

SPYDER SERIES

GIMBAL SYSTEMS AGGREGATED SIGNAL CONVERTER

The Moog Protokraft Spyder is an FPGA based data aggregation and transmission solution designed for rugged/military applications where large amounts of mixed signal data need to be aggregated and transmitted. As with all Protokraft solutions, the Spyder is ideally suited to harsh environment applications where small size, light weight and integrated DC power conditioning are required.

FEATURES

- 100/1000/10G optical Ethernet
- 10/100/1000 copper Ethernet
- RS-232/422/485 serial data
- Analog video RCA
- HD-SDI/3G-SDI
- H.264 video compression
- USB 3.0/2.0
- Analog INPUT
- Discrete I/O
- Operating temperature range from -40° to +85° C
- Power supply 28, 110 and 240 VDC options available

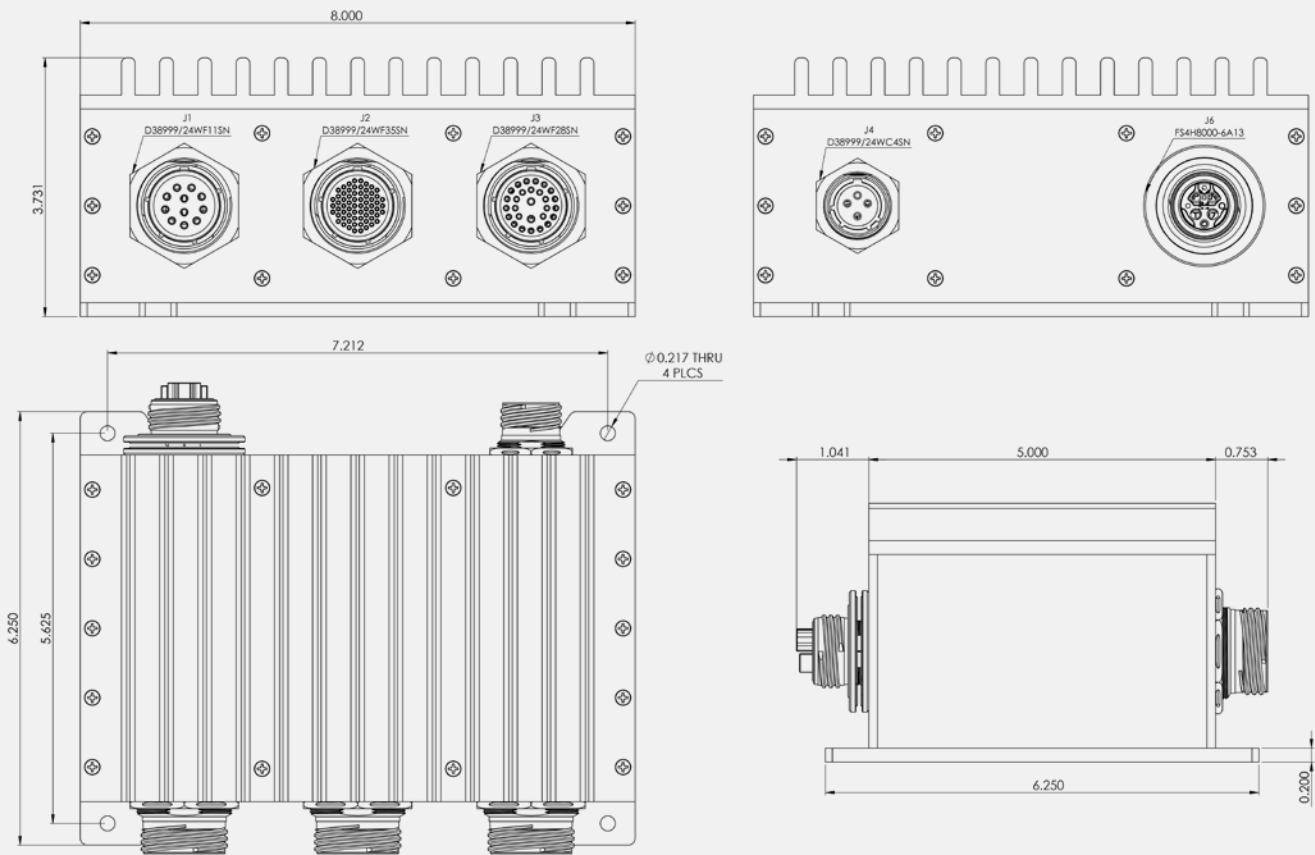


ORDERING INFORMATION

Application	Part Number
MX-10 Fiber Optic Multiplexor	S40G-0011
MX-10 Fiber Optic Demultiplexor	S40G-0012

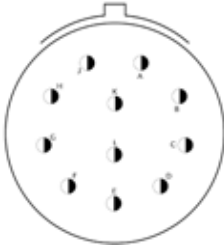
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MX-10 MUX UNIT OUTLINE DRAWING



