	Project: 296	File:	
	Title: CMC-E-600 ICD		Doc No: 21029100-406
	Rev 2.	Revision Date: 15 September 2010	Contract No.:

Revisions Table			
ECR/ECN	LTR	Description	Date
	0	Pre Contract draft	29 July 2010
	1	Replace VGA and USB connectors with 'Console' connector. Add LAN3 to 'Console" connector Add LAN4 on front panel	1 August 2010
	2	Fix J4, J5	15 September 2010




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1. General Information

dataMARS-CMC-e-600 is a rugged PC-based flight data-recorder. The recorder uses removable recording media to store collected flight data. The CMC-e-600 flight recorder comes with complementary ground analysis software for data processing and post-flight analysis.

The system monitors and records the entire traffic (or selected portions) of two independent MIL-STD-1553 buses and two Ethernet channels. Recorded data is time tagged with reference to IRIG-B time code or internal PC clock.

This document is the Hardware Interface Control Drawing of the CMC-ED

2. Summary of CMC-ED External Connectors

2.1 Connectors on Connectors' Panel

REF DES.	Name	On Unit Connector Part Number	Vendor	On Cable Connector Part Number
J1	POWER	62GB-5067-12-03PN	Amphenol	MS3116E-12-3S
J2	1553-1-A	BJ79-29	Trompeter	PL-75-29
J3	1553-1-B	BJ79-29	Trompeter	PL-75-29
J4	1553-2-A	BJ79	Trompeter	PL-75-29
J5	1553-2-B	BJ79	Trompeter	PL-75-29
J6	IRIG-B	31-4803 BNC receptacle	Amphenol	
J7	NETWORK	D38999/24WC35SN	General	D38999/26WC35PN
J8	CONTROL	M24308/4-1F	CINCH	
J9	RS-232	M24308/4-1F	CINCH	
J10	Console	D38999/24WD35SN	General	D38999/26WD35PN

Table 2-1 Connectors on Connectors' Panel

2.2 Front Panel Connectors

The following industry standard connectors are located behind maintenance panel at the front of the CMC-e-600.

- (1) Two Standard USB 2.0 Connectors
- (2) One Standard LAN (Ethernet) Connector, (LAN4 from internal Switch).

