

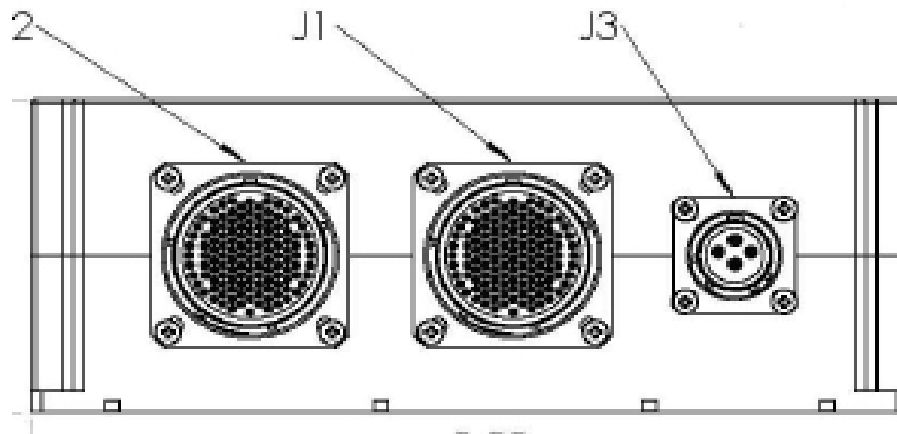
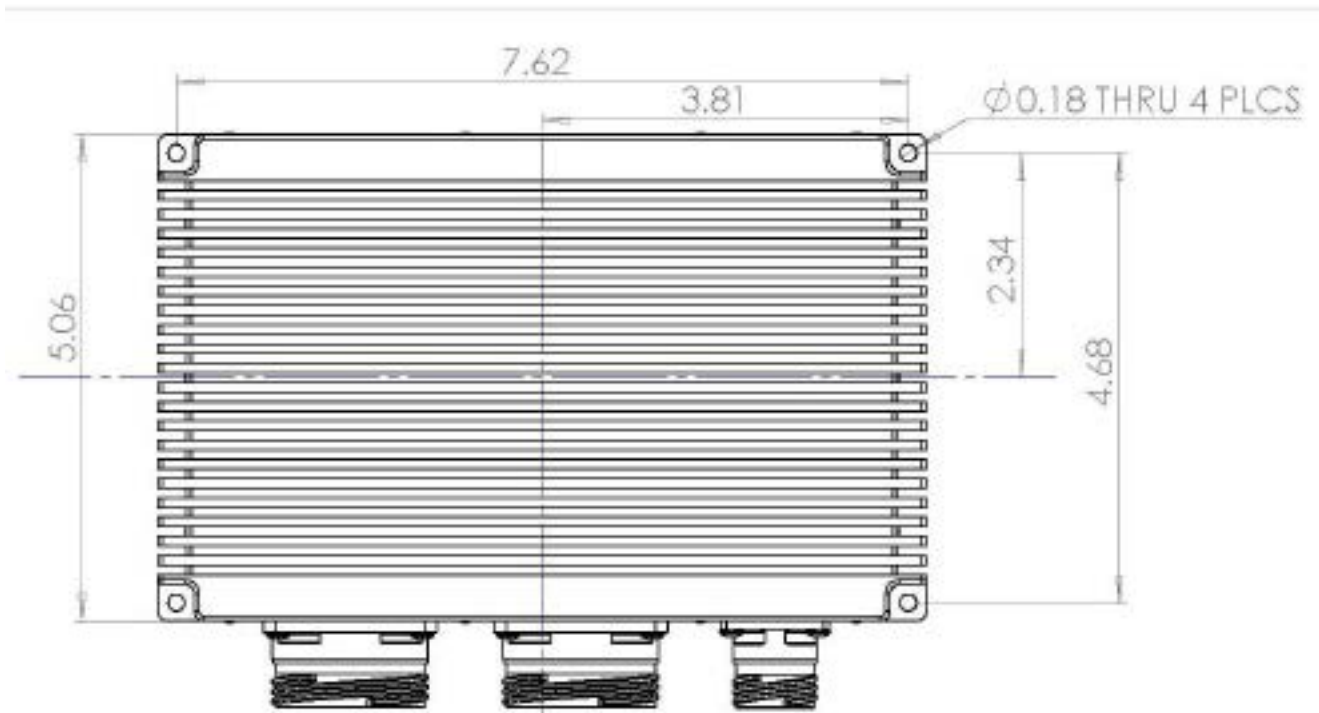
## Spyder Series Aggregated Signal Media Converter



