

Table 1 - Document and Product Information

Document Name	CAVU-CDH-FS-OS-v2024.2
Document Description	CDH-FS Option Sheet
Product Name	CDH-FS
Product Description	Satellite Command & Data Handling Full Redundant Subsystem

Table 2 - Customer Information

Company Name				
Contact Name				
Email Address				
Phone Number				
Address				
Mission Launch Window	From		To	

Table 3 - CDH-FS Model Requirements

Model Name	Quantity
Engineering Model	
Qualification Model	
Flight Model	

Table 4 - CDH-FS Digital Inputs Configuration 1 to 90

You can choose Input Voltage Level and Pull Up/Down Resistor for Each Group. Default Configuration is 5V No Pull Up/Down.		
Port Number	Voltage Level	Pull-Up/Pull-Down/None
1~8		
9~16		
17~24		
25~32		
33~40		
41~48		
49~56		
57~64		
65~72		
73~80		
81~86		
87~90		

Table 5 - CDH-FS Digital Outputs Configuration 1 to 100

You can choose Output Voltage Level and Pull Up/Down Resistor for Each Group. Default Configuration is 5V No Pull Up/Down.		
Port Number	Voltage Level	Pull-Up/Pull-Down/None
1~8		
9~16		
17~24		
25~32		
33~40		
41~48		
49~56		
57~64		
65~72		
73~80		
81~88		
89~92		
93~100		

Table 6 - CDH-FS Analog to Digital Converter Configuration (ADC)

When Choosing "Double" that means double redundant and the default topology is multiplexed. Default Configuration is 128CH Double Multiplexed $\pm 10V$ Pull-Down			
Multiplexed (For more than 32CH)		Dedicated Connections	
16CH Single	16CH Double	32CH Single	32CH Double
64CH Single	64CH Double	96CH Single	96CH Double
128CH Single	128CH Double	144CH Single	144CH Double
Input Channel	Voltage Input Range		Pull-Up/Pull-Down/None
1~16			
17~32			
33~48			
49~64			
65~80			
81~96			
97~112			
113~128			
129~144			
145~160			

Table 7 - CDH-FS Digital to Analog Converter Configuration (DAC)

By default, the CDH-FS is equipped with 2CH ladder DAC, if you need more output channels, please select the required number, and configure them.

1CH	2CH	3CH	4CH
5CH	6CH	7CH	8CH
Output Channel	Voltage Output Range		Voltage Buffer
1			
2			
3			
4			
5			
6			
7			
8			

Table 8 - CDH-FS Serial Ports Configuration

The Default Physical Layer for Serial Ports 1~8 is RS485 and for 9~16 is RS422 and there are one RS232 PHY and one UART TTL3.3, pls keep same PHY layers together.

Serial Port Number	Physical Layer
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	

Table 9 - CDH-FS CAN Configuration

The CDH-FS features 5 CAN 2.0 buses. While all are usable, 2 handle internal communication. We recommend 3 for satellite connection. Need more CAN buses, Contact us.			
1	2	3	4
5	6	7	8
Bus	Termination		
CAN1			
CAN2			
CAN3			
CAN4			
CAN5			
CAN6			
CAN7			
CAN8			

Table 10 - CDH-FS NAND Flash Storage Configuration

The CDH-FS comes with Triple 8Gb SLC NAND Flash Chips by Default. We suggest upgrades up to 3x128Gb SLC. Capacities exceeding this limit might require adjustments to design, cost, and lead time.			
3x8Gb SLC	3x16Gb SLC	3x32Gb SLC	3x64Gb SLC
3x128Gb SLC	3x256Gb MLC	3x512Gb MLC	3x1.5Gb MCP
3x6Gb MCP	3x8Gb MCP	3x1024Gb UFS4.0	3x2048Gb UFS4.0

Table 11 - CDH-FS MRAM RAM Configuration

The CDH-FS comes with Default 160Mbits Magneto Resistive RAM in 40bits Wide Data Bus.	
160Mbits	320Mbits