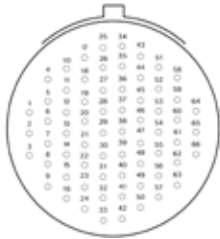
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MX-10 MUX UNIT PIN CONNECTORS



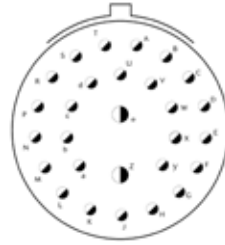
J1

Pin	Function	Logic Family
A	D_VID_1	HD-SDI Inner Contact - Video Outer Contact - Shield
B	D_VID_2	HD-SDI Inner Contact - Video Outer Contact - Shield
C	D_VID_3	HD-SDI Inner Contact - Video Outer Contact - Shield
All Other Are No Connect		



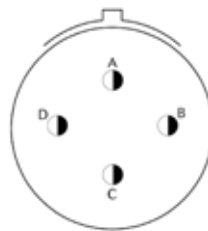
J2

Pin	Function	Logic Family
2	CE2_RX+	RS422 \ RS232 - See J2
3	CE2_RX-	RS422 \ RS232 - See J2
4	CE2_TX+	RS422 \ RS232 - See J2
5	CE2_TX-	RS422 \ RS232 - See J2
6	CE2_RTN	
8	CE3_RTN	
13	CE3_TX+	RS422 \ RS232 - See J2
14	CE3_TX-	RS422 \ RS232 - See J2
15	CE3_RX+	RS422 \ RS232 - See J2
16	CE3_RX-	RS422 \ RS232 - See J2
34	CER2_SEL	
35	CER2_SEL_RTN	
36	CER3_SEL	
37	CER3_SEL_RTN	
48	ETHERNET_B+	IEE 802.3 100Base-T
55	ETHERNET_A+	IEE 802.3 100Base-T
56	ETHERNET_A-	IEE 802.3 100Base-T
62	ETHERNET_B-	IEE 802.3 100Base-T
All Other Are No Connect		



J3

Pin	Function	Logic Family
A	Chassis	-
B	+28V_HC	-
C	28V_HC_RTN	-
F	HC_TX+	RS422
G	HC_TX-	RS422
H	HC_RX+	RS422
J	HC_RX-	RS422
K	HC_RTN	RS422
L	TURRET_ON	-
M	TURRET_ON_RTN	-
U	MCU_MAINT_TX	RS232
V	MCU_MAINT_RX	RS232
W	MCU_MAINT_RTN	RS232
Z	28V_SYSTEM_RTN	-
e	+28V_SYSTEM	-
All Other Are No Connect		
28V DC MAX Current Supply = 1A Total		



J4

Pin	Function
A	NC
B	Mains Input - Earth
C	Mains Input - Neutral
D	Mains Input - Live