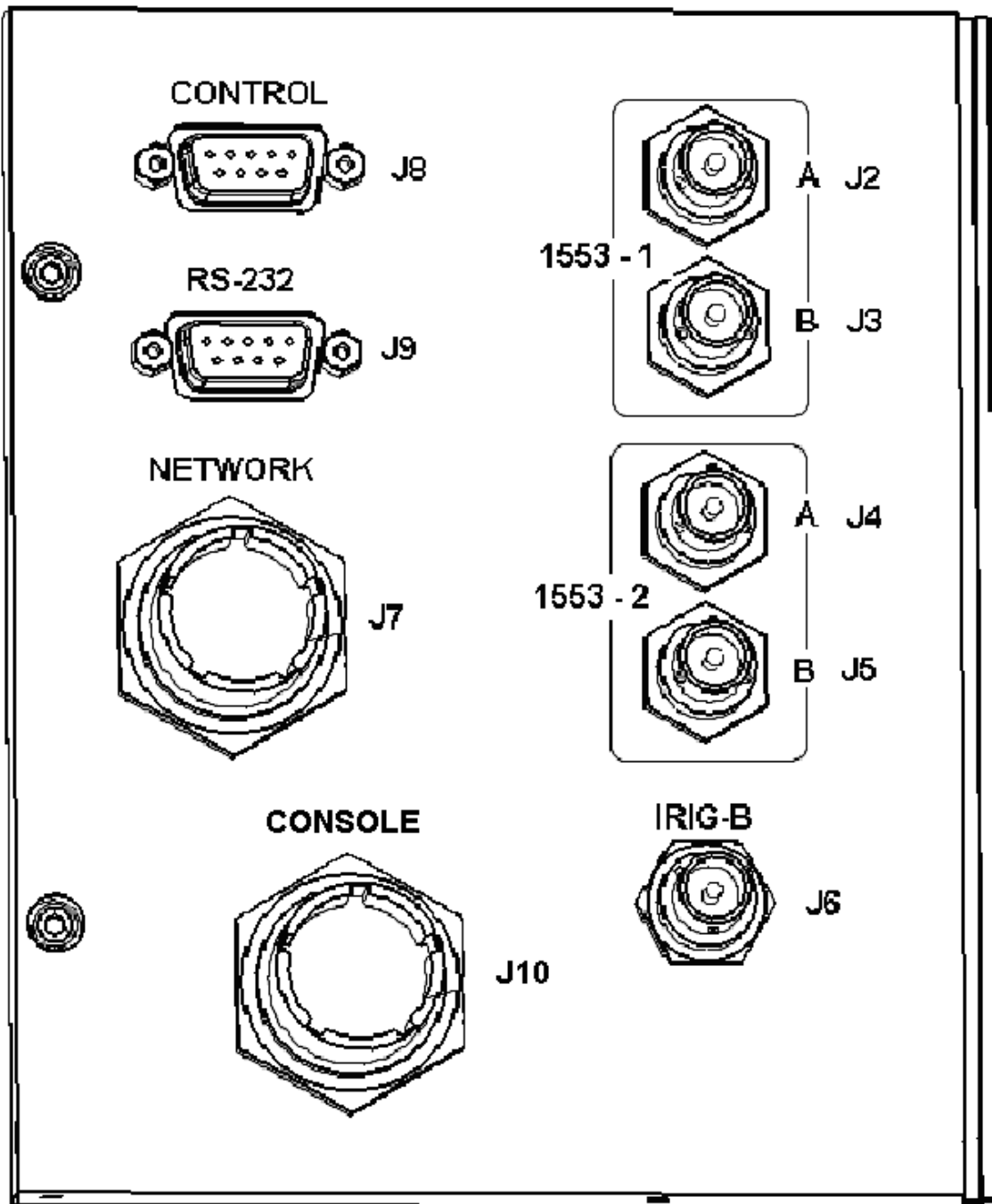


Figure 2-1 CMC-e-Connectors Panel

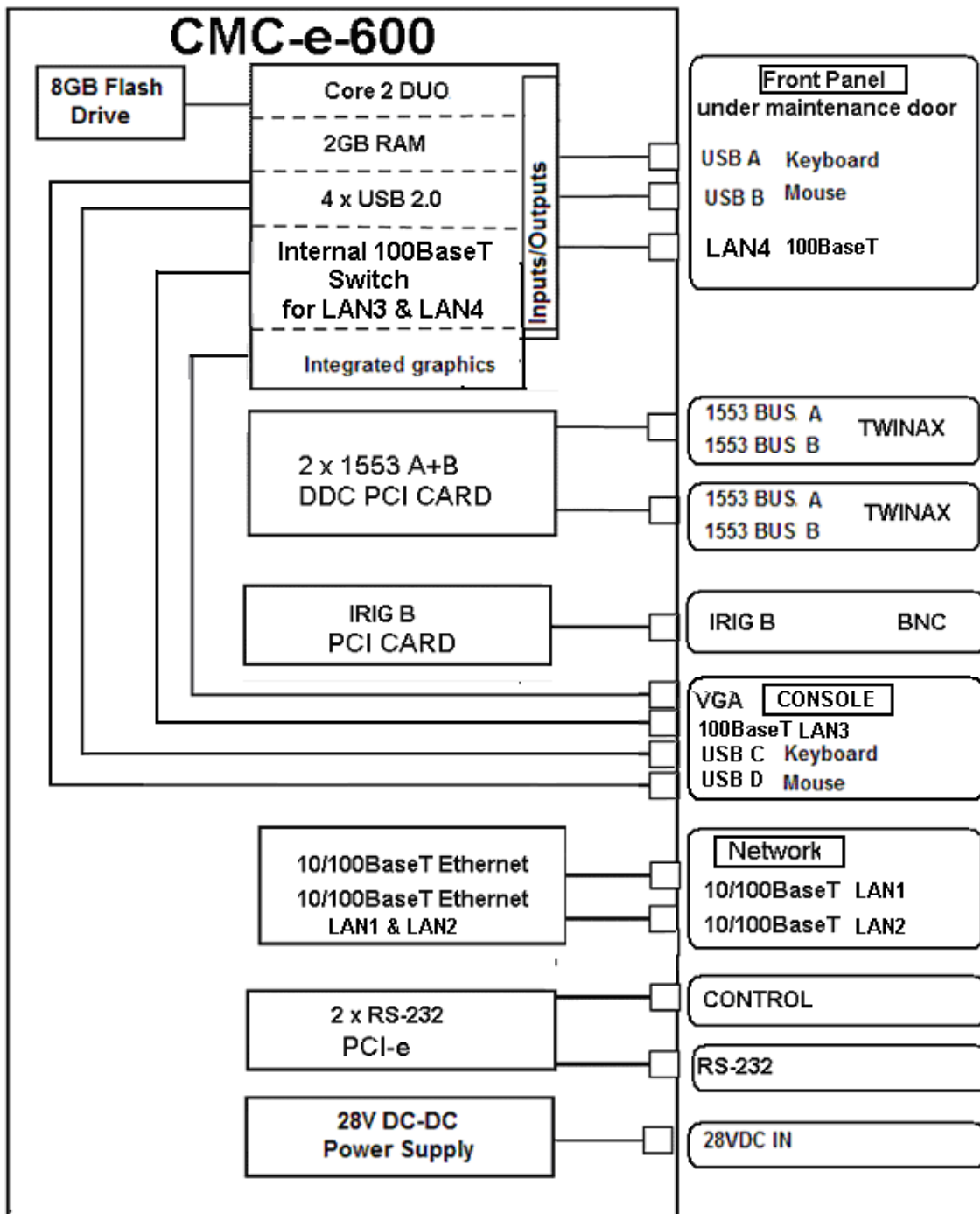


Figure 2-2 CMC-e-600 Wiring

3. Connectors Pinouts

3.1 J1 – Power (3 Pin)

J1 Pin	Function
A	28V1
B	28V2
C	28V-Ret

Table 3-1 - J1 Power Connector Pin List

3.2 J2 – 1553-1 - A

J2	FUNCTION
CENTER	+SIGNAL
INNER SHIELD	-SIGNAL
OUTER SHIELD	SHIELD

Table 3-2 – J2 1553-1 – A Connector Pin List

3.3 J3 – 1553- 1 - B

J3	FUNCTION
CENTER	+SIGNAL
INNER SHIELD	-SIGNAL
OUTER SHIELD	SHIELD

Table 3-3 – J3 1553-1 – B Connector Pin List

3.4 J4 – 1553- 2 - A

J4	FUNCTION
CENTER	+SIGNAL
INNER SHIELD	-SIGNAL
OUTER SHIELD	SHIELD

Table 3-4 – J4 1553- 2 – A Connector Pin List

3.5 J5 – 1553- 2 - B

J5	FUNCTION
CENTER	+SIGNAL
INNER SHIELD	-SIGNAL
OUTER SHIELD	SHIELD

Table 3-5 – J5 1553- 2 – B Connector Pin List

3.6 J6 – IRIG B

J6	FUNCTION
CENTER	+SIGNAL
OUTER SHIELD	SHIELD

Table 3-6 J6 IRIG B Connector Pin List**3.7 J7 – NETWORKS**

J7 Pin	FUNCTION	REMARK	
1	+TX1	TWISTED PAIR	LAN1
2	-TX1		
3	+RX1	TWISTED PAIR	
4	-RX1		
5	SHIELD	CABLE SHIELD	
6	+TX2	TWISTED PAIR	LAN2
7	-TX2		
8	+RX2	TWISTED PAIR	
9	-RX2		
10	SPARE	No Connection	
11	SPARE	No Connection	
12	SPARE	No Connection	
13	SPARE	No Connection	
14	SPARE	No Connection	
15	SPARE	No Connection	
16	SPARE	No Connection	
17	SPARE	No Connection	
18	SPARE	No Connection	
19	SPARE	No Connection	
20	SPARE	No Connection	
21	SPARE	No Connection	
22	SPARE	No Connection	
SHELL	SHIELD	CABLE SHIELD	

