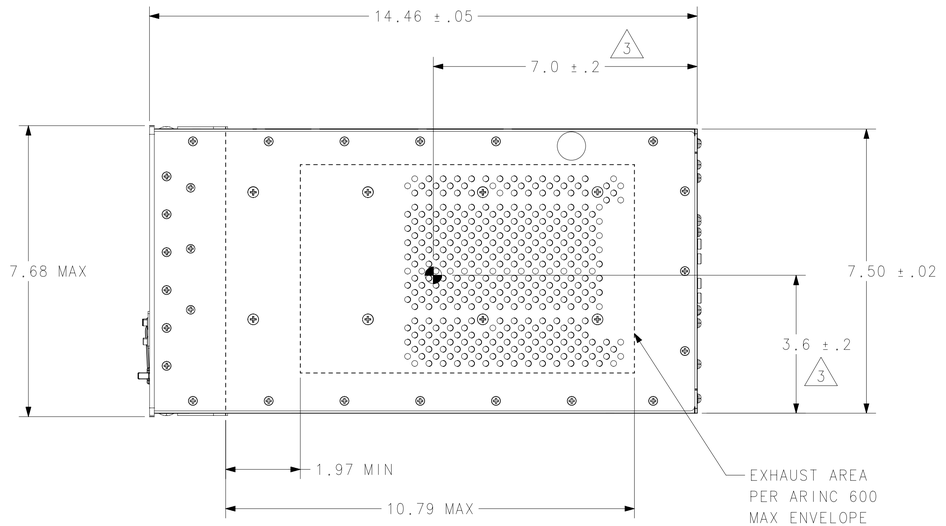
REVISIONS					
REV.	DESCRIPTION	DATE	BY	APPD	APPD
A	ALPHA RELEASE PER ECR100723	29OCT10	PRM	N/A	N/A
B	UPDATED PER ECR110319	09JUN11	PRM	John Pepe	Nguyen Hien

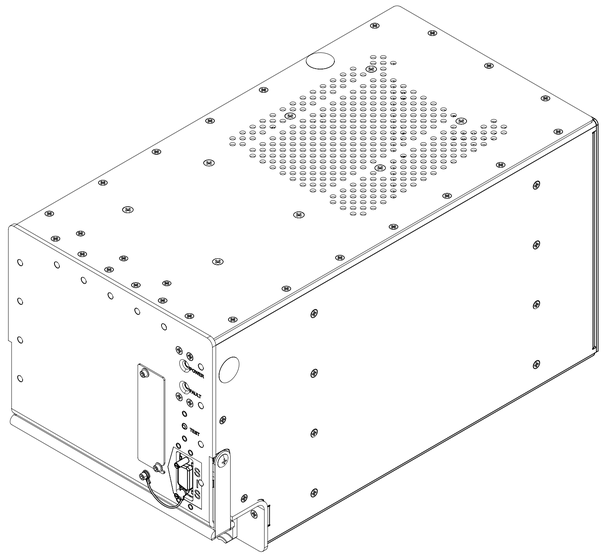
NOTES:

1. THIS UNIT MEETS THE DIMENSIONAL REQUIREMENTS OF ARINC SPECIFICATION 600.
2. MAXIMUM WEIGHT IS 8.2 KG (18.08 LBS).
3. APPROXIMATE CENTER OF GRAVITY IS INDICATED BY ⊕
4. THIS UNIT SHALL BE INSTALLED IN A 6 MCU TRAY PER ARINC 600 SPEC.
5. POWER DISSIPATION IS 110W MAX.
6. COOLING REQUIREMENTS PER ARINC 600:
   - FLOW RATE: 24kg/hr MAX;
   - PRESSURE DROP: 300+0/-50 Pa.
7. FINISH:
   - METAL TREATMENT: CHEMICAL FILM PER MIL-DTL-5541, TYPE II, CLASS 3
   - EXTERIOR FINISH: PRISM POWDER COAT PB134LT (POLYESTER POWDER, SATIN SANTEX BLACK)

