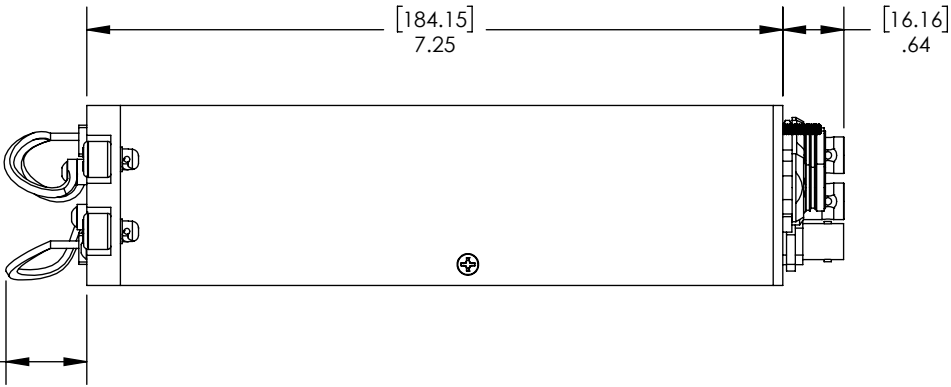
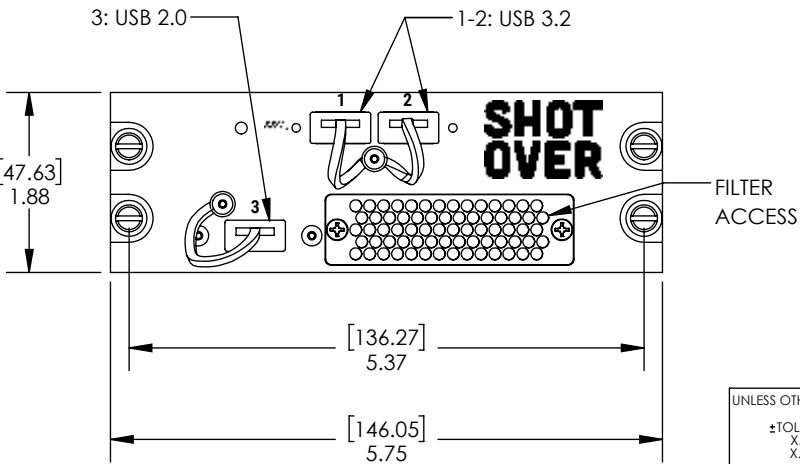
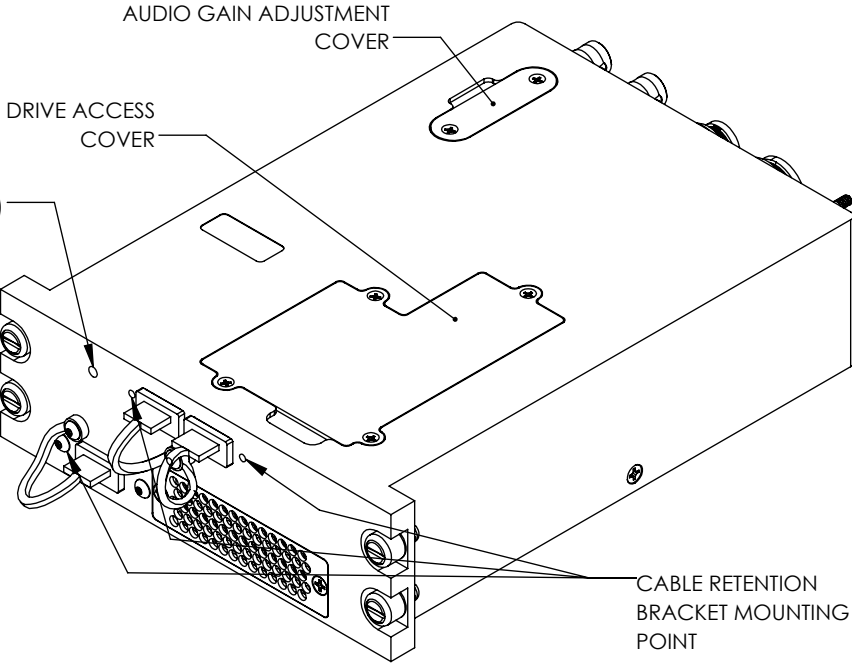


