

## ► 3U Conduction-Cooled Mechanical Housing Assembly

The 3U Conduction-Cooled Mechanical Housing Assembly (3U CC MHA) is a versatile, rugged enclosure for 3U Single Board Computer (SBC) based embedded systems, as used in varied Airborne, Vehicular and Naval applications. The MHA can be configured for use with standard 3U CompactPCI, VME, VPX or other custom backplanes.

The 3U CC MHA has dual-redundant hot-swap power supplies, connected in a load-sharing topology, capable of operating from a wide AC input range and supplying standard DC output rails. Onboard power line filtering is implemented to limit susceptibility to EMI and RFI.

The modular rear-I/O connector plate can easily be customised to suite any end application. Resilience to shock and vibration can be enhanced using external shockmounts.

The 3U CC MHA is designed for highest levels of resilience to mechanical shock, vibration, temperature, dust and salt fog.

### Features

- support for various 3U backplanes (CompactPCI, VME, VPX, custom, etc.)
- 4 x 3U CompactPCI or VME card slots in the standard configuration
- rugged, lightweight cast aluminium construction
- optional dual-redundant power supplies
- optional external shockmounts
- conduction cooling
- rugged and reliable military circular connectors



**Figure 1 : 3U Conduction-Cooled Mechanical Housing Assembly**

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Specifications		
<b>Mechanical Construction</b>	cast aluminium construction freestanding (with or without shockmounts)	
<b>Card Space</b>	inner card cage 4 x 3U card slot backplane support for hot swap vertical card orientation conduction-cooled cards	
<b>Thermal Management</b>	conduction cooling via finned side panels	
<b>Backplane Type</b>	various standard 3U options (CompactPCI, VME, VPX, Custom, etc.)	
<b>Power Supply</b>	dual-redundant hot swap power supplies (application specific rating) EMI/RFI power line filtering	
<b>I/O Interface</b>	Fully customisable rear I/O area 120 mm x 125 mm	
<b>Switches and Indicators</b>	optional front and rear panel switches and indicators : <ul style="list-style-type: none"> <li>▸ Power Switch</li> <li>▸ Battleshort Switch</li> <li>▸ BIT Status Indicators</li> <li>▸ General purpose military multi-pin circular I/O connectors</li> </ul>	
<b>Surface Finish</b>	Powder coat painted various colours options	
<b>IP Rating</b>	IP-65 (IEC-60529)	
<b>Acoustic Noise</b>	zero	
Characteristics		
Physical	Dimensions	Mass
	Height x Width x Depth 155 mm x 190 mm x 305 mm	5,2 kg ± 0,2 kg

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Environmental Specifications		
Grade	Industrial	Ruggedised
Temperature - Operating - Storage	-15 C to +75 C -50 C to +85 C	-40 C to +85 C -60 C to +125 C
Relative Humidity	0% to 100%	
Shock	60 g for 5 ms, ½ sine 30 g for 10 ms, ½ sine  i.a.w. MIL-STD-810F Method 516.5 Procedure I	
Vibration	5 g (peak) 10 Hz to 100 Hz 0,1 g <sup>2</sup> /Hz at 15 Hz to 2 kHz  i.a.w. MIL-STD-810F Method 516.5 Procedure II	
EMC	RE, CE, RS, CS i.a.w. MIL-STD-461C for military equipment	

**Note :** The three digit code (xxx) in the part number denotes customer specific backplane options.

Part Designations	
Part Designation	Grade
CCII/MHA/xxx/IND	Industrial
CCII/MHA/xxx/RGD	Ruggedised