



VT894 KEY FEATURES

- μTCA System Platform 19" x 7U x 10.5" deep (with handles 12" deep)
- Full redundancy with dual MicroTCA Carrier Hub (MCH), dual Cooling Units and dual Power Modules
- Up to twelve AMCs: 12 full-size double-width
- Dual star topology
- Radial I2C bus to each AMC
- High-speed routing on 26 layers
- High-speed μTCA connectors (12.5 GHz)
- Redundant FRU information devices
- Redundant Carrier Locator
- 1000W AC Power supply option
- Telco Alarm
- CLK1, CLK2 and CLK3
- No active components on the backplane
- JTAG Switch Module (JSM) Slot
- ESD-Jack at the top front
- Cooling from bottom to top
- RoHS compliant

The VT894 is a 7U μTCA chassis that provides 12 AMC full-size double-width slots that can accept any AMC.1, AMC.2, AMC.3 and/or AMC.4. It provides CLK1, CLK2, and CLK3 to each slot.

The VT894 has full redundancy. It's capable of having redundant MCH, Power Modules, as well as redundant Cooling Units (CU) for high availability. **The VT892 cooling is from bottom to top.**

There is an option for redundant/non-redundant clock per μTCA specification. The CLK3 option can be configured for the Fabric clock as well as Telcom clock.

There is an option for Port 2 and 3 to be directly connected among the adjacent AMCs or to the fabric B (AMC.3 SATA/SAS switch option on the MCH).

The VT894 has a Telco Alarm as well as Redundant FRU information devices and carrier locators.

The VT894 has a JSM slot which routes to each JTAG port of the AMC.

The VT894 routes ports 12-15 and 17-20 between slots.

VadaTech can modify this product to meet special customer requirements without NRE (minimum order placement is

μTCA™

μTCA Chassis with 12 double-width AMC slots

SPECIFICATIONS

| Architecture | | |
|----------------------|---|---|
| | | Height 7U |
| Physical | Dimensions | Width: 19" |
| | | Depth 10.25" without the handles and 12" with the handles |
| Type | μTCA Chassis | Twelve AMC.0 slots |
| Standards | | |
| AMC | Type | AMC.0, AMC.1, AMC.2, AMC.3, and AMC.4 |
| μTCA | Type | Telco Alarm, Dual MCH, Dual Power Module and Dual Intelligent Cooling units |
| Configuration | | |
| Power | VT894 | 1000W supply |
| | | 110-240VAC with frequency from 47-63Hz |
| Environmental | Temperature | Operating Temperature: 0° to 55° C |
| | | Storage Temperature: -40° to +70° C |
| | Altitude | 10,000 ft. Operating |
| | | 40,000 ft. Non-Operating |
| Relative Humidity | 5 to 95 percent, non-condensing | |
| Conformal Coating | | Humiseal 1A33 Polyurethane |
| | | Humiseal 1B31 Acrylic |
| Other | | |
| MTBF | MIL Hand book 217-F@ TBD Hrs. | |
| Certifications | Designed to meet FCC, CE and UL certifications where applicable | |
| Standards | VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards | |
| Compliance | RoHS and NEBS | |
| Warranty | Two (2) years | |
| Trademarks and Logos | The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedTCA™ and the AdvancedMC™ logo are trademarks of the PCI Industrial Computers Manufacturers Group. All rights reserved. Specification subject to change without notice. | |