Table 3-7 NETWORKS Connector Pin List

3.8 J8 – CONTROL

J8 Pin	FUNCTION
1	DCD
6	DSR
2	RXD
7	RTS
3	TXD
8	CTS
4	DTR
9	RI
5	GND

Table 3-8 CONTROL Connector Pin List**3.9 J9 – RS-232**

J9 Pin	FUNCTION
1	DCD
6	DSR
2	RXD
7	RTS
3	TXD
8	CTS
4	DTR
9	RI
5	GND

Table 3-9 RS-232 Connector Pin List

3.10 J10 – CONSOLE

Pin	Function	Remarks
1	RED	75Ω
6	RED RET	
2	GRN	75Ω
7	GRN RET	
3	BLU	75Ω
8	BLU RET	
4	--	
5	SIGNAL GND	
9	No Connection	+5V FOR DDC
10	SYNC RET	
11	No Connection	
12	No Connection	DDC DATA
13	HSYNC	
14	VSYNC	
15	No Connection	DDC CLK
26	USBC +D	USB
27	USBC -D	
28	USBC,D VCC	
29	USBC, D GND	
30	USBD +D	
31	USBD -D	
32	USBC, D SHIELD	
33	CH3 TX+	LAN3 (from internal Switch)
34	CH3 TX-	
35	LAN SHIELD	
36	CH3 RX+	
37	CH3 RX-	