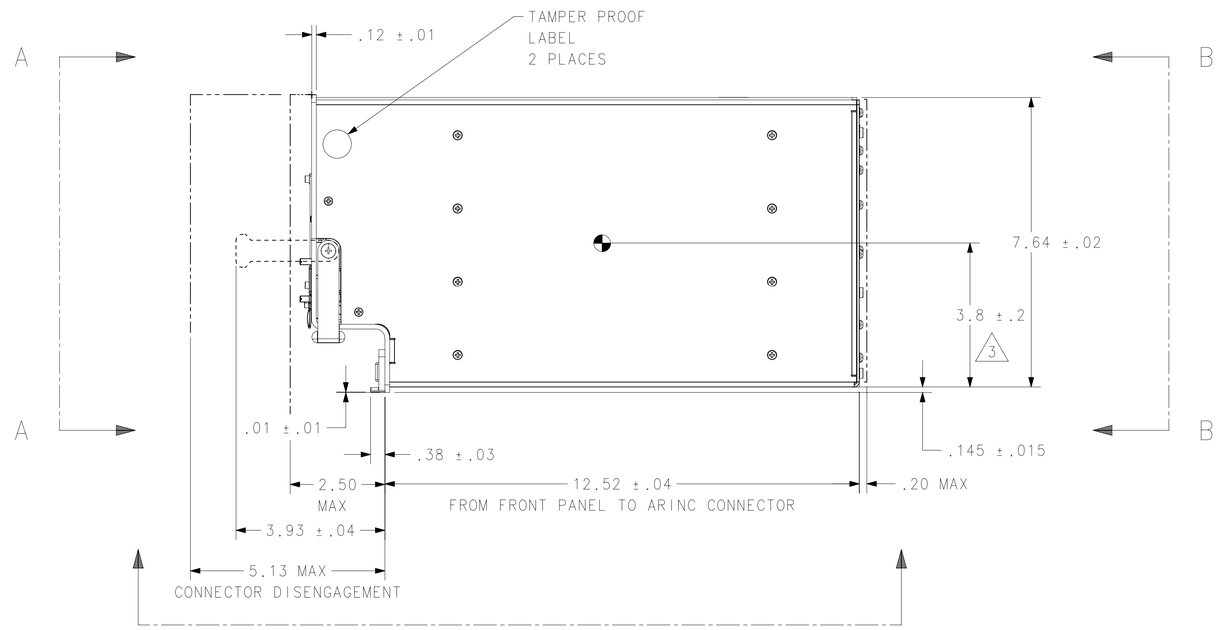
NOTES APPLICABLE TO SHEET 3 INTERCONNECTION DIAGRAM

8. CABLE LOSS HPA TO D/LNA (RFTX): 2.5dB MAXIMUM TO ANTENNA.
9. CABLE LOSS D/LNA TO SDU (RFRX): 6-25dB.
10. CABLE LOSS SDU TO HPA (RFTX): 8-11dB.
11. CABLE BETWEEN SDU AND SCM TO BE LESS THAN 10 METERS. WIRE USED TO ROUTE SCM POWER (SCM PWR) MUST BE 22 AWG MINIMUM.
12. IF THE NUMBER OF OTHER CONFIGURATION PINS IS EVEN, THEN STRAP CONFIGURATION PIN 3 (TP3F) TO SERVICE AVAILABILITY DISCRETE 1 (MP11E).
13. P⧫ DENOTES TWISTED PAIR.





SCALE 1:2



APPLICATION		ADDITIONAL APPROVALS		
USED ON	USED ON		SIGN	DATE
		REA	P.MARCHAND	15DEC10
		MASS		
		ANTENNA		
		THERMAL		
		SYSTEMS		
		OPTICAL		

DWG. LEVEL 2

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
DECIMALS .X ± .020, .XX ± .010, .XXX ± .005
ANGLES 0.30°
SURFACES √64

DO NOT SCALE DRAWING

MATERIAL N/A

FINISH N/A

CONTRACT/PROJECT A350 RCI

APPROVALS	SIGN	DATE
DRAWN	P.MARCHAND	01DEC08
CHECKED	J.AZEVEDO	15DEC10
MECH.	P.MARCHAND	15DEC10
ELECT.	D.MOFFATT	15DEC10
MFG ENG	I.MILANOVIC	17DEC10
PA	N.HIEN	14DEC10
CMO	S.MULDER	17DEC10
PGM MGR	J.PEPE	12DEC10