Table 12 - CDH-FS MRAM ROM Configuration

The CDH-FS comes with Default Triple 32Mbits (Total 96Mbits) Magneto Resistive ROM for Code/Data Storage.	
3x32Mbits (96Mbits)	3x64Mbits (192Mbits)

Table 13 - CDH-FS Case Coating

The CDH-FS Structure is Made of AL 7075-T6 with Default Yellow Alodine Coating which is Conductive			
Hardcoat Black Anodize	Yellow Alodine	White Alodine	ENP

Table 14 - CDH-FS Digital PWM/Pulse Output Configuration				
By default, the CDH-FS is Equipped with 10 Pulse/PWM Outputs				
1CH	2CH	3CH	4CH	5CH
6CH	7CH	8CH	9CH	10CH
Output Channel	Output Type		Voltage Level	
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Table 15 - CDH-FS Voltage Input Configuration	
The CDH-FS Default Input voltage Configuration is 5V $\pm$ 5%	
Regulated 5V $\pm$5%	Unregulated 8V to 17V

Table 16 - CDH-FS Case Style Selection		
The CDH-FS Default Case Style is Custom CAVU Casing Presented in the Product Catalog.		
Custom CAVU Casing	OpenVPX 3U 10Slots	OpenVPX 6U 5Slots

Table 17 - CDH-FS Connector Style		
The CDH-FS Default Connector Type is Micro-D. For Custom Mix please contact us.		
Micro-D	Circular	Custom Mix

Table 18 - Transport Casing	
The CDH-FS Default Transport Casing is ABS Foamed Box	
IP67 ABS Hard Case with PU Foam	Molded Insta-Pak Foam Carton

Table 19 - Transport Method		
The CAVU Default Transport Method is Air Express		
Air Express	Pick Up by Customer at CAVU Aerospace UK	Custom (contact us)

Table 20 - CDH-FS Unified Tester

The CDH-FS Unified Tester is a comprehensive hardware and software solution that streamlines testing of all CDH-FS functionalities. This complete package, including essential connectors and cables, enables rapid verification for all your CDH-FS units.

You only need one CDH-FS-UT.

Include CDH-FS-UT in the Order

CDH-FS-UT PC Connection

Sample Snapshot of CDH-FS-UT Desktop App

The screenshot shows the CDH-FS-UT Desktop App interface. On the left is a sidebar with a list of components: ADC, DAC, RS485, CAN, Processor, FPU, RTC, WDT, GPIO, Monitoring, NAND Flash, RAM, ROM, Update, Boot, Synchronize, and Supervisor. Each component has a red question mark icon next to it. At the bottom of the sidebar is a 'Reset All' button. The main area has a top navigation bar with tabs for ADC, DAC, RS485, CAN, Processor & FPU, RTC (Set), RTC (Get), WDT, and GPIO. Below this is another set of tabs: Monitoring, NAND Flash, RAM, ROM, Update code, Synchronize, and Supervisor. The 'Monitoring' tab is selected. The main content area is titled 'Operations' and shows a range of '0 - 4095'. There are dropdowns for 'Chip: All' and 'Start: 0', and a 'Result: !' indicator. Below this is a table with columns: Memory, Reset, Erase block, Program page, Read page, and Bad block. The table has three rows of data, all showing red exclamation marks in the 'Reset', 'Erase block', 'Program page', and 'Read page' columns. Below the table are two sections: 'Write File' and 'Read File'. The 'Write File' section has a file input field, a 'Brows' button, and dropdowns for 'Block: 1050' and 'Page: 20', with a 'Result: !' indicator. The 'Read File' section has dropdowns for 'Block: 1050' and 'Page: 20', a 'Size (bytes): 0' input field, and a 'Result: !' indicator. At the bottom of the main area is a 'Start' button.

Completion Date	
Submitter Name	