INSTALLATION NOTES:

1. ATOM 2 IS CASE GROUNDED THROUGH MOUNTING RAILS AND GROUND STUD ON REAR OF CASE. USE A MINIMUM OF 16 GAUGE WIRE TO GROUND THE MISSION COMPUTER TO AIRCRAFT CHASSIS GROUND PRIOR TO OPERATION.
2. EXPOSED ALUMINUM IS CHROMATED. DO NOT CHEMICALLY COAT OR COVER WITH NON-CONDUCTIVE MATERIAL.
3. ALL GROUND PINS ARE GROUND CONTINUOUS TO CASE (EXCEPT AUDIO).
4. INPUT POWER IS REVERSE-POLARITY PROTECTED.
5. RECOMMENDED POWER WIRE SIZE: 22AWG. ALL POWER PINS MUST BE WIRED.
6. INPUT POWER: 28VDC (OPERATING RANGE: 18-30VDC)
7. AVERAGE POWER DRAW IS 59 WATTS (2.1A ON 28VDC).
8. MAXIMUM POWER DRAW IS 95 WATTS (3.4A ON 28VDC).
9. AMBIENT AIR WHERE ATOM 2 IS INSTALLED SHOULD NEVER EXCEED 70° C. AMPLE ROOM IS REQUIRED IN FRONT AND REAR OF ATOM 2 FOR PROPER AIRFLOW. IF ENCLOSED, SPACE AROUND ATOM 2 SHALL BE ACTIVELY VENTILATED OR HAVE SUFFICIENT SPACE TO COOL AVERAGE POWER LISTED ABOVE.

REVISIONS				
REV	EPN	DESCRIPTION	DATE	INIT.
3	N/A	UPDATED HARDWARE REVISION, HD-SDI CABLE OPTION A & ENGRAVING, ADDED GROUND STUD THREAD NOTE	11/06/23	KWH
4	N/A	UPDATED PART NUMBERS FOR CONNECTOR KITS	3/5/2026	KWH

