CUSTOM AND SUPPORT PACKAGE OPTIONS THAT MEET YOUR EXACTING NEEDS

Fast, responsive service on high-quality products
RUGGED HARDWARE
FOR SECURE OPERATION

Collins Aerospace specializes in standard ARINC 404 and 600 mounting trays, as well as custom tray designs, providing the flexibility you need to accommodate system requirements. Our trays are available individually or as part of an Avionics Support Package kit with an ARINC rack connector, MilSPEC connectors, pins, sockets and backshells, tray mounting rails and connector mounting hardware.

With separate product teams dedicated to cables and trays, we make sure you always receive a fast response, short lead time and high-quality product.

TECHNICAL SPECIFICATIONS

Our ARINC 404 and 600 equipment trays are designed to accommodate standard mounting hole shelf locations per ARINC or original equipment manufacturer (OEM) specifications. Front hold-down locations and other dimensions are also per ARINC specifications.

TRAY WIDTH

<table>
<thead>
<tr>
<th>MCU</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>10</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATR</td>
<td>1/4</td>
<td>3/8</td>
<td>1/2</td>
<td>–</td>
<td>3/4</td>
<td>–</td>
<td>1</td>
<td>–</td>
<td>1-1/2</td>
</tr>
<tr>
<td># Mounting holes</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Distance between mounting holes</td>
<td>1.312”</td>
<td>1.312”</td>
<td>1.968”</td>
<td>2.264”</td>
<td>3.280”</td>
<td>2.624”</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

OVERALL LENGTH

<table>
<thead>
<tr>
<th>OVERALL LENGTH</th>
<th>MOUNTING HOLE SPACING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long tray shell</td>
<td>20.08” (510.03 mm)</td>
</tr>
<tr>
<td>Short tray shell</td>
<td>14.95” (379.73 mm)</td>
</tr>
</tbody>
</table>
MECHANICAL ENGINEERING

Our custom-designed mechanical trays are engineered according to specific applications per OEM installation manuals or other guidelines. Designs can be tested, qualified and FAA certified as required, including:

- 3D solid modeling using SolidWorks, CADKey, AutoCAD
- Structural analysis
- Environmental qualification testing
- Custom designs: Low profile, military, specialty, ruggedized, racking units for ARINC 404/600, RTCA-DO160, MIL-STD-810, Boeing or Airbus standards

LRU COOLING REQUIREMENTS

For line replaceable units (LRUs) with cooling requirements, our trays support convective airflow, aircraft forced-air cooling and forced-air cooling with a fan.

- Convective airflow:
  An LRU without external forced-air cooling may require a tray shell with an oval cutout to optimize airflow to cool the LRU.

- Forced-air cooling:
  Metering plates and seals – Air inlet holes in the metering plate allow for airflow regulation. Metering plate seals and baffle plugs (plug bumpers) are supplied with each tray assembly for insertion by the customer to direct airflow as required. For assemblies requiring a fan, we also provide an open metering plate or seal retainer for maximum airflow.
  Fan assemblies and filters – Our equipment trays are designed with options for rear-, side- or bottom-mounted fans and meet ARINC 600 Level (1) or Level (2) cooling requirements. Our fan filter provides high efficiency and low resistance without reducing fan velocity or airflow. The assembly is flame retardant per 8110-3 FAR 25.853 Appendix “F” Part 1(a) (v) and meets ARINC 600-12 ITM 3.5.4.4 Coolant Air Quality requirements. Filter elements are replaceable.
  Air plenum chambers – Trays that need a fan also require a plenum. Our plenums are fastened with corrosion-resistant locking clinch nuts and screws. MIL-A-46146 RTV adhesive/sealant is applied to form an airtight seal.

MATERIAL SPECIFICATIONS

- Aluminum alloy: 5052, 6061 or 2024
- Stainless steel, 300 Series, 17-4 PH standard
- Silicone, SC-1021V Red 56 durometer
- Finish
  - Gold chem-film per MIL-DTL-5541, Type 1, Class 1A
  - Clear Chem-Film per MIL-DTL-5541, Type 2, Class 3
  - Other finishes available by request
- Part marking
  - Per MIL-STD-130
### ARINC 404 assemblies

<table>
<thead>
<tr>
<th>TRAY STYLE (ATR)</th>
<th>W = INSIDE WIDTH (MM)</th>
<th>H = INSIDE HEIGHT (MM)</th>
<th>ARINC 404 CONNECTOR SERIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4</td>
<td>2.39” (60.75)</td>
<td>4.36”/6.88” (110.75/174.75)</td>
<td>DPXA, DPXB, DPX2, DPX3</td>
</tr>
<tr>
<td>3/8</td>
<td>3.69” (93.72)</td>
<td>4.36”/6.88” (110.75/174.75)</td>
<td>DPXA, DPXB, DPX2, DPX3</td>
</tr>
<tr>
<td>1/2</td>
<td>5.01” (127.30)</td>
<td>4.36”/6.88” (110.75/174.75)</td>
<td>DPXA, DPXB, DPX2, DPX3, DPX4</td>
</tr>
<tr>
<td>3/4</td>
<td>7.63” (193.29)</td>
<td>4.36”/6.94” (110.75/176.35)</td>
<td>DPXA, DPXB, DPX2, DPX3, DPX4</td>
</tr>
<tr>
<td>1</td>
<td>10.26” (259.33)</td>
<td>4.36”/6.94” (110.75/176.35)</td>
<td>DPXA, DPXB, DPX2, DPX3, DPX4</td>
</tr>
<tr>
<td>1-1/2</td>
<td>15.40” (391.28)</td>
<td>4.36”/6.94” (110.75/176.35)</td>
<td>DPXA, DPXB, DPX2, DPX3, DPX4</td>
</tr>
</tbody>
</table>

