C104KA87	Murata
C161	0.1uF	1005	GRM155B31C104KA87	Murata
C162	0.1uF	1005	GRM155B31C104KA87	Murata
C163	0.1uF	1005	GRM155B31C104KA87	Murata
C164	0.1uF	1005	GRM155B31C104KA87	Murata
C165	4.7uF	1608	GRM188R60J475KE19D	Murata
C166	4.7uF	1608	GRM188R60J475KE19D	Murata
C167	4.7uF	1608	GRM188R60J475KE19D	Murata
C168	4.7uF	1608	GRM188R60J475KE19D	Murata
C169	4.7uF	1608	GRM188R60J475KE19D	Murata
C170	4.7uF	1608	GRM188R60J475KE19D	Murata
C171	4.7uF	1608	GRM188R60J475KE19D	Murata
C172	4.7uF	1608	GRM188R60J475KE19D	Murata
C201	47uF	3225	GRM32EB31A476ME20L	Murata
C211	10uF	2012	GRM21BB31C106KE15	Murata
C212	10uF	2012	GRM21BB31C106KE15	Murata
C213	10uF	2012	GRM21BB31C106KE15	Murata
C214	10uF	2012	GRM21BB31C106KE15	Murata
C221	10uF	2012	GRM21BB31C106KE15	Murata
C222	10uF	2012	GRM21BB31C106KE15	Murata
C223	10uF	2012	GRM21BB31C106KE15	Murata
C224	10uF	2012	GRM21BB31C106KE15	Murata
CN101	51pin	3804	FX16-51S-0.5SH	HRS
CN102	41pin	3404	FX15SC-41S-0.5SH	HRS
CN103	51pin	3804	FX15SC-51S-0.5SH	HRS
CN104	41pin	3404	FX15SC-41S-0.5SH	HRS
CN105	51pin	3804	FX15SC-51S-0.5SH	HRS
CN201	DC12V	1105	ML-800-S1H-2P	Sato-parts
D201	LED-G	1608	SML-310MT	ROHM
JP101	JMP1x2	2.54mm	1x2-PinHeaders	-
JP102	JMP1x2	2.54mm	1x2-PinHeaders	-
JP103	JMP1x2	2.54mm	1x2-PinHeaders	-
JP104	JMP1x2	2.54mm	1x2-PinHeaders	-
JP201	JMP2x8	2.54mm	2x8-PinHeaders	-
R101	390Ω	1608	MCR01M2P391A	TDK
R102	0Ω	1005	MCR01M2P-0000	ROHM
R103	0Ω	1005	MCR01M2P-0000	ROHM
R104	0Ω	1005	MCR01M2P-0000	ROHM
R105	0Ω	1005	MCR01M2P-0000	ROHM
R106	0Ω	1005	MCR01M2P-0000	ROHM
R107	0Ω	1005	MCR01M2P-0000	ROHM
R108	0Ω	1005	MCR01M2P-0000	ROHM
R201	150Ω	1608	MCR03E2PFX151	ROHM
R301	10kΩ	2010	EXB-28V103JX	Panasonic
R302	10kΩ	2010	EXB-28V103JX	Panasonic
R501	10kΩ	1005	MCR01M2PF103	ROHM
R601	10kΩ	1005	MCR01M2PF103	ROHM
R701	10kΩ	1005	MCR01M2PF103	ROHM
SW301	DP8	2206	A65-8104-H	Omurcon
U101	V-by-One-Rx	TS50P64	THCV216	Thine
U102	V-by-One-Rx	TS50P64	THCV216	Thine
U103	V-by-One-Rx	TS50P64	THCV216	Thine
U104	V-by-One-Rx	TS50P64	THCV216	Thine
U201	3.3V	SC-63	JP2938BT-AZ	NEC
U203	1.8V	SC-63	JP2918BT-AZ	NEC
U204	1.8V	SC-63	JP2918BT-AZ	NEC
U501	Inverter	SON5	TC7SG04FU	Toshiba
U502	Inverter	SON5	TC7SG04FU	Toshiba
U701	Inverter	SON5	TC7SG04FU	Toshiba