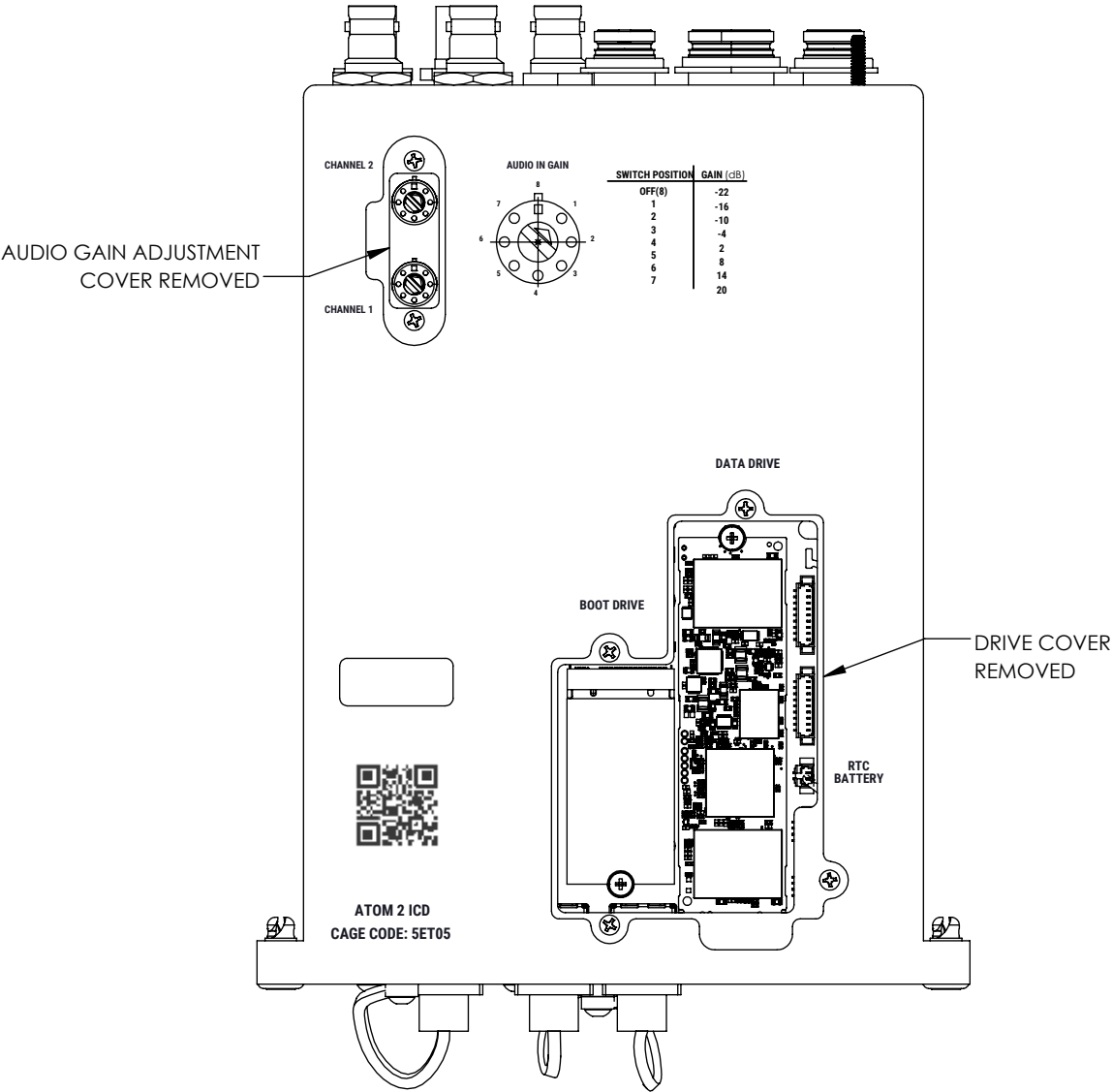


UNLESS OTHERWISE SPECIFIED		NAME	DATE	THIRD ANGLE PROJECTION	TITLE: ATOM 2 MISSION COMPUTER ARS-750, GEAR-750, ARS-ATOM 2		SHOT OVER	
	±TOL LINEAR DIM. X.X ±0.15 X.XX ±0.05	DRAWN	KWH	03/15/23				SHEET SIZE: A
	SURFACE FINISH Ra 1.6	CHECKED	NOM	03/16/23	SHEET 1 of 7			
	ALL DIM IN INCHES [mm] WEIGHT IN LBS [Kg] DO NOT SCALE	STATE: APPROVED		SHEET 1 of 7		Hardware DWG		DWG:
				SCALE: 1:2		REV: 1.3 4		US007-0001

SYSTEM WEIGHT: 2.70 LBS [1.22 KG] ±0.10 LBS [0.05 KG]

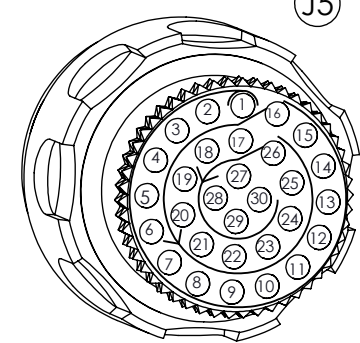
NOTES:
1. USE LOCTITE 222 PURPLE LOW STRENGTH THREADLOCKER ON ALL SCREW COVERS.