### Features

- Aggregated signal media converter in a rugged aluminum housing with D38999 connector interface.
- 60 discrete signal multiplexer/demultiplexer to/from a single fiber link
- 1 x 100Base-FX Fast Ethernet over fiber port
- Standard operating temperature range from -40°C to +85°C
- 28VDC power supply input (12-36VDC) per MIL-STD-704

# Spyder Series Aggregated Signal Media Converter



# Facilitating Secure Communications in Harsh Environments

Connector	Pin #	Pin Function	Notes
J1	1	Discrete INPUT #1 (Isolated)	If = 50 mA MAX
J1	2	Discrete INPUT RTN #1 (Isolated)	
J1	3	Discrete INPUT #2 (Isolated)	If = 50 mA MAX
J1	4	Discrete INPUT RTN #2 (Isolated)	
J1	5	Discrete INPUT #3 (Isolated)	If = 50 mA MAX
J1	6	Discrete INPUT RTN #3 (Isolated)	
J1	7	Discrete INPUT #4 (Isolated)	If = 50 mA MAX
J1	8	Discrete INPUT RTN #4 (Isolated)	
J1	9	Discrete INPUT #5 (Isolated)	If = 50 mA MAX
J1	10	Discrete INPUT RTN #5 (Isolated)	
J1	11	Discrete INPUT #6 (Isolated)	If = 50 mA MAX
J1	12	Discrete INPUT RTN #6 (Isolated)	
J1	13	Discrete INPUT #7 (Isolated)	If = 50 mA MAX
J1	14	Discrete INPUT RTN #7 (Isolated)	
J1	15	Discrete INPUT #8 (Isolated)	If = 50 mA MAX
J1	16	Discrete INPUT RTN #8 (Isolated)	
J1	17	Discrete INPUT #9 (Isolated)	If = 50 mA MAX
J1	18	Discrete INPUT RTN #9 (Isolated)	
J1	19	Discrete INPUT #10 (Isolated)	If = 50 mA MAX
J1	20	Discrete INPUT RTN #10 (Isolated)	
J1	21	Discrete INPUT #11 (Isolated)	If = 50 mA MAX
J1	22	Discrete INPUT RTN #11 (Isolated)	
J1	23	Discrete INPUT #12 (Isolated)	If = 50 mA MAX
J1	24	Discrete INPUT RTN #12 (Isolated)	
J1	25	Discrete INPUT #13 (Isolated)	If = 50 mA MAX
J1	26	Discrete INPUT RTN #13 (Isolated)	
J1	27	Discrete INPUT #14 (Isolated)	If = 50 mA MAX
J1	28	Discrete INPUT RTN #14 (Isolated)	
J1	29	Discrete INPUT #15 (Isolated)	If = 50 mA MAX
J1	30	Discrete INPUT RTN #15 (Isolated)	
J1	31	Discrete INPUT #16 (Isolated)	If = 50 mA MAX
J1	32	Discrete INPUT RTN #16 (Isolated)	
J1	33	Discrete INPUT #17 (Isolated)	If = 50 mA MAX
J1	34	Discrete INPUT RTN #17 (Isolated)	
J1	35	Discrete INPUT #18 (Isolated)	If = 50 mA MAX
J1	36	Discrete INPUT RTN #18 (Isolated)	
J1	37	Discrete INPUT #19 (Isolated)	If = 50 mA MAX
J1	38	Discrete INPUT RTN #19 (Isolated)	
J1	39	Discrete INPUT #20 (Isolated)	If = 50 mA MAX
J1	40	Discrete INPUT RTN #20 (Isolated)	
J1	41	Discrete INPUT #21 (Isolated)	If = 50 mA MAX
J1	42	Discrete INPUT RTN #21 (Isolated)	
J1	43	Discrete INPUT #22 (Isolated)	If = 50 mA MAX
J1	44	Discrete INPUT RTN #22 (Isolated)	
J1	45	Discrete INPUT #23 (Isolated)	If = 50 mA MAX