EMS Technologies
400 MAPLE GROVE ROAD
OTTAWA, ONTARIO
K2V 1B8

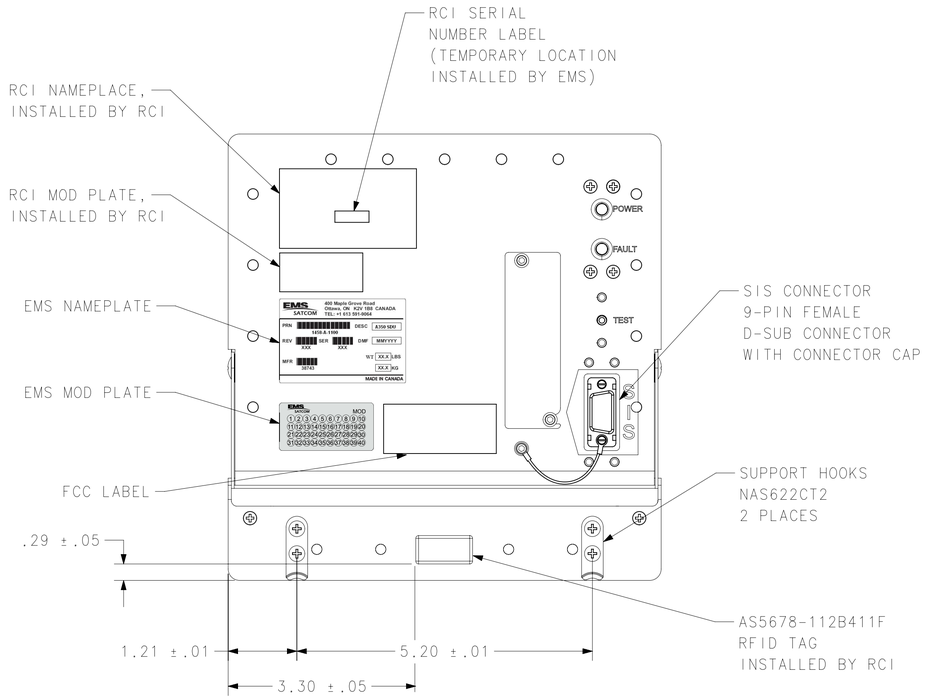
TITLE
OUTLINE & INSTALLATION DRAWING, A350 SDU

SIZE D | FSCM NO. 38473 | DWG. NO. 1458-E-1100 | REV B

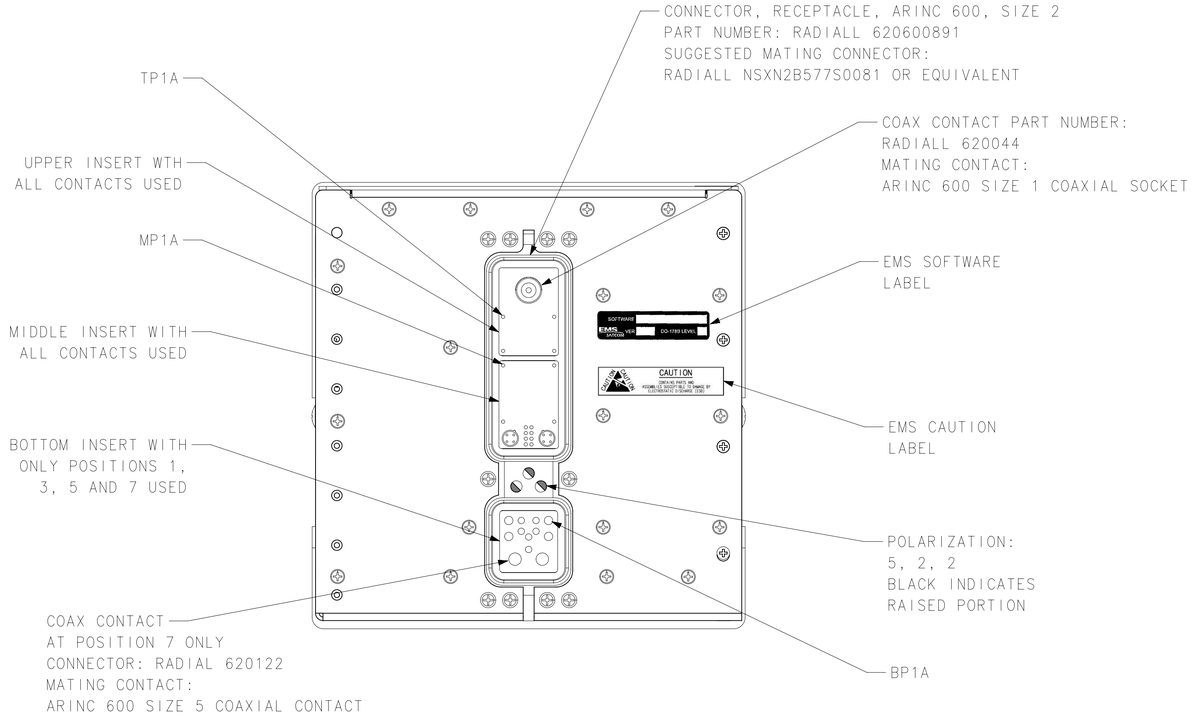
SCALE 1:2 | LIBRARY 1458-E-1100.PRT | SHEET 1 OF 4