Table 1. Comparison chart between VadaTech 7U VT894x series

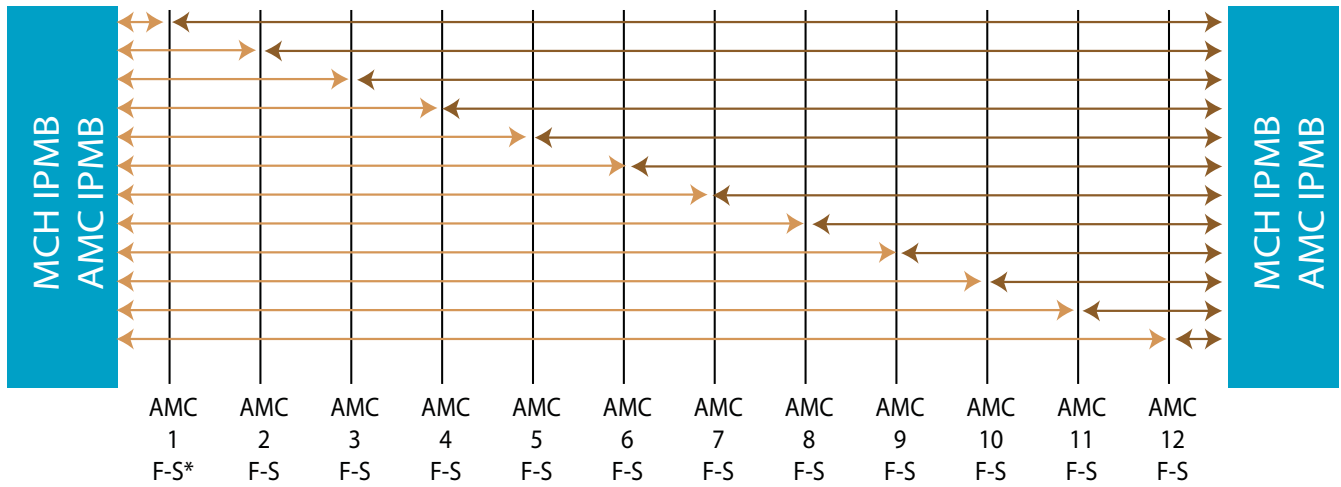
| Model | No. of MCH Slots | No. of Power Module Slots | JSM Slot | Telco Alarm | No. of AMC FH* Slots | No. of AMC MH* Slots | No. of AMC CH* Slots | Dual Redundant Fan Tray | 1000W Power Supply |
|---------|------------------|---------------------------|----------|-------------|----------------------|----------------------|----------------------|-------------------------|--------------------|
| VT890 | 4 | 4 | Yes | Yes | 8 | 16 | 0 | Yes | Yes |
| VT891 | 2 | 2 | Yes | Yes | 12 | 0 | 0 | Yes | Yes |
| VT894** | 2 | 2 | Yes | Yes | 12 | 0 | 0 | Yes | Yes |

*FH (Full-Height), MH (Mid-Height), CH (Compact-Height)

**VT894 routes ports 12-15 and 17-20 between slots

IPMB Bus

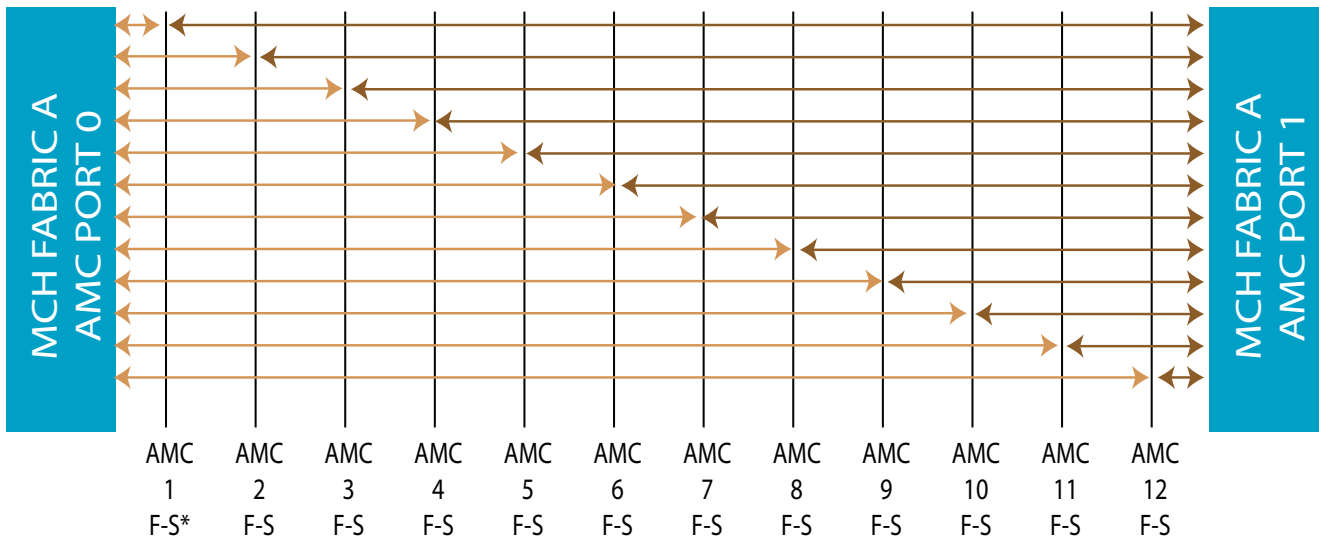
The I2C bus from each AMC is routed radially to each of the MCH.