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Connector	Pin #	Pin Function	Notes
J1	46	Discrete INPUT RTN #23 (Isolated)	
J1	47	Discrete INPUT #24 (Isolated)	If = 50 mA MAX
J1	48	Discrete INPUT RTN #24 (Isolated)	
J1	49	Discrete INPUT #25 (Isolated)	If = 50 mA MAX
J1	50	Discrete INPUT RTN #25 (Isolated)	
J1	51	Discrete INPUT #26 (Isolated)	If = 50 mA MAX
J1	52	Discrete INPUT RTN #26 (Isolated)	
J1	53	Discrete INPUT #27 (Isolated)	If = 50 mA MAX
J1	54	Discrete INPUT RTN #27 (Isolated)	
J1	55	Discrete INPUT #28 (Isolated)	If = 50 mA MAX
J1	56	Discrete INPUT RTN #28 (Isolated)	
J1	57	Discrete INPUT #29 (Isolated)	If = 50 mA MAX
J1	58	Discrete INPUT RTN #29 (Isolated)	
J1	59	Discrete INPUT #30 (Isolated)	If = 50 mA MAX
J1	60	Discrete INPUT RTN #30 (Isolated)	
J1	61	Discrete INPUT #31 (Isolated)	If = 50 mA MAX
J1	62	Discrete INPUT RTN #31 (Isolated)	
J1	63	Discrete INPUT #32 (Isolated)	If = 50 mA MAX
J1	64	Discrete INPUT RTN #32 (Isolated)	
J1	65	Discrete INPUT #33 (Isolated)	If = 50 mA MAX
J1	66	Discrete INPUT RTN #33 (Isolated)	
J1	67	Discrete INPUT #34 (Isolated)	If = 50 mA MAX
J1	68	Discrete INPUT RTN #34 (Isolated)	
J1	69	Discrete INPUT #35 (Isolated)	If = 50 mA MAX
J1	70	Discrete INPUT RTN #35 (Isolated)	
J1	71	Discrete INPUT #36 (Isolated)	If = 50 mA MAX
J1	72	Discrete INPUT RTN #36 (Isolated)	
J1	73	Discrete INPUT #37 (Isolated)	If = 50 mA MAX
J1	74	Discrete INPUT RTN #37 (Isolated)	
J1	75	Discrete INPUT #38 (Isolated)	If = 50 mA MAX
J1	76	Discrete INPUT RTN #38 (Isolated)	
J1	77	Discrete INPUT #39 (Isolated)	If = 50 mA MAX
J1	78	Discrete INPUT RTN #39 (Isolated)	
J1	79	Discrete INPUT #40 (Isolated)	If = 50 mA MAX
J1	80	Discrete INPUT RTN #40 (Isolated)	
J1	81	Discrete INPUT #41 (Isolated)	If = 50 mA MAX
J1	82	Discrete INPUT RTN #41 (Isolated)	
J1	83	Discrete INPUT #42 (Isolated)	If = 50 mA MAX
J1	84	Discrete INPUT RTN #42 (Isolated)	
J1	85	Discrete INPUT #43 (Isolated)	If = 50 mA MAX
J1	86	Discrete INPUT RTN #43 (Isolated)	
J1	87	Discrete INPUT #44 (Isolated)	If = 50 mA MAX
J1	88	Discrete INPUT RTN #44 (Isolated)	
J1	89	Discrete INPUT #45 (Isolated)	If = 50 mA MAX
J1	90	Discrete INPUT RTN #45 (Isolated)	