DWG No 1458-E-1100 REV B SHT 1

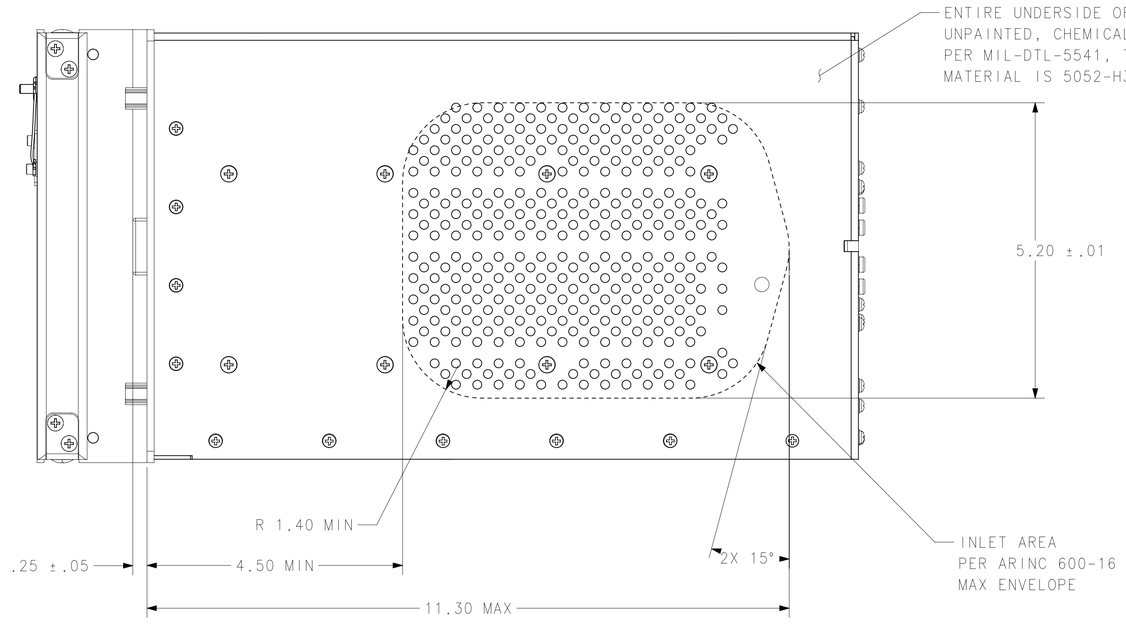
CAD SOFTWARE USED: NX 6



VIEW A-A (FRONT)



VIEW B-B (BACK)



VIEW C-C (BOTTOM)

SIZE	FSCM NO.	DWG. NO.	REV
D	38473	1458-E-1100	B
SCALE 3:4	LIBRARY 1458-E-1100.PRT	SHEET 2 OF 4	

DWG No 1458-E-1100 REV B SHT 2

CAD SOFTWARE USED: NX 6

A350 SDU

SYSTEM CONFIGURATION PINS (12)
- CONFIGURATION PIN 1 — TP3D
- CONFIGURATION PIN 2 — TP3E
- CONFIGURATION PIN 3 — TP3F
- CONFIGURATION PIN 4 — TP3G
- CONFIGURATION PIN 5 — TP4D
- CONFIGURATION PIN 6 — TP4E
- CONFIGURATION PIN 7 — TP4F
- CONFIGURATION PIN 8 — TP4G
- CONFIGURATION PIN 9 — TP5D
- CONFIGURATION PIN 10 — TP5E
- CONFIGURATION PIN 11 — TP5F
- CONFIGURATION PIN 12 — TP5G
- CONFIGURATION PIN 13 — TP6D
- CONFIGURATION PIN 14 — TP6E
- CONFIGURATION PIN 15 — TP6F
- CONFIGURATION PIN 16 — TP6G
- CONFIGURATION PIN 17 — TP7D
- CONFIGURATION PIN 18 — TP7E
- CONFIGURATION PIN 19 — TP7F
- CONFIGURATION PIN 20 — TP7G

SPARE (14-20)

SERVICE AVAILABILITY DISCRETE 1 — MP11E
SERVICE AVAILABILITY DISCRETE 2 — MP11F
SERVICE AVAILABILITY DISCRETE 3 — MP12E
SERVICE AVAILABILITY DISCRETE 4 — MP12F
SERVICE AVAILABILITY DISCRETE 5 — MP13E
SERVICE AVAILABILITY DISCRETE 6 — MP13F
SERVICE AVAILABILITY DISCRETE 7 — MP14E
SERVICE AVAILABILITY DISCRETE 8 — MP14F
SERVICE AVAILABILITY DISCRETE 9 — MP15E
SERVICE AVAILABILITY DISCRETE 10 — MP15F