*F-S (Full-Size)

FIGURE 1. VT894 Topology for AMC I2C Bus

Ports 0 and 1

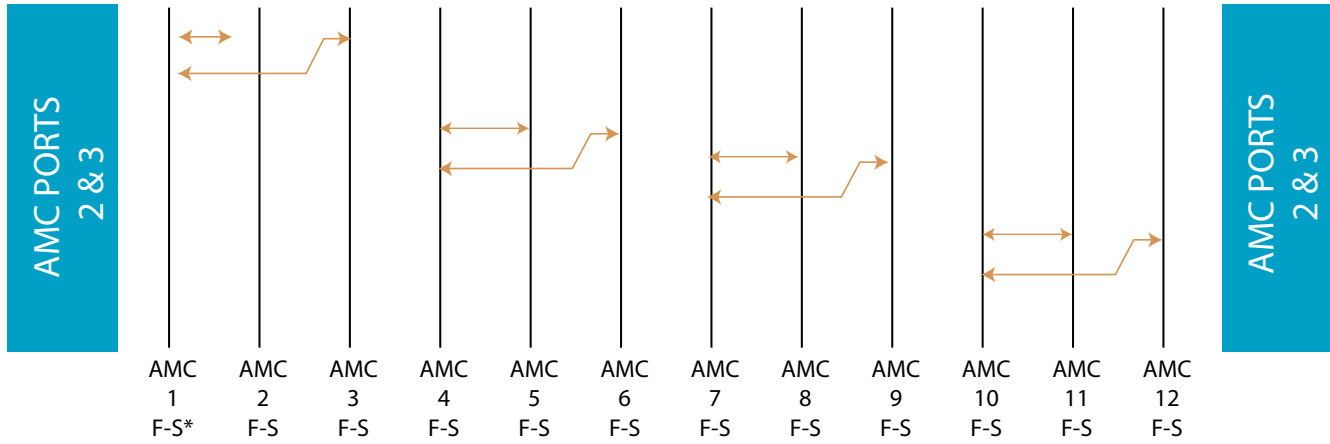


*F-S (Full-Size)