Table 3-10 Console Connector Pin List

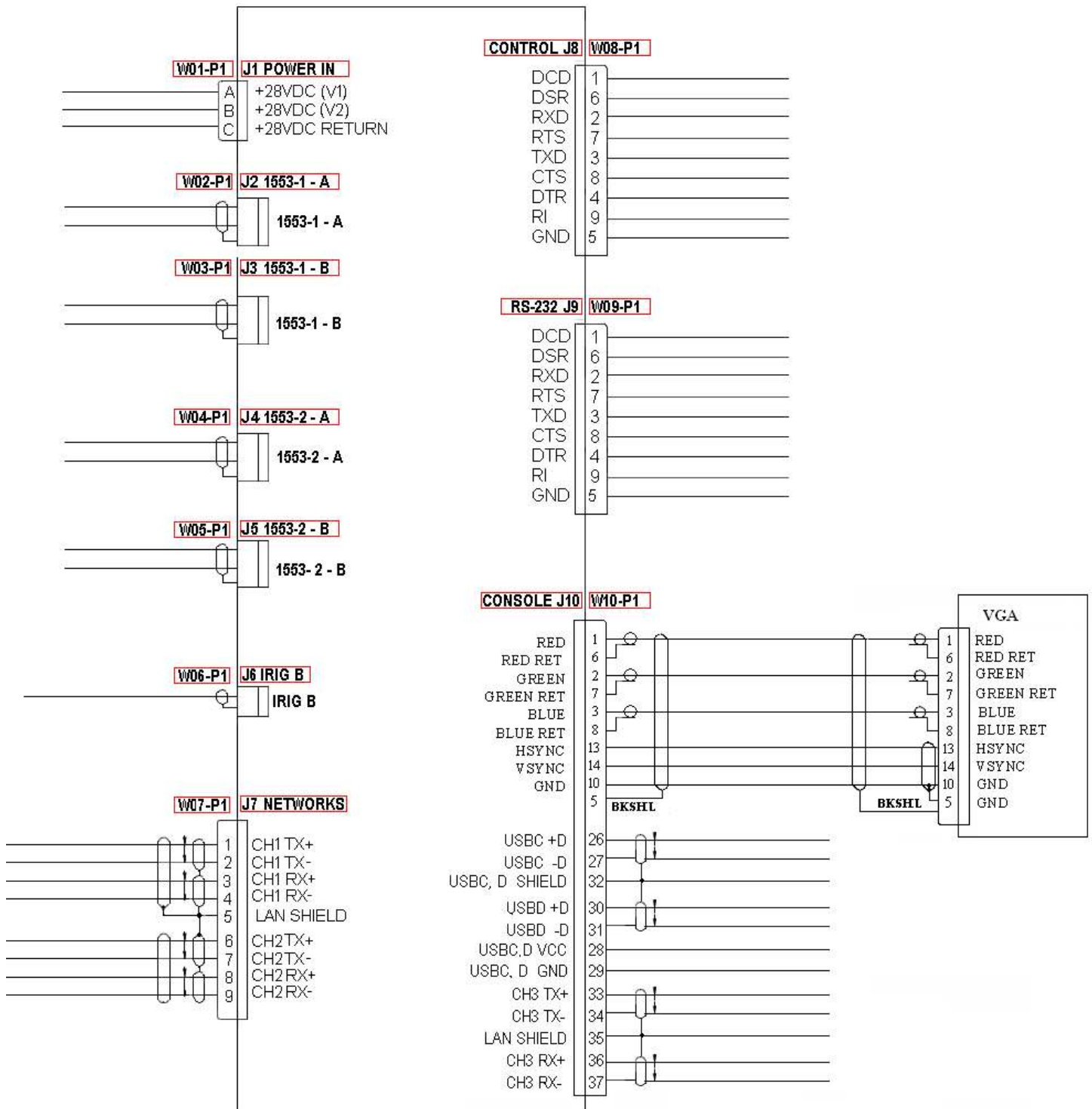


Figure 3-1 CMC-e-600 Connector's Panel INTERFACE DIAGRAM

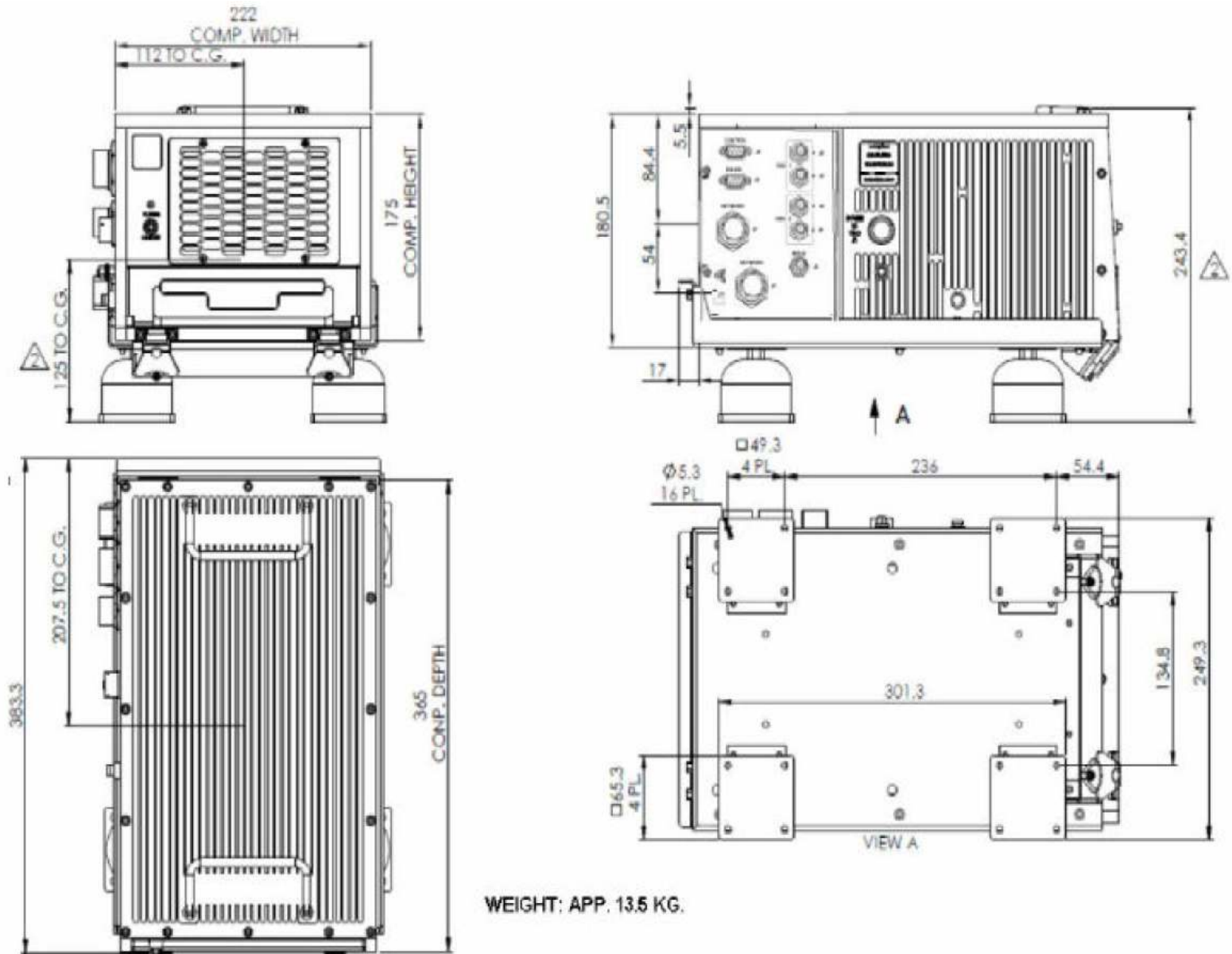


Figure 3-2 CMC-e-600 MECHANICAL ICD