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Connector	Pin #	Pin Function	Notes
J1	91	Discrete INPUT #46 (Isolated)	If = 50 mA MAX
J1	92	Discrete INPUT RTN #46 (Isolated)	
J1	93	Discrete INPUT #47 (Isolated)	If = 50 mA MAX
J1	94	Discrete INPUT RTN #47 (Isolated)	
J1	95	Discrete INPUT #48 (Isolated)	If = 50 mA MAX
J1	96	Discrete INPUT RTN #48 (Isolated)	
J1	97	Discrete INPUT #49 (Isolated)	If = 50 mA MAX
J1	98	Discrete INPUT RTN #49 (Isolated)	
J1	99	Discrete INPUT #50 (Isolated)	If = 50 mA MAX
J1	100	Discrete INPUT RTN #50 (Isolated)	
J1	101	Discrete INPUT #51 (Isolated)	If = 50 mA MAX
J1	102	Discrete INPUT RTN #51 (Isolated)	
J1	103	Discrete INPUT #52 (Isolated)	If = 50 mA MAX
J1	104	Discrete INPUT RTN #52 (Isolated)	
J1	105	Discrete INPUT #53 (Isolated)	If = 50 mA MAX
J1	106	Discrete INPUT RTN #53 (Isolated)	
J1	107	Discrete INPUT #54 (Isolated)	If = 50 mA MAX
J1	108	Discrete INPUT RTN #54 (Isolated)	
J1	109	Discrete INPUT #55 (Isolated)	If = 50 mA MAX
J1	110	Discrete INPUT RTN #55 (Isolated)	
J1	111	Discrete INPUT #56 (Isolated)	If = 50 mA MAX
J1	112	Discrete INPUT RTN #56 (Isolated)	
J1	113	Discrete INPUT #57 (Isolated)	If = 50 mA MAX
J1	114	Discrete INPUT RTN #57 (Isolated)	
J1	115	Discrete INPUT #58 (Isolated)	If = 50 mA MAX
J1	116	Discrete INPUT RTN #58 (Isolated)	
J1	117	Discrete INPUT #59 (Isolated)	If = 50 mA MAX
J1	118	Discrete INPUT RTN #59 (Isolated)	
J1	119	Discrete INPUT #60 (Isolated)	If = 50 mA MAX
J1	120	Discrete INPUT RTN #60 (Isolated)	
J1	121	Vcc	
J1	122	Vcc	
J1	123	Vcc	
J1	124	Vcc	
J1	125	GND	
J1	126	GND	
J1	127	GND	
J1	128	GND	
J2	1	Discrete OUTPUT #1 (Isolated)	35V MAX
J2	2	Discrete OUTPUT RTN #1 (Isolated)	
J2	3	Discrete OUTPUT #2 (Isolated)	35V MAX
J2	4	Discrete OUTPUT RTN #2 (Isolated)	
J2	5	Discrete OUTPUT #3 (Isolated)	35V MAX
J2	6	Discrete OUTPUT RTN #3 (Isolated)	
J2	7	Discrete OUTPUT #4 (Isolated)	35V MAX

# Facilitating Secure Communications in Harsh Environments

Connector	Pin #	Pin Function	Notes
J2	8	Discrete OUTPUT RTN #4 (Isolated)	
J2	9	Discrete OUTPUT #5 (Isolated)	35V MAX
J2	10	Discrete OUTPUT RTN #5 (Isolated)	
J2	11	Discrete OUTPUT #6 (Isolated)	35V MAX
J2	12	Discrete OUTPUT RTN #6 (Isolated)	
J2	13	Discrete OUTPUT #7 (Isolated)	35V MAX
J2	14	Discrete OUTPUT RTN #7 (Isolated)	
J2	15	Discrete OUTPUT #8 (Isolated)	35V MAX
J2	16	Discrete OUTPUT RTN #8 (Isolated)	
J2	17	Discrete OUTPUT #9 (Isolated)	35V MAX
J2	18	Discrete OUTPUT RTN #9 (Isolated)	
J2	19	Discrete OUTPUT #10 (Isolated)	35V MAX
J2	20	Discrete OUTPUT RTN #10 (Isolated)	
J2	21	Discrete OUTPUT #11 (Isolated)	35V MAX
J2	22	Discrete OUTPUT RTN #11 (Isolated)	
J2	23	Discrete OUTPUT #12 (Isolated)	35V MAX
J2	24	Discrete OUTPUT RTN #12 (Isolated)	
J2	25	Discrete OUTPUT #13 (Isolated)	35V MAX
J2	26	Discrete OUTPUT RTN #13 (Isolated)	
J2	27	Discrete OUTPUT #14 (Isolated)	35V MAX
J2	28	Discrete OUTPUT RTN #14 (Isolated)	
J2	29	Discrete OUTPUT #15 (Isolated)	35V MAX
J2	30	Discrete OUTPUT RTN #15 (Isolated)	
J2	31	Discrete OUTPUT #16 (Isolated)	35V MAX
J2	32	Discrete OUTPUT RTN #16 (Isolated)	
J2	33	Discrete OUTPUT #17 (Isolated)	35V MAX
J2	34	Discrete OUTPUT RTN #17 (Isolated)	
J2	35	Discrete OUTPUT #18 (Isolated)	35V MAX
J2	36	Discrete OUTPUT RTN #18 (Isolated)	
J2	37	Discrete OUTPUT #19 (Isolated)	35V MAX
J2	38	Discrete OUTPUT RTN #19 (Isolated)	
J2	39	Discrete OUTPUT #20 (Isolated)	35V MAX
J2	40	Discrete OUTPUT RTN #20 (Isolated)	
J2	41	Discrete OUTPUT #21 (Isolated)	35V MAX
J2	42	Discrete OUTPUT RTN #21 (Isolated)	
J2	43	Discrete OUTPUT #22 (Isolated)	35V MAX
J2	44	Discrete OUTPUT RTN #22 (Isolated)	
J2	45	Discrete OUTPUT #23 (Isolated)	35V MAX
J2	46	Discrete OUTPUT RTN #23 (Isolated)	
J2	47	Discrete OUTPUT #24 (Isolated)	35V MAX
J2	48	Discrete OUTPUT RTN #24 (Isolated)	
J2	49	Discrete OUTPUT #25 (Isolated)	35V MAX
J2	50	Discrete OUTPUT RTN #25 (Isolated)	
J2	51	Discrete OUTPUT #26 (Isolated)	35V MAX
J2	52	Discrete OUTPUT RTN #26 (Isolated)	