### ARINC 600 assemblies

<table>
<thead>
<tr>
<th>TRAY STYLE (MCU)</th>
<th>W = INSIDE WIDTH (MM)</th>
<th>H = INSIDE HEIGHT (MM)</th>
<th>ARINC 600 CONNECTOR SERIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.10” (27.94)</td>
<td>7.30” (185.42)</td>
<td>Size 1</td>
</tr>
<tr>
<td>2</td>
<td>2.39” (60.75)</td>
<td>7.30” (185.42)</td>
<td>Size 1, 2</td>
</tr>
<tr>
<td>3</td>
<td>3.69” (93.72)</td>
<td>7.30” (185.42)</td>
<td>Size 1, 2</td>
</tr>
<tr>
<td>4</td>
<td>5.01” (127.30)</td>
<td>7.30” (185.42)</td>
<td>Size 1, 2, 3</td>
</tr>
<tr>
<td>5</td>
<td>6.31” (160.27)</td>
<td>7.30” (185.42)</td>
<td>Size 1, 2, 3</td>
</tr>
<tr>
<td>6</td>
<td>7.61” (193.29)</td>
<td>7.36” (186.9)</td>
<td>Size 1, 2, 3</td>
</tr>
<tr>
<td>7</td>
<td>8.91” (226.31)</td>
<td>7.36” (186.9)</td>
<td>Size 1, 2, 3</td>
</tr>
<tr>
<td>8</td>
<td>10.21” (259.33)</td>
<td>7.36” (186.9)</td>
<td>Size 1, 2, 3</td>
</tr>
<tr>
<td>10</td>
<td>12.81” (325.37)</td>
<td>7.36” (186.9)</td>
<td>Size 1, 2, 3</td>
</tr>
<tr>
<td>12</td>
<td>15.41” (391.41)</td>
<td>7.36” (186.9)</td>
<td>Size 1, 2, 3</td>
</tr>
</tbody>
</table>
MECHANICAL COMPONENTS

Shock/vibration isolators

With many shock and vibration isolator styles available, we can cross-reference part numbers to ensure prompt delivery. Isolator features include:

- Effective vibration isolation in all axes
- Compact design
- Standardized sizes and products for most applications
- Customization to meet specific requirements
- Supports static loads from 1 to 80 pounds
- Engineering support beginning with selection analysis

GUIDE PINS

<table>
<thead>
<tr>
<th>GUIDE BLOCK (MT1-6002)</th>
<th>GUIDE BLOCK (MT1-6062)</th>
<th>PANEL MOUNTED (MT1-5003)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy duty block design</td>
<td>Heavy duty block design</td>
<td>Rear panel required</td>
</tr>
<tr>
<td>Spring-loaded guide feature</td>
<td>Optional stainless steel material</td>
<td>Spring-loaded guide feature</td>
</tr>
<tr>
<td>Solid pin design</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

HOLDDOWNS

<table>
<thead>
<tr>
<th>TORQUE-LIMITING HOLD-DOWN (MT1-5005)</th>
<th>SELF-LOCKING HOLD-DOWN (MT1-5001)</th>
<th>THUMBSCREW HOLD-DOWN (MT1-5028)</th>
<th>MODIFIED THUMBSCREW HOLDDOWN (MT1-5047)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designed to ARINC 600 specifications to prevent over-torquing</td>
<td>Adjustable torque</td>
<td>Smaller profile</td>
<td>Smaller profile</td>
</tr>
<tr>
<td>Insertion and extraction features</td>
<td>Standard M85731 body</td>
<td>Non-ratcheting wave spring locking mechanism</td>
<td>Non-ratcheting wave spring locking mechanism</td>
</tr>
<tr>
<td>Flame retardant plastic</td>
<td>Riveted construction</td>
<td>Riveted construction</td>
<td>Lock wire installation holes</td>
</tr>
</tbody>
</table>
ACCESSORIES

Our product line includes hooks and handles; rack connectors are sold outright or as part of Avionics Support Package kits.