FIGURE 2. VT894 Topology for AMC Ports 0 and 1

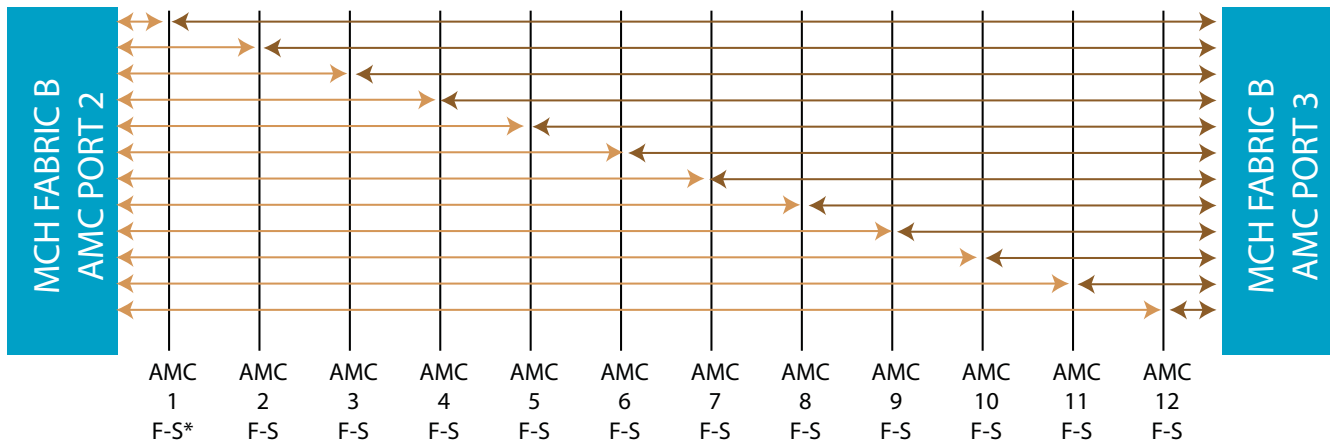
Ports 2 and 3

Topology for Ports 2 and 3 with direct connections among the slots (ordering option)



*F-S (Full-Size)

Topology for Ports 2 and 3 to MCH (ordering option with redundant CLK)

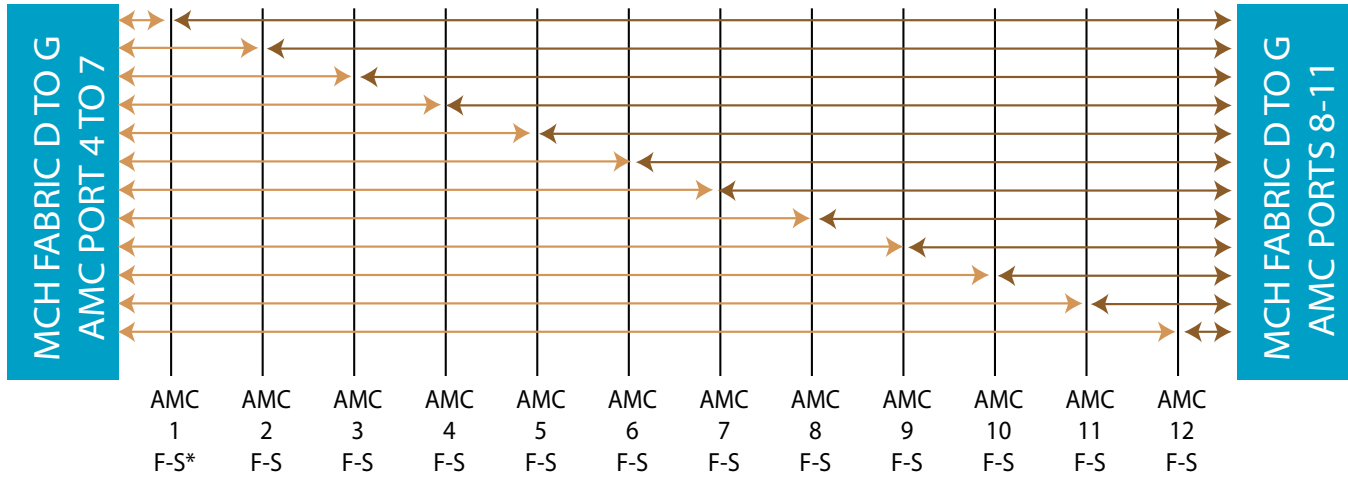


*F-S (Full-Size)

FIGURE 3. VT894 Topology for AMC Ports 2 and 3

When CLK3 is non-redundant, Fabric B will be partially provided only on ports 1 to 6. CLK3 is routed on Fabric B on ports 7 to 12.