REVISIONS				
REV	EPN	DESCRIPTION	DATE	INIT.
3	N/A	UPDATED HARDWARE REVISION, HD-SDI CABLE OPTION A & ENGRAVING, ADDED GROUND STUD THREAD NOTE	11/06/23	KWH
4	N/A	UPDATED PART NUMBERS FOR CONNECTOR KITS	3/5/2026	KWH



UNLESS OTHERWISE SPECIFIED: ±TOL LINEAR DIM. X.X' ±0.15 X.XX ±0.05 SURFACE FINISH Ra 1.6 ALL DIM IN INCHES [mm] WEIGHT IN LBS [Kg] DO NOT SCALE		NAME	DATE	THIRD ANGLE PROJECTION	TITLE: ATOM 2 MISSION COMPUTER ARS-750, GEAR-750, ARS-ATOM 2		SHOT OVER
	DRAWN	KWH	03/15/23	SHEET SIZE: A			
	CHECKED	NOM	03/16/23				
	STATE: APPROVED			SHEET 2 of 7	Hardware DWG	DWG: US007-0001	
			SCALE: 1:1.5	REV: 1.3 4			

A top-down diagram of a circular connector. The connector has a central circular area containing 30 pins, numbered 1 through 30. The pins are arranged in a circular pattern. The connector is surrounded by a multi-layered circular housing. The diagram is a line drawing with no shading.



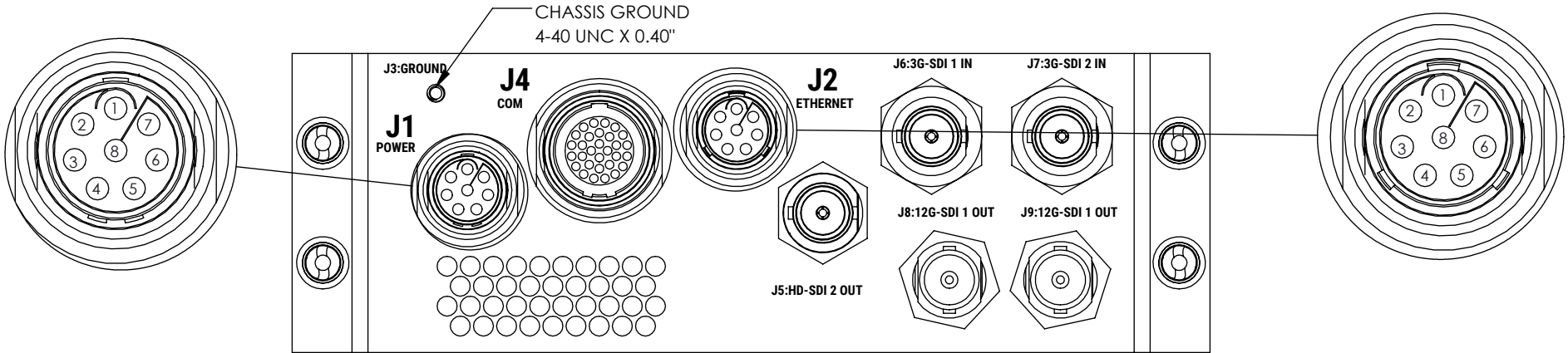
MATING CONNECTOR
US001-0004 / FGN.3M.330.XLCM

FOLLOW THE PATTERN ON THE REAR
OF THE MALE LEMO WHEN
POPULATING LEMO CONNECTORS.