HANDLES

• Used to install or remove LRU
• Installed onto front plate

<table>
<thead>
<tr>
<th>P/N</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>THREAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT1-HDL-4</td>
<td>1 ⅛</td>
<td>1 ⅛</td>
<td>¼</td>
<td>1 ⅛</td>
<td>6-32 x ¾</td>
</tr>
<tr>
<td>MT1-HDL-4A</td>
<td>2 1/₁₆</td>
<td>1 ⅛</td>
<td>⅛</td>
<td>3 ⅛</td>
<td>6-32 x ⅛</td>
</tr>
<tr>
<td>MT1-HDL-5</td>
<td>3</td>
<td>1 ⅛</td>
<td>⅛</td>
<td>3 ⅛</td>
<td>8-32 x ⅛</td>
</tr>
<tr>
<td>MT1-HDL-6</td>
<td>4 ⅛</td>
<td>1 ⅛</td>
<td>⅛</td>
<td>4 ¼</td>
<td>8-32 x ⅛</td>
</tr>
<tr>
<td>MT1-HDL-7</td>
<td>6 ⅛</td>
<td>1 ⅛</td>
<td>⅛</td>
<td>6 ⅛</td>
<td>10-32 x ⅛</td>
</tr>
<tr>
<td>MT1-HDL-8</td>
<td>9 ⅛</td>
<td>2 ¼</td>
<td>⅛</td>
<td>9 ⅛</td>
<td>10-32 x ⅛</td>
</tr>
</tbody>
</table>

Material: brass, 410 series; Finish: nickel plated
*Material: alum, 110 series; Finish: gold chem-film

HOOKS

• Secures LRU to mounting tray
• Mounts onto front plate
• Hold-down latches onto j-hook

<table>
<thead>
<tr>
<th>P/N</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>THREAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT1-HDL-1*</td>
<td>.562</td>
<td>-</td>
<td>.182</td>
<td>20 and below</td>
</tr>
<tr>
<td>MT1-HDL-2*</td>
<td>.562</td>
<td>-</td>
<td>.182</td>
<td>Above 20</td>
</tr>
<tr>
<td>MT1-HDL-3</td>
<td>.562</td>
<td>.375</td>
<td>.182</td>
<td>20 and below</td>
</tr>
<tr>
<td>MT1-HDL-3EP</td>
<td>.562</td>
<td>.500</td>
<td>.182</td>
<td>20 and below</td>
</tr>
<tr>
<td>MT1-HDL-3SP</td>
<td>.687</td>
<td>.265</td>
<td>.156</td>
<td>20 and below</td>
</tr>
<tr>
<td>MT1-HDL-3-228</td>
<td>1.50</td>
<td>.335</td>
<td>.156</td>
<td>20 and below</td>
</tr>
<tr>
<td>MT1-HDL-4</td>
<td>.562</td>
<td>.375</td>
<td>.182</td>
<td>Above 20</td>
</tr>
<tr>
<td>MT1-HDL-4EP</td>
<td>.562</td>
<td>.437</td>
<td>.182</td>
<td>Above 20</td>
</tr>
<tr>
<td>MT1-HDL-4EP</td>
<td>.687</td>
<td>.265</td>
<td>.182</td>
<td>Above 20</td>
</tr>
</tbody>
</table>

Rated to 125000 PSI, passivate, MIL-C-172B and ARINC 404/600. Material: SS 410: *Material: SS304

RUGGEDIZED TRAYS

Collins Aerospace designs ruggedized trays to meet higher environmental testing conditions. These trays are ideal for environments with higher vibration and meet increased crash safety.

• Higher yield strength materials
• Increased bend radii throughout and doubler plate thickness
• Completely riveted construction
• Additional rear double with improved support features
• Improved connector plate features
ORDER GUIDES

ARINC 404 configuration guide (ATR)

Tray style
02 = ¼ 03 = ⅜ 04 = ½
06 = ¾ 08 = 1 12 = 1 ½

Equipment length
S = short  L = long

Tray style
02 = 1 03 = 2 04 = 3
06 = 4 07 = 5 08 = 6
10 = 7 12 = 8

Equipment length
SS = short (14.95” overall) SL = long (20.08” overall)

Connector plate height
S = short  T = tall

Connector type
A = DPXA  B = DPXB
2 = DPX2  3 = DPX3
4 = DPX4  5 = DPX2-33

2nd connector type
A = DPXA  B = DPXB
2 = DPX2  3 = DPX3
4 = DPX4  5 = DPX2-33

3rd connector type
A = DPXA  B = DPXB
2 = DPX2  3 = DPX3
4 = DPX4  5 = DPX2-33

Front hold-down
TL = torque limiting
SL = self-locking
WO = without

Rear guide pin
TW = thumbscrew

Fan configuration
0 = No fan
1 = 115 VAC, 400 Hz
2 = 28 VDC
3 = 115 VAC, 60 Hz

Tray shell configuration
D = metering plate and seal
F = flat bottom with oval cutout

Air plenum configuration
A = no plenum
B = rear mounted (long tray)
C = right side (short tray)
D = left side (short tray)
E = bottom (short tray)

Contact us if fan or shock vibration isolators are required. We will generate a part number based on the configuration you select.

ARINC 600 configuration guide (MCU)

Tray style
01 = 1 06 = 6
02 = 2 07 = 7
03 = 3 08 = 8
04 = 4 10 = 10
05 = 5 12 = 12

Equipment length
SS = short (14.95” overall) SL = long (20.08” overall)

Front hold-down
SL = self-locking
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WO = without

Fan configuration
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