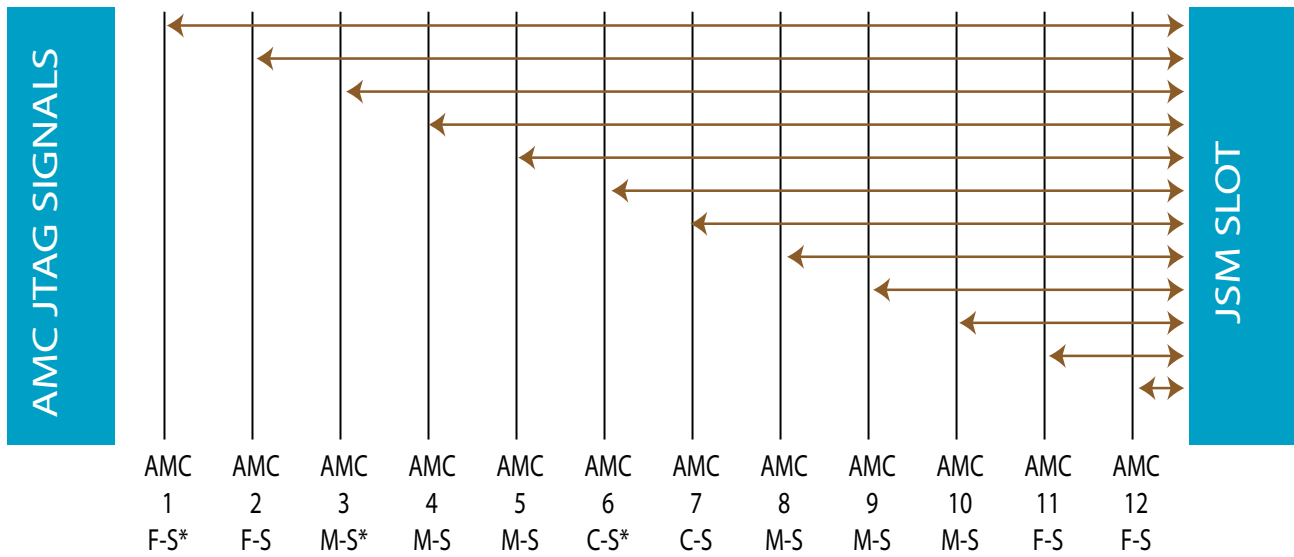
Ports 4-7 and 8-11



*F-S (Full-Size)

FIGURE 4. VT894 Topology for AMC Ports 4-7 and 8-11

FIGURE 5. VT894 Topology for JSM



F-S (Full-Size), M-S (Mid-Size), C-S (Compact-Size)

Ports 12-15 and 17-20

These ports are routed per diagram below.