BNC CONNECTION
CENTER PIN: SIGNAL
SHELL: GROUND

SHOT OVER

REVISIONS				
REV	EPN	DESCRIPTION	DATE	INIT.
3	N/A	UPDATED HARDWARE REVISION, HD-SDI CABLE OPTION A & ENGRAVING, ADDED GROUND STUD THREAD NOTE	11/06/23	KWH
4	N/A	UPDATED PART NUMBERS FOR CONNECTOR KITS	3/5/2026	KWH



J1: POWER*

1: NO CONTACT

2: NO CONTACT

3: NO CONTACT

4: NO CONTACT

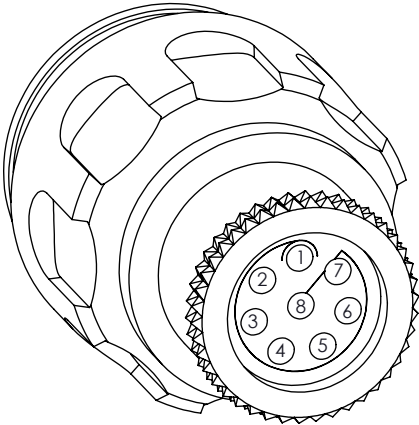
5: 18-30VDC (+)

6: POWER GROUND (-)

7: 18-30VDC (+)

8: POWER GROUND (-)

*ALL POWER PINS MUST BE WIRED.



MATING CONNECTOR
US001-0002 / FGN.1M.308.XLCM
US001-0007 / FGU.1M.308.XLCM

FOLLOW THE PATTERN ON THE
REAR OF THE MALE LEMO WHEN
POPULATING LEMO CONNECTORS.

J2: ETHERNET*

1: Bi_DA-/TX- (ORANGE)

2: Bi_DA+/TX+ (ORANGE/WHITE)

3: Bi_DB-/RX- (GREEN)

4: Bi_DB+/RX+ (GREEN/WHITE)

5: Bi_DD- (BROWN)

6: Bi_DD+ (BROWN/WHITE)

7: Bi_DC+ (BLUE)

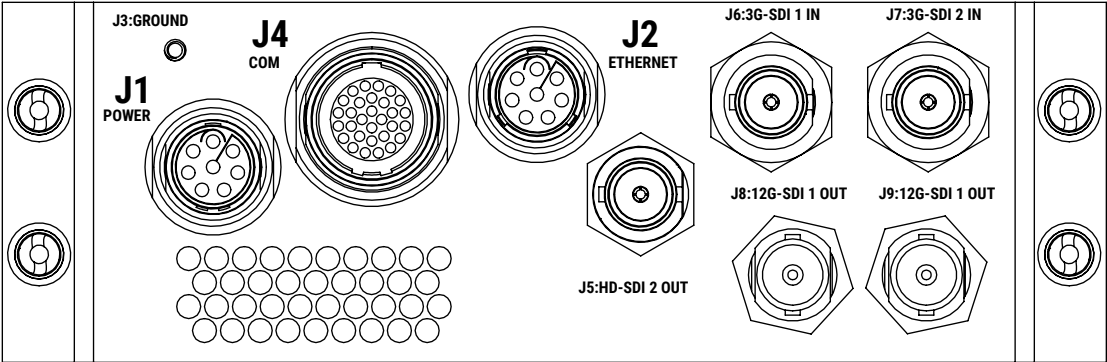
8: Bi_DC- (BLUE/WHITE)

*FOR 2 PAIR/4 WIRE ETHERNET (10 MBIT AND 100 MBIT) Bi_DA AND Bi_DB WILL AUTOMATICALLY ADJUST TO BE TX OR RX IN RUNTIME BUT INSTALLERS SHOULD MAKE SURE THAT POLARITY IS CORRECT.