SPARE (8,9,10)

A350 SATCOM CONFIGURATION MODULE (SCM) (11)

DA15
- 1 — P — SCM DATA TO SDU A — MP5D
- 2 — SCM DATA TO SDU B — MP6D
- 3 — P — SDU DATA TO SCM A — MP3D
- 4 — SDU DATA TO SCM B — MP4D
- 8 — P — SCM PWR +8 TO +15V — MP1D
- 15 — SCM PWR RETURN 0V — MP2D
- 7 — W3 EARTH STUD

RMP 1
- DATA FROM MCDU 1 A — P — MP1A
- DATA FROM MCDU 1 B — MP1B
- DATA TO MCDU A — P — MP10J
- DATA TO MCDU B — MP10K

RMP 2
- DATA TO MCDU A — P — MP1J
- DATA TO MCDU B — MP1K
- DATA FROM MCDU 2 A — P — MP10A
- DATA FROM MCDU 2 B — MP10B

RMP 3
- DATA TO MCDU A — P — MP3A
- DATA TO MCDU B — MP3B
- DATA FROM MCDU 3 A — P — MP7J
- DATA FROM MCDU 3 B — MP7K

ACR 1
- DATA FROM CMU 1 A — P — MP3J
- DATA FROM CMU 1 B — MP3K
- DATA TO CMU 1 A — P
- DATA TO CMU 1 B

ACR 2
- DATA TO CMU 2 A — P
- DATA TO CMU 2 B
- DATA FROM CMU 2 A — P
- DATA FROM CMU 2 B

BP7 — RF IN RX (9)
TP7J — RF OUT TX (10) — J2 RF IN

HPA (17-26 (J1))
- MP2E — BITE INPUT FROM HPA A — P — A
- MP2F — BITE INPUT FROM HPA B — P — B
- P — T
- P — S
- P — P
- R

J3 RF OUT (8) — D/LNA

AIRCRAFT POWER
- X — 115 VAC HOT
- Y — 115 VAC RETURN
- J — CHASSIS GND

HGA

- MP1E — MULTI CONTROL OUTPUT A — P
- MP1F — MULTI CONTROL OUTPUT B — P
- MP8C — BITE INPUT TOP/PORT BSU/ANT A — P
- MP8D — BITE INPUT TOP/PORT BSU/ANT B — P

- MP8F — TX MUTE INPUT
- MP10C — PORT BSU HPA MUTE INPUT A
- MP10D — PORT BSU HPA MUTE INPUT B
- MP10G — STBD BSU HPA MUTE INPUT A
- MP10H — STBD BSU HPA MUTE INPUT B
- MP8G — BITE INPUT STBD BSU A
- MP8H — BITE INPUT STBD BSU B

COCKPIT VOICE

CHIME
- MP2C — VOICE CHIME SIGNAL CONTACT 1
- MP2H — VOICE CHIME SIGNAL CONTACT 2

AUDIO CONTROL PANEL
- MP3C — VOICE CALL LIGHT OUTPUT 1
- MP3H — VOICE CALL LIGHT OUTPUT 2
- MP5C — VOICE GO AHEAD CHIME RESET

AUDIO MANAGEMENT SYSTEM
- MP4A — AUDIO INPUT 1 HIGH
- MP4B — AUDIO INPUT 1 LOW
- MP4J — AUDIO INPUT 2 HIGH
- MP4K — AUDIO INPUT 2 LOW
- MP5A — AUDIO OUTPUT 1 HIGH
- MP5B — AUDIO OUTPUT 1 LOW
- MP5J — AUDIO OUTPUT 2 HIGH
- MP5K — AUDIO OUTPUT 2 LOW
- MP4C — VOICE MIC ON INPUT 1
- MP4H — VOICE MIC ON INPUT 2
- MP1C — CALL PLACE/END DISCRETE INPUT 1
- MP1H — CALL PLACE/END DISCRETE INPUT 2

- MP6J — A — P
- MP6K — B — DATA FROM GPS
- MP7D — WOW INPUT 1

DATA FROM PRIMARY IRS/GNSS
- MP2A — DATA FROM PRIMARY IRS/GNSS A — P
- MP2B — DATA FROM PRIMARY IRS/GNSS B

DATA FROM SECONDARY IRS
- MP2J — DATA FROM SECONDARY IRS A — P
- MP2K — DATA FROM SECONDARY IRS B

AIRCRAFT EARTH STATION (AES) ID
- MP7A — AES ID INPUT A — P
- MP7B — AES ID INPUT B

CFDS (CMC)
- MP8A — DATA FROM CFDS (CMC) A — P
- MP8B — DATA FROM CFDS (CMC) B
- MP8J — DATA TO CFDS (CMC) A — P
- MP8K — DATA TO CFDS (CMC) B