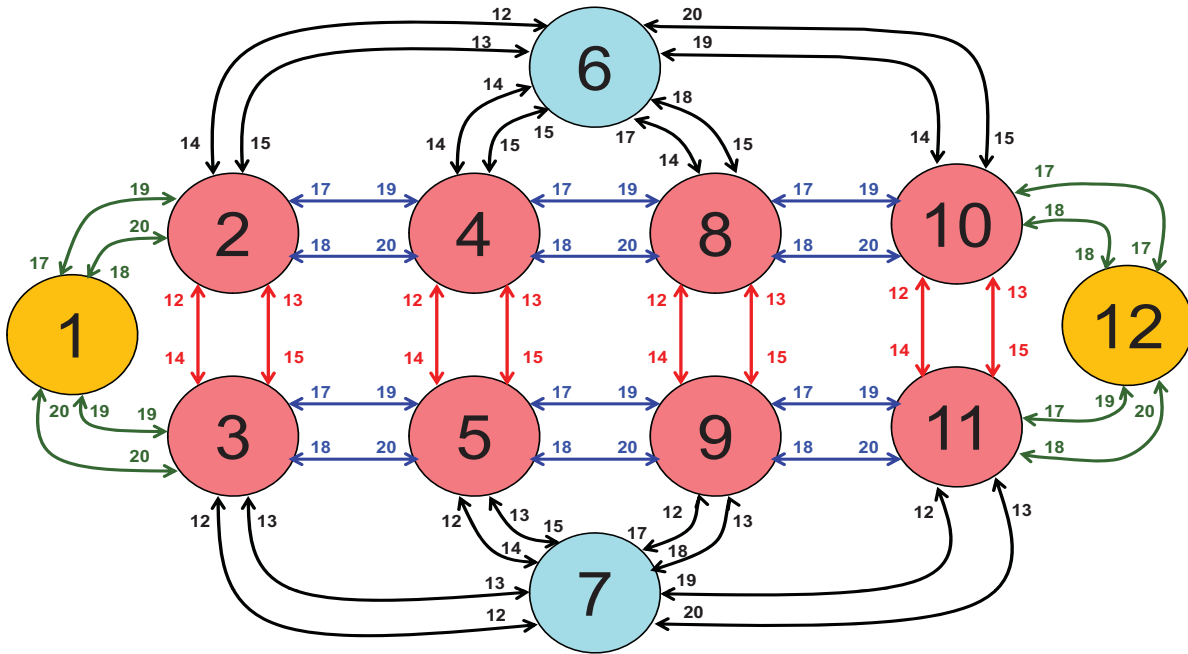


FIGURE 5. VT894 Topology for Ports 12-15 and 17-20

Clock Options

The μTCA specifies three clocks: CLK1, CLK2, and CLK3. It defines non-redundant and redundant clock networks. The non-redundant clock network connects CLK1, CLK2 and CLK3 of one MCH point-to-point to CLK1, CLK2 and CLK3 of the AMCs. CLK3 can follow the Telco clock or become the Fabric clock per AMC.1 specification. Fabric B will be partially provided only on ports 1 to 6 CLK3 is routed on Fabric B on ports 7 to 12.

The redundant clock network option connects the CLK1 of MCH1 and CLK1 of MCH2 point-to-point to each of the CLK1 and CLK3 respectively of each AMC.

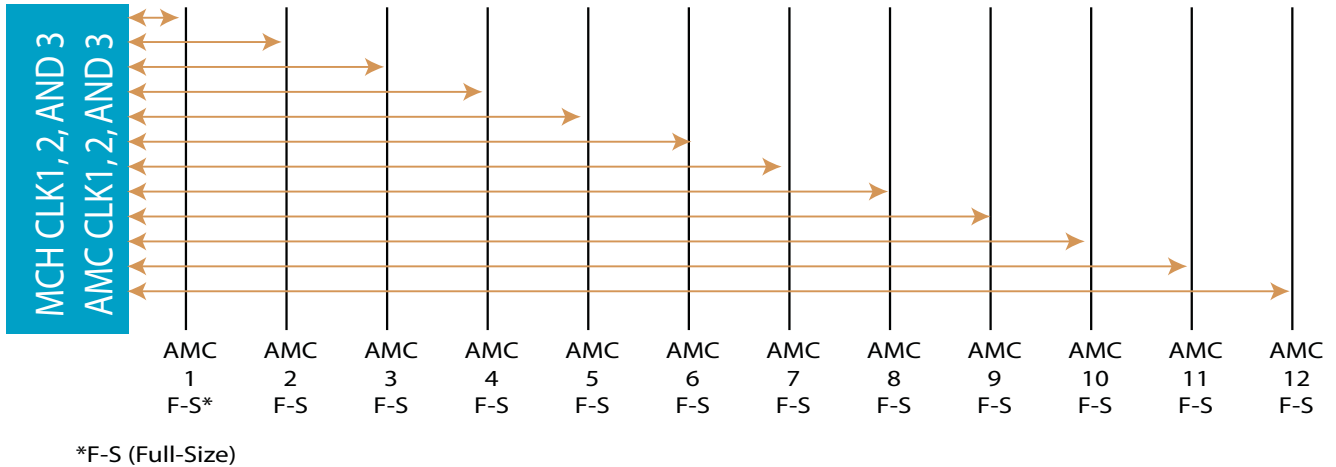


FIGURE 6. VT894 non-redundant clock Topology, CLK3 can run as Fabric Clock (i.e. PCIe clock)