UNLESS OTHERWISE SPECIFIED: ±TOL LINEAR DIM. X.X ±0.15 X.XX ±0.05 SURFACE FINISH Ra 1.6 ALL DIM IN INCHES [mm] WEIGHT IN LBS [Kg] DO NOT SCALE		NAME	DATE	THIRD ANGLE PROJECTION	TITLE: ATOM 2 MISSION COMPUTER ARS-750, GEAR-750, ARS-ATOM 2		SHOT OVER
	DRAWN	KWH	03/15/23	SHEET SIZE: A			
	CHECKED	NOM	03/16/23	SHEET 4 of 7			
	STATE: APPROVED		SCALE: 1:1		Hardware DWG REV: 1.3 4	DWG: US007-0001	

REVISIONS				
REV	EPN	DESCRIPTION	DATE	INIT.
3	N/A	UPDATED HARDWARE REVISION, HD-SDI CABLE OPTION A & ENGRAVING, ADDED GROUND STUD THREAD NOTE	11/06/23	KWH
4	N/A	UPDATED PART NUMBERS FOR CONNECTOR KITS	3/5/2026	KWH

CABLE TERIMINATION: MATING CONNECTOR PLUGS ONE PROVIDED WITH EACH ATOM 2		
REAR INTERFACE	CABLE	CONNECTOR
J1	SEE NOTES, PAGE 6	LEMO FGN.1M.308.XLCM
J2		LEMO FGU.1M.308.XLCM
J3		TE CONNECTIVITY 34104
J4		LEMO FGN.3M.330.XLCM
J5	PICWIRE V73263	PICWIRE 190712
	RG59	AMPHENOL 112123
	RG179	AMPHENOL 112133
J6	PICWIRE V73263	PICWIRE 190712
	RG59	AMPHENOL 112123
	RG179	AMPHENOL 112133
J7	PICWIRE V73263	PICWIRE 190712
	RG59	AMPHENOL 112123
	RG179	AMPHENOL 112133
J8	PICWIRE V73263	PICWIRE 190712
	RG59	AMPHENOL 112123
	RG179	AMPHENOL 112133
J9	PICWIRE V73263	PICWIRE 190712
	RG59	AMPHENOL 112123
	RG179	AMPHENOL 112133



UNLESS OTHERWISE SPECIFIED: ±TOL LINEAR DIM. X.X' ±0.15 X.XX ±0.05 SURFACE FINISH Ra 1.6 ALL DIM IN INCHES [mm] WEIGHT IN LBS [Kg] DO NOT SCALE		NAME	DATE	THIRD ANGLE PROJECTION	TITLE: ATOM 2 MISSION COMPUTER ARS-750, GEAR-750, ARS-ATOM 2		SHOT OVER
	DRAWN	KWH	03/15/23	SHEET SIZE: A			
	CHECKED	NOM	03/16/23		SHEET 5 of 7		
	STATE:			APPROVED		Hardware DWG	
			SCALE: 1:1		REV: 1.3 4	US007-0001	

CABLING REQUIREMENTS:
In order to ensure a properly working SHOTOVER Systems ATOM 2 system, these cabling requirements are highly recommended and any variations will be at the sole responsibility of the installer. Each cable must have an 8 inch service loop for easy removal and replacement of unit.

REVISIONS				
REV	EPN	DESCRIPTION	DATE	INIT.
3	N/A	UPDATED HARDWARE REVISION, HD-SDI CABLE OPTION A & ENGRAVING, ADDED GROUND STUD THREAD NOTE	11/06/23	KWH
4	N/A	UPDATED PART NUMBERS FOR CONNECTOR KITS	3/5/2026	KWH

POWER CABLE
The connection to 28V input on the ATOM 2 and 28V GND are highly recommended to be spirally laid.

75 ohm HD-SDI COAX Cable

Option A
PicWire V73263 is highly recommended for 3G-SDI and higher data rate signals (6G-SDI, 12G-SDI). The proper connector is PicWire P/N 190712. (<https://picwire.com/Product/V73263>)

Option B
RG59 is also recommended for 3G-SDI and higher data rate signals (6G-SDI, 12G-SDI). The proper connector is Amphenol Connex P/N 112123. (<https://www.amphenolrf.com/112123.html>)

Option C
If RG179 is required by other equipment (ex. MX-10 gimbal), then for EMI purposes, DOUBLE high performance 360 degree EMC individual braid shielding must be done to RG179 cable from end to end. The proper connector is Amphenol Connex P/N 112133. (<https://www.amphenolrf.com/112133.html>)

CRIMPNG TOOL
Correct crimping tool are needed for the connectors selected. A few examples are listed below. Check with SHOTOVER Systems for availability.