A350 SDU

ETHERNET 1 10bT/100bTX
- FROM SDU TO USER + — P — TP3A
- FROM SDU TO USER - — TP4B
- FROM USER TO SDU + — P — TP3B
- FROM USER TO SDU - — TP4A

ETHERNET 2 10bT/100bTX
- FROM SDU TO USER + — P — TP6A
- FROM SDU TO USER - — TP7B
- FROM USER TO SDU + — P — TP6B
- FROM USER TO SDU - — TP7A

AFDX1 10b/100b QUADRAX
- FROM SDU TO USER + — P — MP1T1
- FROM SDU TO USER - — MP1T3
- FROM USER TO SDU + — P — MP1T2
- FROM USER TO SDU - — MP1T4

AFDX2 10b/100b QUADRAX
- FROM SDU TO USER + — P — MP2T1
- FROM SDU TO USER - — MP2T3
- FROM USER TO SDU + — P — MP2T2
- FROM USER TO SDU - — MP2T4

SPARE — ETHERNET 10 BASE T
- FROM SDU TO USER + — P — MP6E
- FROM SDU TO USER - — MP6F
- FROM USER TO SDU + — P — MP7E
- FROM USER TO SDU - — MP7F

N/C — SPARE DISCRETE INPUT (x6) — MP3F, MP4F, MP6A, MP6B, MP6C, MP7C
BITE FROM LGA LNA — MP10F

FRONT PANEL (9 PIN FEMALE D-SUB CONNECTOR) — STANDALONE IDENTIFICATION SYSTEM (SIS) INTERFACE

ADIS TEST EQUIPMENT
- MP5E — ADIS DISCRETE OUTPUT
- MP5F — ADIS DISCRETE INPUT

N/C
- MP7G — SPARE ARINC 429 OUTPUT A
- MP7H — SPARE ARINC 429 OUTPUT B
- MP5G — SPARE ARINC 429 OUTPUT A
- MP5H — SPARE ARINC 429 OUTPUT B

N/C
- MP6G — SPARE ARINC 429 INPUT A
- MP6H — SPARE ARINC 429 INPUT B

ARINC 429
- MP9C — CROSSTALK FROM OTHER SDU A
- MP9D — CROSSTALK FROM OTHER SDU B
- MP9G — CROSSTALK TO OTHER SDU A
- MP9H — CROSSTALK TO OTHER SDU B

- MP9E — DUAL SYSTEM SELECT DISCRETE OUTPUT
- MP9F — DUAL SYSTEM DISABLE DISCRETE INPUT

ARINC 429 (A615 DATA LOADER NOT SUPPORTED)
- MP9A — FROM AIRBORNE DATA LOADER A
- MP9B — FROM AIRBORNE DATA LOADER B
- MP9J — TO AIRBORNE DATA LOADER A
- MP9K — TO AIRBORNE DATA LOADER B

- MP8E — DATA LOADER LINK A

AUTOMATIC TEST EQUIPMENT (ATE)
- TP1A
- TP1B
- TP1C
- TP1D
- TP1E
- TP1F
- TP1G
- TP1H
- TP1J
- TP1K
- TP2A
- TP2B
- TP2C
- TP2D
- TP2E
- TP2F
- TP2G
- TP2H
- TP2J
- TP2K