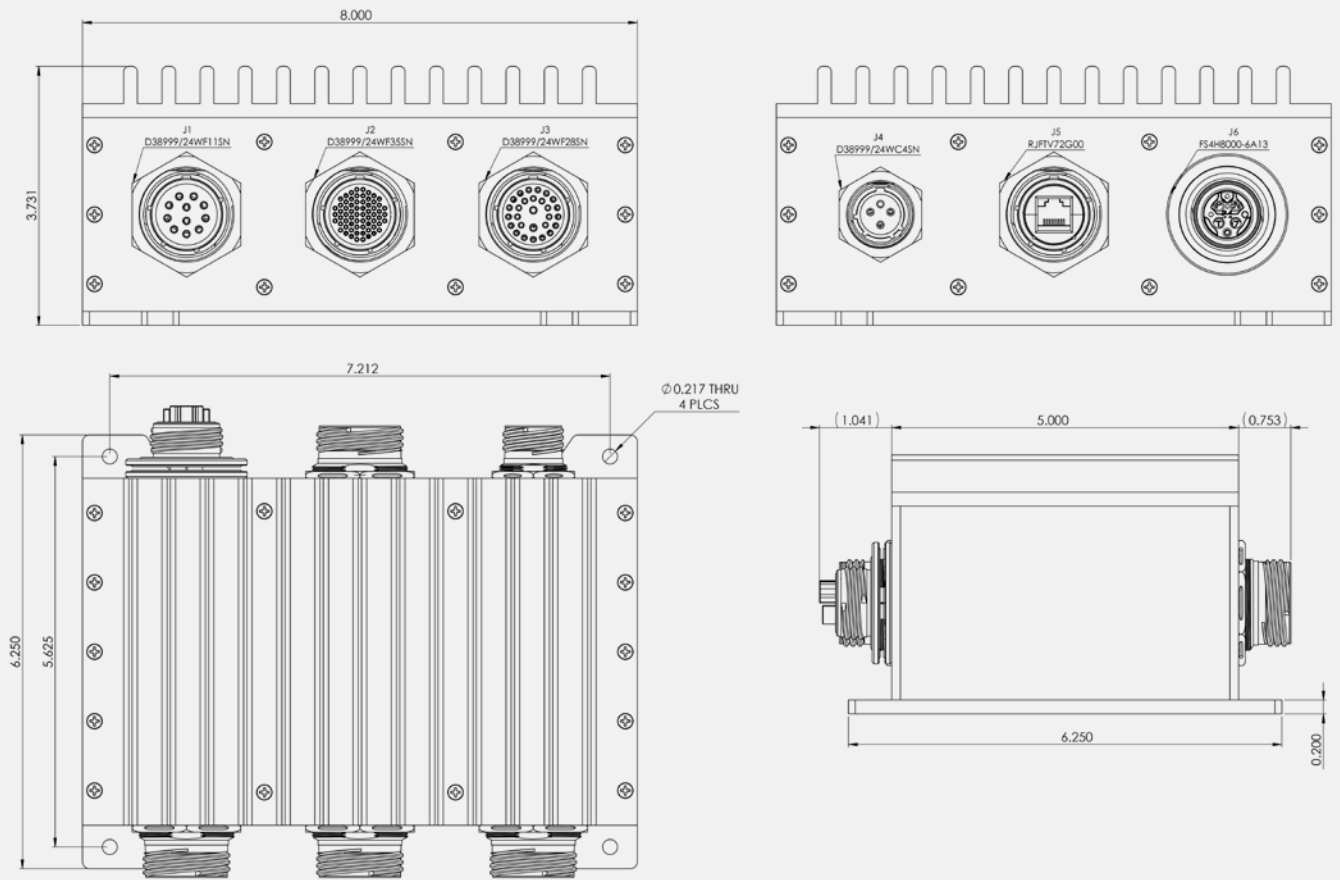
KEY OPTION I

J6

Pin	Function	Logic Family
P1	TX	Optical Transmit
P2	NC	-
S1	RX	Optical Receive
S2	NC	-

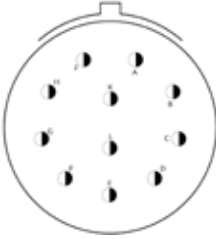
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MX-10 DEMUX UNIT OUTLINE DRAWING



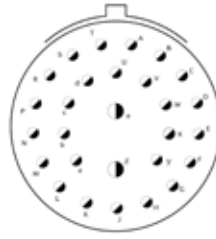
SPYDER SERIES GIMBAL SYSTEMS AGGREGATED SIGNAL CONVERTER

MX-10 DEMUX UNIT PIN CONNECTORS



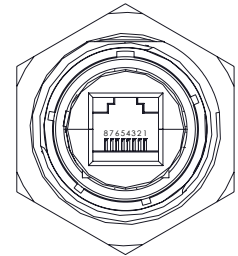
J1

Pin	Function	Logic Family
A	D_VID_1	HD-SDI Inner Contact - Video Outer Contact - Shield
B	D_VID_2	HD-SDI Inner Contact - Video Outer Contact - Shield
C	D_VID_3	HD-SDI Inner Contact - Video Outer Contact - Shield
All Other Are No Connect		



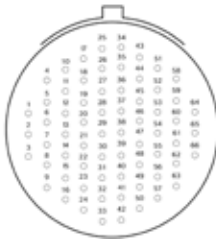
J3

Pin	Function	Logic Family
A	Chassis	-
B	+28V_HC	-
C	28V_HC_RTN	-
F	HC_TX+	RS422
G	HC_TX-	RS422
H	HC_RX+	RS422
J	HC_RX-	RS422
K	HC_RTN	RS422
L	TURRET_ON	-
M	TURRET_ON_RTN	-
U	MCU_MAINT_TX	RS232
V	MCU_MAINT_RX	RS232
W	MCU_MAINT_RTN	RS232
Z	28V_SYSTEM_RTN	-
e	+28V_SYSTEM	-
All Other Are No Connect		
28V DC MAX Current Supply = 1A Total		



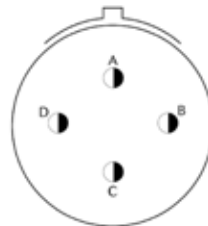
J5

Pin	Function	Logic Family
1	TX+	IEE 802.3 100Base-T
2	TX-	IEE 802.3 100Base-T
3	RX+	IEE 802.3 100Base-T
4	-	-
5	-	-
6	RX-	IEE 802.3 100Base-T
7	-	-
8	-	-