CONNECTOR	CONTACT PIN		FERRULE	
	TOOL	CRIMP	TOOL	CRIMP
PICWIRE 190712	M22520/2-01	SELECTOR #6	M22520/5-01	M22520/5-41 B HEX
AMPHENOL 112123	47-10070	HEX 0.068"	47-20000	HEX 0.255"
AMPHENOL 112133	47-10150	HEX 0.068"	47-20004	HEX 0.178"

ALL LEMO CONNECTORS	
CRIMP TOOL	DPC.91.701.V
PIN POSITIONER	DCE.91.070.5MVC
PIN EXTRACTOR	DCF.93.070.4LT DCC.07.04B.LAG

USB CABLE
USB 2.0 cabling is sufficient for all ATOM 2 functions. USB performance cannot be guaranteed at cable lengths greater than 6ft without the use of an extender. Contact SHOTOVER Systems for further details.

Option A
Carlisle 1031-215A-22
(<https://www.carlisleit.com/prod-info/usb-cable-offerings/>)

Option B
Gore RCN8800-22D-22P-H
(<https://www.gore.com/system/files/2021-11/ACS-0454-R1-DAT-US-MAY21.pdf>)

ETHERNET CABLE
Picwire PIC E50824 is highly recommended. (<https://www.picwire.com/pic-cables/e50824/>)

EMTEQ D100-0824-006 is also highly recommended. (https://www.collinsaerospace.com/-/media/CA/product-assets/marketing/0-9/50-75-ohm-coaxial-cables/1_50-74-coaxial-cables/10_d100-0824-006_cat_6a_10_gbit_ethernet_cable_datasheet.pdf?rev=226ed3ad9c8747deacf1afdb26c4de73&hash=D6A96AC1723D79D8C2878D637C0A6113)

ALL OTHER CABLES - *MUST BE SHIELDED*
All other cable can be selected by installer and all cables must be shielded, including power cables.

UNLESS OTHERWISE SPECIFIED ±TOL LINEAR DIM. X.X ±0.15 X.XX ±0.05 SURFACE FINISH Ra 1.6 ALL DIM IN INCHES [mm] WEIGHT IN LBS [Kg] DO NOT SCALE		NAME	DATE	THIRD ANGLE PROJECTION	TITLE: ATOM 2 MISSION COMPUTER ARS-750, GEAR-750, ARS-ATOM 2		SHOT OVER
	DRAWN	KWH	03/15/23	SHEET SIZE: A			
	CHECKED	NOM	03/16/23			SHEET 6 of 7	
	STATE: APPROVED		SCALE: 1:1		Hardware DWG		
					REV: 1.3 4	US007-0001	

REVISIONS				
REV	EPN	DESCRIPTION	DATE	INIT.
3	N/A	UPDATED HARDWARE REVISION, HD-SDI CABLE OPTION A & ENGRAVING, ADDED GROUND STUD THREAD NOTE	11/06/23	KWH
4	N/A	UPDATED PART NUMBERS FOR CONNECTOR KITS	3/5/2026	KWH