THCV215/216-8LANE Evaluation Kits

SerDes transmitter and receiver evaluation board

9. Layout

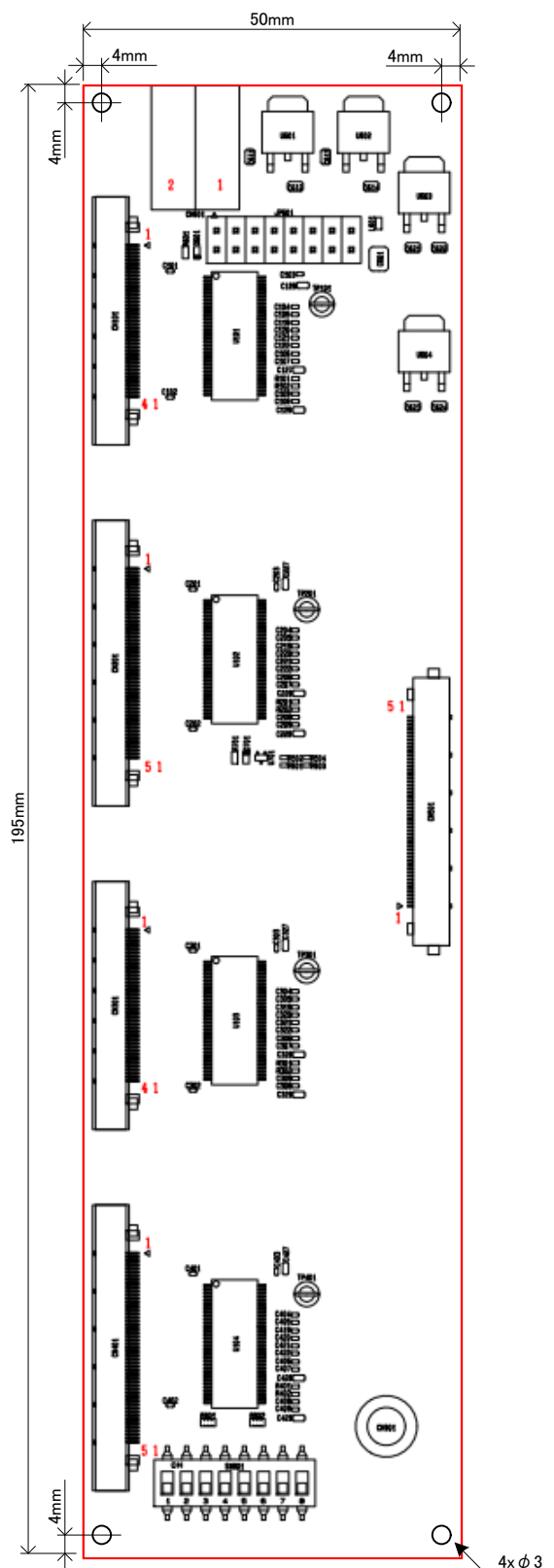


Figure 9-1. Component Placement Guide of THCV215-8LANE

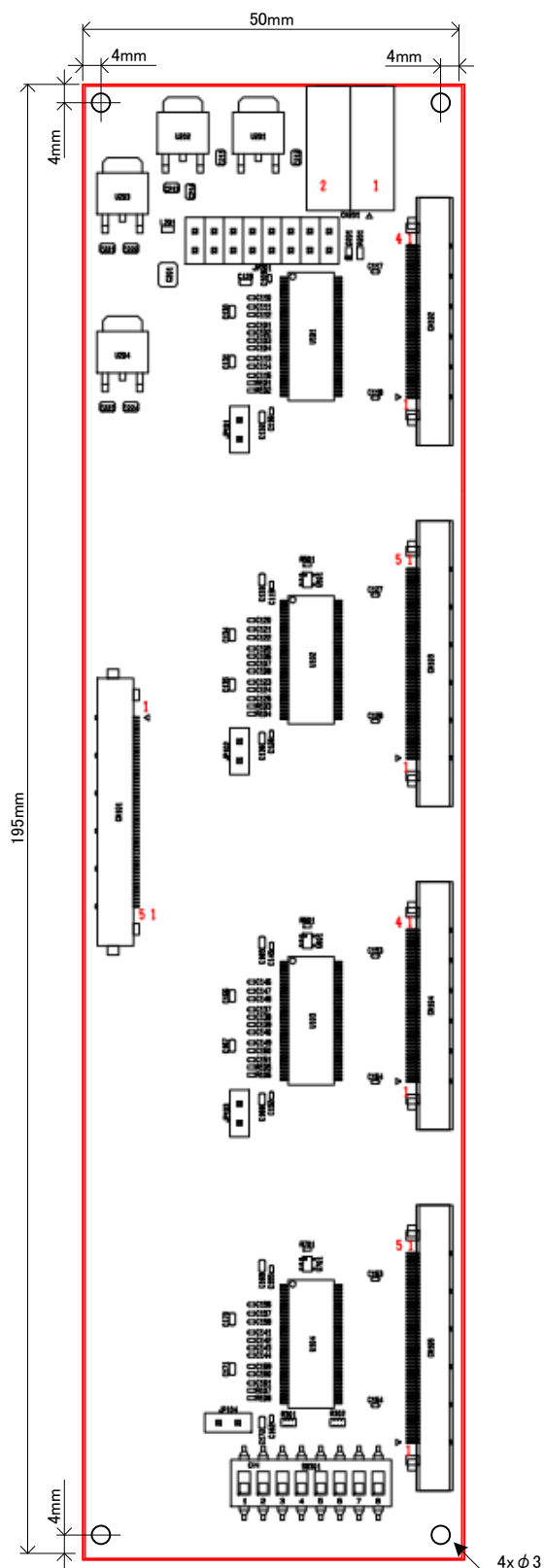


Figure 9-2. Component Placement Guide of THCV216-8LANE