J2

Pin	Function	Logic Family
2	CE2_RX+	RS422 \ RS232 - See J2
3	CE2_RX-	RS422 \ RS232 - See J2
4	CE2_TX+	RS422 \ RS232 - See J2
5	CE2_TX-	RS422 \ RS232 - See J2
6	CE2_RTN	
8	CE3_RTN	
13	CE3_TX+	RS422 \ RS232 - See J2
14	CE3_TX-	RS422 \ RS232 - See J2
15	CE3_RX+	RS422 \ RS232 - See J2
16	CE3_RX-	RS422 \ RS232 - See J2
34	CER2_SEL	
35	CER2_SEL_RTN	
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56	ETHERNET_A-	IEE 802.3 100Base-T
62	ETHERNET_B-	IEE 802.3 100Base-T
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J4

Pin	Function
A	NC
B	Mains Input - Earth
C	Mains Input - Neutral
D	Mains Input - Live



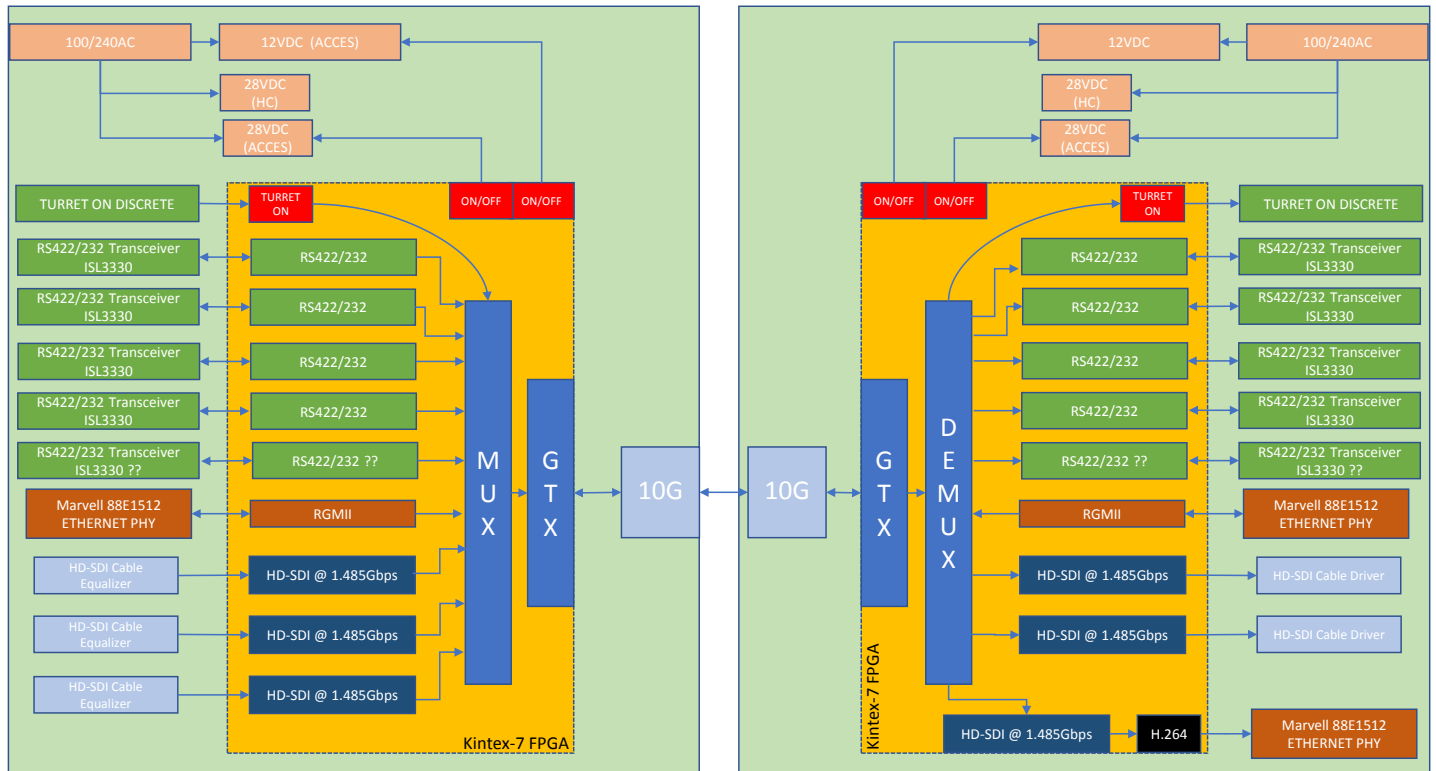
KEY OPTION I

J6

Pin	Function	Logic Family
P1	TX	Optical Transmit
P2	NC	-
S1	RX	Optical Receive
S2	NC	-

SPYDER SERIES GIMBAL SYSTEMS AGGREGATED SIGNAL CONVERTER

EO SENSOR DATA AGGREGATION BLOCK DIAGRAM



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