AVAILABLE FROM SHOTOVER SYSTEMS

US007-0007 KIT - CONNECTORS, ATOM 2 (INCLUDES ALL OF THE BELOW)			
SHOTOVER Systems P/N	Manufacturer P/N	Description	QTY
US001-0002	LEMO FGN.1M.308.XLCM	PLUG, STRAIGHT, 1M, 8 MALE, BLU, SHELL THRD	1
	AMPHENOL M85049/38-9N	BACKSHELL, STRAIN RELIEF CLAMP, STRAIGHT, SZ 9, NICKEL	1
US001-0007	LEMO FGU.1M.308.XLCM	PLUG, STRAIGHT, 1M, 8 MALE, GRN, SHELL THRD	1
	AMPHENOL M85049/38-9N	BACKSHELL, STRAIN RELIEF CLAMP, STRAIGHT, SZ 9, NICKEL	1
US001-0004	LEMO FGN.3M.330.XLCM	PLUG, STRAIGHT, 3M, 30 MALE, BLU, SHELL THRD	1
	AMPHENOL M85049/38-13N	BACKSHELL, STRAIN RELIEF CLAMP, STRAIGHT, SZ 13, NICKEL	1
US002-6192	PICWIRE P/N 190712	CONN, BNC, PLUG, STRAIGHT, 75 OHM (V73263)	5
US002-6121	AMPHENOL 112123	CONN, BNC, PLUG, STRAIGHT, 75 OHM (RG-59)	5
US002-6122	AMPHENOL 112133	CONN, BNC, PLUG, STRAIGHT, 75 OHM (RG-179)	5
US002-6001	EXTRON 101-020-01	BRACKET, CABLE LACING	3
HW-SCREW-S-0440-0188-SS-000RH-HE	McMASTER-CARR 92949A105	SCREW, 4-40 X 3/16", SS 18-8, ROUND HEAD	2
US002-6015	TE CONNECTIVITY 34104	RING TERMINAL, #4 STUD, 16-22 AWG, CRIMP	1
HW-NUT-S-0440-0063-0188-SS	McMASTER-CARR 90730A005	NUT, 4-40, 1/16", 3/16" HEX, SS 18-8	1
002-63490	STARTECH USB433WACDB	ADAPTER, NETWORK, WIFI, DUAL BAND, USB 2.0	1

TOOLS (CHECK WITH SHOTOVER SYSTEMS FOR AVAILABILITY)		
SHOTOVER Systems P/N	Manufacturer P/N	Description
US002-8004	AMPHENOL RF 47-10070	TOOL - CRIMPER, HAND, COAX, DIE SIZE 0.068/0.213/0.255
US002-8005	AMPHENOL RF 47-10150	TOOL - CRIMPER, HAND, COAX, DIE SIZE 0.068/0.128/0.178
US002-8006	DMC TOOLS M22520/5-01	TOOL - CRIMPER, HAND, CIRCULAR, M22520/5-01
US002-8007	DMC TOOLS M22520/5-41	TOOL - DIE, M22520/5-41
US002-8008	LEMO DPC.91.701.V*	TOOL - CRIMPER, HAND, CIRCULAR, LEMO DPC.91.701.V
US002-8009	LEMO DCE.91.070.5MVC	TOOL - POSITIONER, CIRCULAR, LEMO DCE.91.070.5MVC
US002-8010	LEMO DCF.93.070.4LT	TOOL - EXTRACTER, 24-26 AWG, LEMO DCF.93.070.4LT

* OR ALTERNATE

UNLESS OTHERWISE SPECIFIED		NAME	DATE	THIRD ANGLE PROJECTION	TITLE: ATOM 2 MISSION COMPUTER ARS-750, GEAR-750, ARS-ATOM 2		SHOT OVER	
	±TOL LINEAR DIM. X.X ±0.15 X.XX ±0.05	DRAWN	KWH	03/15/23				SHEET SIZE: A
	SURFACE FINISH Ra 1.6	CHECKED	NOM	03/16/23				
	STATE:		SHEET 7 of 7					
ALL DIM IN INCHES [mm] WEIGHT IN LBS [Kg] DO NOT SCALE	APPROVED		SCALE: 1:1		Hardware DWG	DWG:		
					REV: 1.3 4	US007-0001		

D

C

B

A