# Facilitating Secure Communications in Harsh Environments

Connector	Pin #	Pin Function	Notes
J2	53	Discrete OUTPUT #27 (Isolated)	35V MAX
J2	54	Discrete OUTPUT RTN #27 (Isolated)	
J2	55	Discrete OUTPUT #28 (Isolated)	35V MAX
J2	56	Discrete OUTPUT RTN #28 (Isolated)	
J2	57	Discrete OUTPUT #29 (Isolated)	35V MAX
J2	58	Discrete OUTPUT RTN #29 (Isolated)	
J2	59	Discrete OUTPUT #30 (Isolated)	35V MAX
J2	60	Discrete OUTPUT RTN #30 (Isolated)	
J2	61	Discrete OUTPUT #31 (Isolated)	35V MAX
J2	62	Discrete OUTPUT RTN #31 (Isolated)	
J2	63	Discrete OUTPUT #32 (Isolated)	35V MAX
J2	64	Discrete OUTPUT RTN #32 (Isolated)	
J2	65	Discrete OUTPUT #33 (Isolated)	35V MAX
J2	66	Discrete OUTPUT RTN #33 (Isolated)	
J2	67	Discrete OUTPUT #34 (Isolated)	35V MAX
J2	68	Discrete OUTPUT RTN #34 (Isolated)	
J2	69	Discrete OUTPUT #35 (Isolated)	35V MAX
J2	70	Discrete OUTPUT RTN #35 (Isolated)	
J2	71	Discrete OUTPUT #36 (Isolated)	35V MAX
J2	72	Discrete OUTPUT RTN #36 (Isolated)	
J2	73	Discrete OUTPUT #37 (Isolated)	35V MAX
J2	74	Discrete OUTPUT RTN #37 (Isolated)	
J2	75	Discrete OUTPUT #38 (Isolated)	35V MAX
J2	76	Discrete OUTPUT RTN #38 (Isolated)	
J2	77	Discrete OUTPUT #39 (Isolated)	35V MAX
J2	78	Discrete OUTPUT RTN #39 (Isolated)	
J2	79	Discrete OUTPUT #40 (Isolated)	35V MAX
J2	80	Discrete OUTPUT RTN #40 (Isolated)	
J2	81	Discrete OUTPUT #41 (Isolated)	35V MAX
J2	82	Discrete OUTPUT RTN #41 (Isolated)	
J2	83	Discrete OUTPUT #42 (Isolated)	35V MAX
J2	84	Discrete OUTPUT RTN #42 (Isolated)	
J2	85	Discrete OUTPUT #43 (Isolated)	35V MAX
J2	86	Discrete OUTPUT RTN #43 (Isolated)	
J2	87	Discrete OUTPUT #44 (Isolated)	35V MAX
J2	88	Discrete OUTPUT RTN #44 (Isolated)	
J2	89	Discrete OUTPUT #45 (Isolated)	35V MAX
J2	90	Discrete OUTPUT RTN #45 (Isolated)	
J2	91	Discrete OUTPUT #46 (Isolated)	35V MAX
J2	92	Discrete OUTPUT RTN #46 (Isolated)	
J2	93	Discrete OUTPUT #47 (Isolated)	35V MAX
J2	94	Discrete OUTPUT RTN #47 (Isolated)	
J2	95	Discrete OUTPUT #48 (Isolated)	35V MAX
J2	96	Discrete OUTPUT RTN #48 (Isolated)	
J2	97	Discrete OUTPUT #49 (Isolated)	35V MAX