N/C
- MP3E — SPARE DISCRETE OUTPUT
- MP4E — SPARE DISCRETE OUTPUT
- MP10E — LGA LNA ON/OFF CONTROL

N/C (RESERVED PIN ASSIGNMENTS)
- MP1G — MFR SPECIFIC
- MP2G — MFR SPECIFIC
- MP3G — MFR SPECIFIC

AIRCRAFT POWER
- BP5 — 115V HOT
- BP1 — 115V RETURN
- BP3 — AIRCRAFT GND

SIZE D	FSCM NO. 38473	DWG. NO. 1458-E-1100	REV B	
SCALE NTS	LIBRARY 1458-E-1100.PRT	SHEET 3 OF 4		

DWG No 1458-E-1100 REV B SHT 3

CAD SOFTWARE USED: NX 6

TP71

RF TX
TO FMPA OR DLNA

TOP PLUG

	A	B	C	D	E	F	G	H	J	K
1	RS232 ATE PIN 1 CPTXD	RS232 ATE PIN 2 CPRXD	RS232 ATE PIN 3 RTN	RS232 ATE PIN 4 DPTXD	RS232 ATE PIN 5 DPRXD	RS232 ATE PIN 6 RTN	RS232 ATE PIN 7 CC1TXD1	RS232 ATE PIN 8 CC1RXD1	RS232 ATE PIN 9 CC1TXD2	RS232 ATE PIN 10 CC1RXD2
2	STRAP ATE PIN 11 D/L SECURITY	STRAP ATE PIN 12 RTN	RS232 ATE PIN 13 RTN	RS232 ATE PIN 14 VPTXD	RS232 ATE PIN 15 VPRXD	RS232 ATE PIN 16 RTN	RS232 ATE PIN 17 CC2TXD	RS232 ATE PIN 18 CC2RXD	RS232 ATE PIN 19 CC3TXD	RS232 ATE PIN 20 CC3RXD
3	ETHERNET 1 FROM SDU TO USER +	ETHERNET 1 FROM USER TO SDU +	EMPTY CAVITY	CONFIG PIN 1	CONFIG PIN 2	CONFIG PIN 3	CONFIG PIN 4	SPARE	RESERVED	RESERVED
4	ETHERNET 1 FROM USER TO SDU -	ETHERNET 1 FROM SDU TO USER -	EMPTY CAVITY	CONFIG PIN 5	CONFIG PIN 6	CONFIG PIN 7	CONFIG PIN 8	SPARE	RESERVED	RESERVED
5	EMPTY CAVITY	EMPTY CAVITY	EMPTY CAVITY	CONFIG PIN 9	CONFIG PIN 10	CONFIG PIN 11	CONFIG PIN 12	SPARE	SPARE	SPARE
6	ETHERNET 2 FROM SDU TO USER +	ETHERNET 2 FROM USER TO SDU +	EMPTY CAVITY	CONFIG PIN 13 [SPARE]	CONFIG PIN 14 [SPARE]	CONFIG PIN 15 [SPARE]	CONFIG PIN 16 [SPARE]	SPARE	RESERVED	RESERVED
7	ETHERNET 2 FROM USER TO SDU -	ETHERNET 2 FROM SDU TO USER -	EMPTY CAVITY	CONFIG PIN 17 [SPARE]	CONFIG PIN 18 [SPARE]	CONFIG PIN 19 [SPARE]	CONFIG PIN 20 [SPARE]	SPARE	RESERVED	RESERVED