THCV215/216-8LANE Evaluation Kits

SerDes transmitter and receiver evaluation board

10. Cable

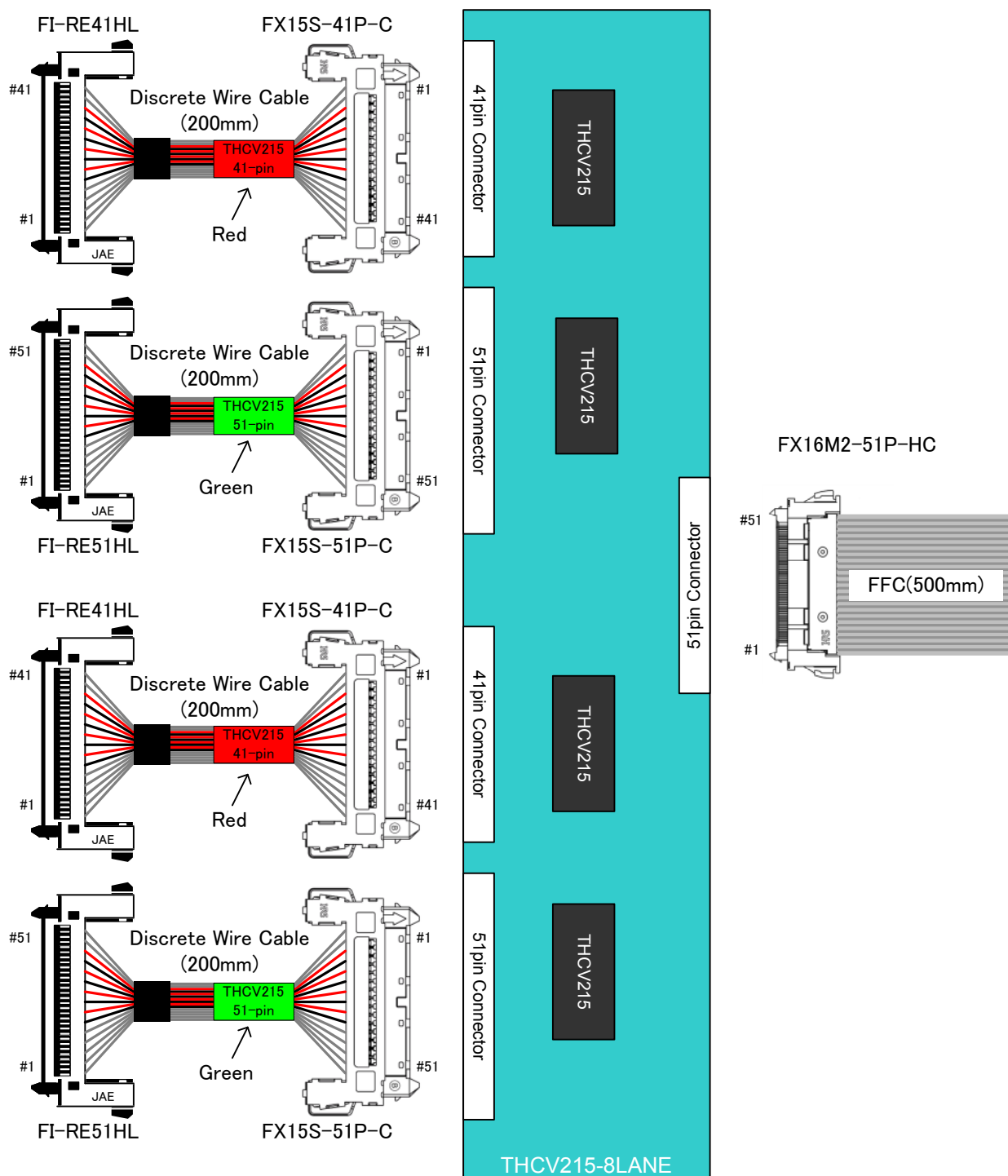


Figure 10-1. Cable of THCV215-8LANE



THCV215/216-8LANE Evaluation Kits

SerDes transmitter and receiver evaluation board

10. Cable

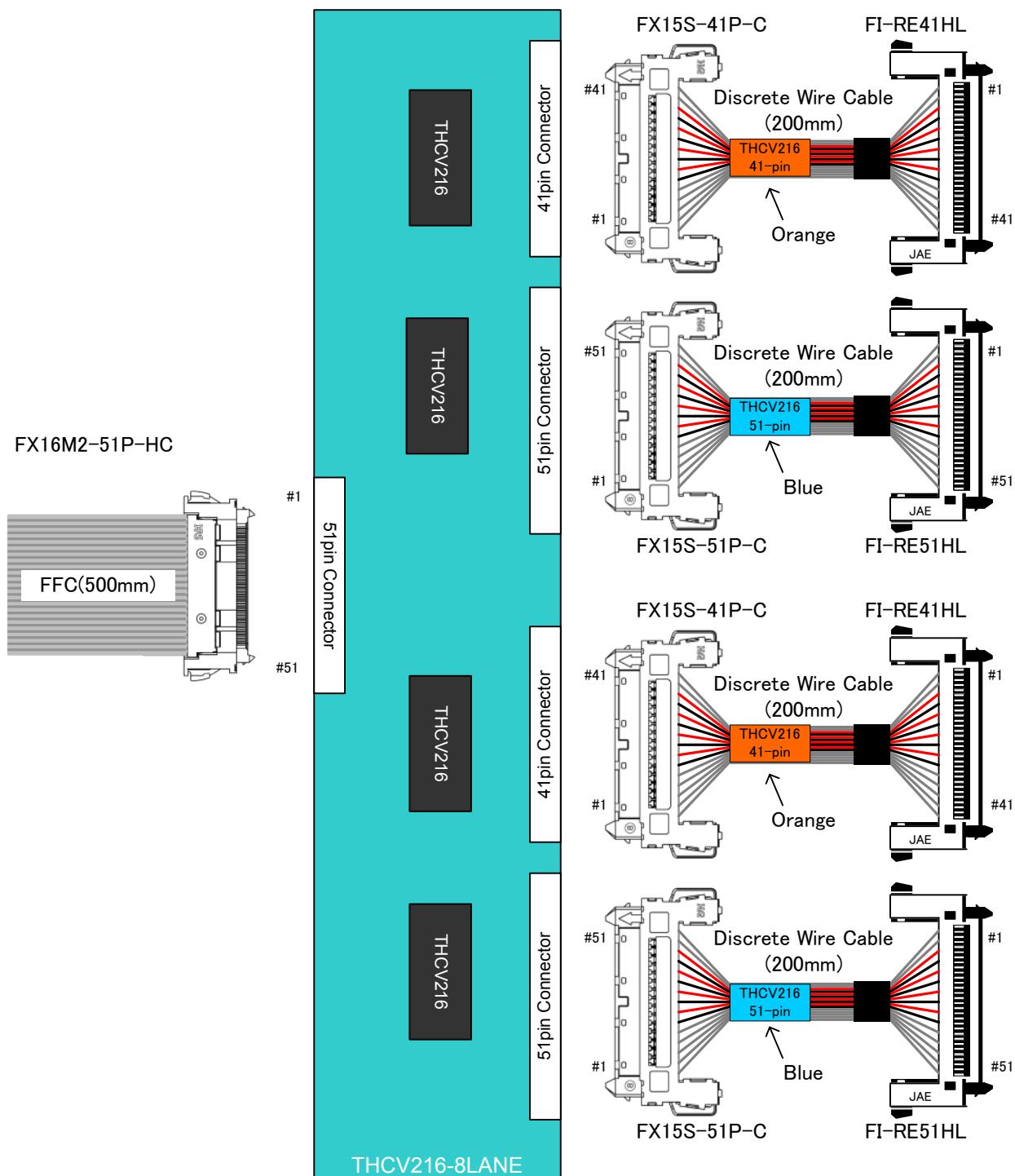


Figure 10-2. Cable of THCV216-8LANE



THCV215/216-8LANE Evaluation Kits

SerDes transmitter and receiver evaluation board

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7. Please note that this product is not designed to be radiation-proof.
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