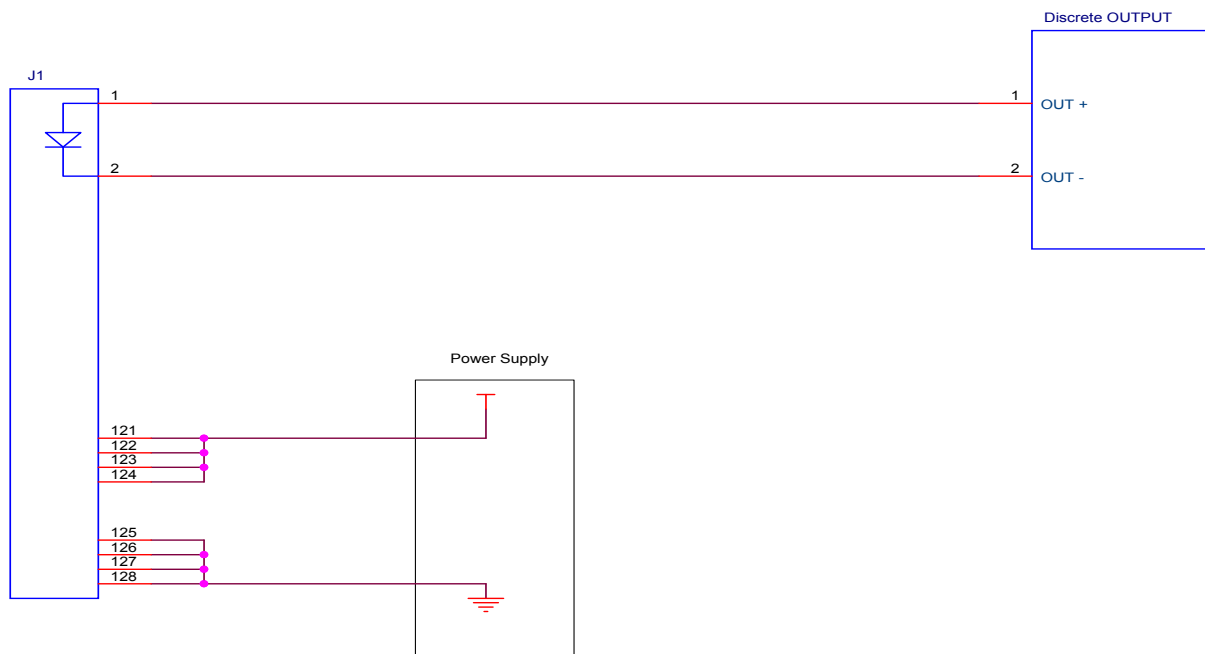


# Facilitating Secure Communications in Harsh Environments

Connector	Pin #	Pin Function	Notes
J2	98	Discrete OUTPUT RTN #49 (Isolated)	
J2	99	Discrete OUTPUT #50 (Isolated)	35V MAX
J2	100	Discrete OUTPUT RTN #50 (Isolated)	
J2	101	Discrete OUTPUT #51 (Isolated)	35V MAX
J2	102	Discrete OUTPUT RTN #51 (Isolated)	
J2	103	Discrete OUTPUT #52 (Isolated)	35V MAX
J2	104	Discrete OUTPUT RTN #52 (Isolated)	
J2	105	Discrete OUTPUT #53 (Isolated)	35V MAX
J2	106	Discrete OUTPUT RTN #53 (Isolated)	
J2	107	Discrete OUTPUT #54 (Isolated)	35V MAX
J2	108	Discrete OUTPUT RTN #54 (Isolated)	
J2	109	Discrete OUTPUT #55 (Isolated)	35V MAX
J2	110	Discrete OUTPUT RTN #55 (Isolated)	
J2	111	Discrete OUTPUT #56 (Isolated)	35V MAX
J2	112	Discrete OUTPUT RTN #56 (Isolated)	
J2	113	Discrete OUTPUT #57 (Isolated)	35V MAX
J2	114	Discrete OUTPUT RTN #57 (Isolated)	
J2	115	Discrete OUTPUT #58 (Isolated)	35V MAX
J2	116	Discrete OUTPUT RTN #58 (Isolated)	
J2	117	Discrete OUTPUT #59 (Isolated)	35V MAX
J2	118	Discrete OUTPUT RTN #59 (Isolated)	
J2	119	Discrete OUTPUT #60 (Isolated)	35V MAX
J2	120	Discrete OUTPUT RTN #60 (Isolated)	
J2	121	Vcc	
J2	122	Vcc	
J2	123	Vcc	
J2	124	Vcc	
J2	125	GND	
J2	126	GND	
J2	127	GND	
J2	128	GND	



# J1 Example Application



# J2 Example Application