MIDDLE PLUG

	A	B	C	D	E	F	G	H	J	K
1	DATA FROM RMP 1 A	DATA FROM RMP 1 B	CALL PLACE/ END DISCRETE INPUT 1	SCM PWR +8 TO +15V	MULTI-CONTROL OUTPUT A	MULTI-CONTROL OUTPUT B	RESV EXT RESET DISCRETE INPUT	CALL PLACE/ END DISCRETE INPUT 2	DATA FROM RMP 2 A	DATA FROM RMP 2 B
2	DATA FROM PRIMARY IRS/GNSS A	DATA FROM PRIMARY IRS/GNSS B	COCKPIT VOICE CHIME SIGNAL CONTACT 1	SCM PWR RETURN 0V	BITE INPUT FROM HPA A	BITE INPUT FROM HPA B	RESV MFR-SPECIFIC 0-28V DISCRETE OUTPUT	COCKPIT VOICE CHIME SIGNAL CONTACT 2	DATA FROM SECONDARY IRS A	DATA FROM SECONDARY IRS B
3	DATA FROM ACR 1 A	DATA FROM ACR 1 B	COCKPIT VOICE CALL LIGHT OUTPUT 1	SDU DATA TO SCM A	SPARE DISCRETE OUTPUT 1	SPARE DISCRETE INPUT 1	SPARE	COCKPIT VOICE CALL LIGHT OUTPUT 2	DATA FROM ACR2 A	DATA FROM ACR2 B
4	COCKPIT AUDIO INPUT 1 HIGH	COCKPIT AUDIO INPUT 1 LOW	COCKPIT VOICE MIC ON INPUT 1	SDU DATA TO SCM B	SPARE DISCRETE OUTPUT 2	SPARE DISCRETE INPUT 2	SPARE	COCKPIT VOICE MIC ON INPUT 2	COCKPIT AUDIO INPUT 2 HIGH	COCKPIT AUDIO INPUT 2 LOW
5	COCKPIT AUDIO OUTPUT 1 HIGH	COCKPIT AUDIO OUTPUT 1 LOW	COCKPIT VOICE GO AHEAD CHIME RESET 1	SDU DATA TO SDU A	ADIS DISCRETE OUTPUT	ADIS DISCRETE INPUT	SPARE 1 ARINC 429 OUTPUT A	SPARE 1 ARINC 429 OUTPUT B	COCKPIT AUDIO OUTPUT 2 HIGH	COCKPIT AUDIO OUTPUT 2 LOW
6	SPARE DISCRETE INPUT	SPARE DISCRETE INPUT	SPARE DISCRETE INPUT	SCM DATA TO SDU B	ETHERNET 5 10 BASE T (SPARE) FROM SDU TO USER +	ETHERNET 5 10 BASE T (SPARE) FROM SDU TO USER -	SPARE 1 ARINC 429 INPUT A	SPARE 1 ARINC 429 INPUT B	GPS ARINC 429 INPUT A	GPS ARINC 429 INPUT B
7	AES ID INPUT A	AES ID INPUT B	SPARE DISCRETE INPUT	WOW INPUT 1	ETHERNET 5 10 BASE T (SPARE) FROM USER TO SDU +	ETHERNET 5 10 BASE T (SPARE) FROM USER TO SDU -	SPARE 2 ARINC 429 OUTPUT A	SPARE 2 ARINC 429 OUTPUT B	DATA TO ACR 1 & 2 A	DATA TO ACR 1 & 2 B
8	DATA FROM CFDS A	DATA FROM CFDS B	BITE INPUT TOP/PORT BSU/ANT A	BITE INPUT TOP/PORT BSU/ANT B	DATA LOADER LINK A	TX MUTE INPUT	BITE INPUT INPUT STBD BSU A	BITE INPUT INPUT STBD BSU B	DATA TO CFDS A	DATA TO CFDS B
9	FROM AIRBORNE DATA LOADER A	FROM AIRBORNE DATA LOADER B	CROSSTALK FROM OTHER SDU A	CROSSTALK FROM OTHER SDU B	DUAL SYSTEM SELECT DISCRETE I/O	DUAL SYSTEM DISABLE DISCRETE I/O	CROSSTALK TO OTHER SDU A	CROSSTALK TO OTHER SDU B	TO AIRBORNE DATA LOADER A	TO AIRBORNE DATA LOADER B
10	DATA FROM RMP3 A	DATA FROM RMP3 B	PORT BSU HPA MUTE INPUT A	PORT BSU HPA MUTE INPUT B	LGA LNA ON/OFF CONTROL	BITE INPUT FROM LGA LNA	STBD BSU HPA MUTE INPUT A	STBD BSU HPA MUTE INPUT B	DATA TO RMP 1,2,3 A	DATA TO RMP 1,2,3 B
11	RESERVED	RESERVED	RESERVED	RESERVED	SERVICE AVAILABILITY DISCRETES 1	SERVICE AVAILABILITY DISCRETES 2	RESERVED	RESERVED	RESERVED	RESERVED
12	1T: 1 AFDX1 ETHERNET FROM SDU TO USER +	1T: 2 AFDX1 ETHERNET FROM USER TO SDU +			SERVICE AVAILABILITY DISCRETES 3	SERVICE AVAILABILITY DISCRETES 4	2T: 2 AFDX2 ETHERNET FROM USER TO SDU +	2T: 3 AFDX2 ETHERNET FROM SDU TO USER -		
13					SERVICE AVAILABILITY DISCRETES 5	SERVICE AVAILABILITY DISCRETES 6				
14	1T: 4 AFDX1 ETHERNET FROM USER TO SDU -	1T: 3 AFDX1 ETHERNET FROM SDU TO USER -			SERVICE AVAILABILITY DISCRETES 7	SERVICE AVAILABILITY DISCRETES 8	2T: 1 AFDX2 ETHERNET FROM SDU TO USER +	2T: 4 AFDX2 ETHERNET FROM USER TO SDU -		
15					SERVICE AVAILABILITY DISCRETES 9	SERVICE AVAILABILITY DISCRETES 10				

BOTTOM PLUG

2 (N/C)	9 (N/C)	8 (N/C)	1 115V COLD
4 (N/C)	11 (N/C)	10 (N/C)	3 CHASSIS GROUND
	12 (N/C)		
7 DLNA	5 115V HOT		6 SPARE

CONTACT ASSIGNMENTS FOR J1 OF A350 SDU

VIEW SHOWN ON MATING FACE

SIZE	FSCM NO.	DWG. NO.	REV
D	38473	1458-E-1100	B
SCALE NTS	LIBRARY 1458-E-1100.PRT	SHEET 4 OF 4	

DWG No 1458-E-1100 REV B SHT 4

CAD SOFTWARE USED: NX 6