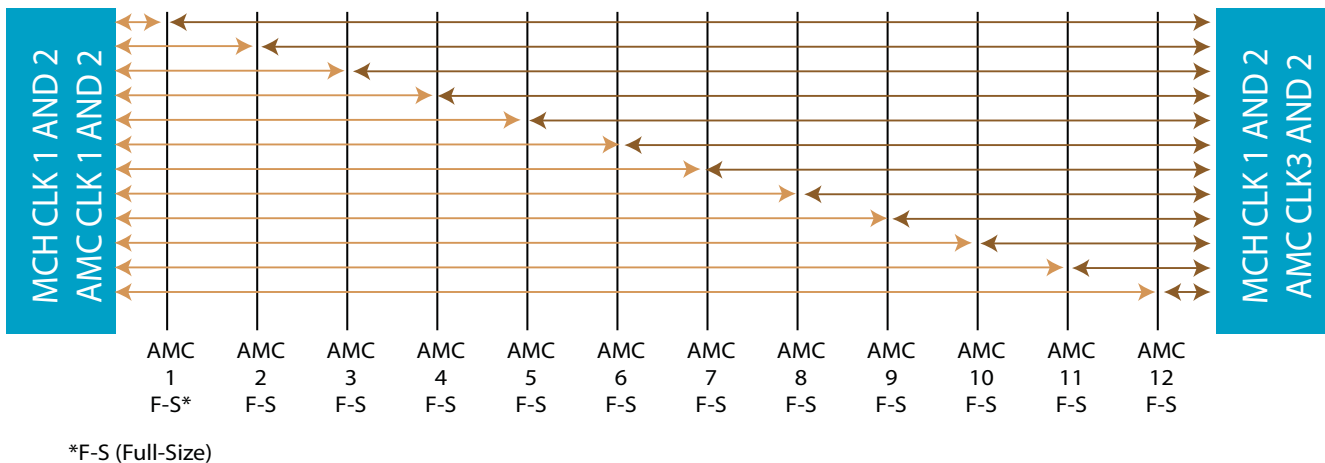


FIGURE 7. VT894 redundant clock Topology

Power supply

The VT894 has an option for a 1000W power supply. The input voltage is from 110-240 VAC (frequency from 47-63 Hz). The VT894 provides -48V connectors to the front of the chassis to power the Dual Power Modules. The AC input is from the back of the chassis. The AC supply has an on/off switch on front top center of the chassis.

Cooling and Temp Sensors

The VT894 has Dual intelligent Cooling Units. This redundancy allows fail-safe operation in case one of the cooling units becomes non-operational. The cooling airflow is from bottom to top. The removable Air Filter has a switch to detect its presence and can be monitored for when it needs to be replaced.

There are a total of 12 Temperature sensors in the chassis that monitor the intake and the outtake air temperature throughout the chassis.

Telco Alarm

The VT894 provides Telco Alarm functionality to alert about any anomaly within the chassis. The Telco Alarm is provide via a Micro DB-9 as well as LED's in the front to show any anomaly. The Telco Alarm has its own dedicated slot.

FRU Information and Carrier Locator

The VT894 has dual redundant FRU information and Carrier Locators. The Carrier Locator is assigned by mechanical dip switches which are easily accessible. The MCH reads the Locator via its private I2C bus.

No active components

Unlike other μTCA chassis in the market, the VT894 has no active components on its back plane. This allows ease of serviceability.

End to End Integrated Solution

VadaTech has the entire μTCA infrastructure: MicroTCA Carrier Hub (product UTC001, UTC002 or UTC004) and Power Module (UTC010, ~800W). Please consult the appropriate data sheet to obtain more information.

VadaTech can integrate any of its over 75 AMC modules, customer AMCs, as well as other third party AMCs into the chassis and deliver a complete system for deployment. Please contact VadaTech Sales for more information.

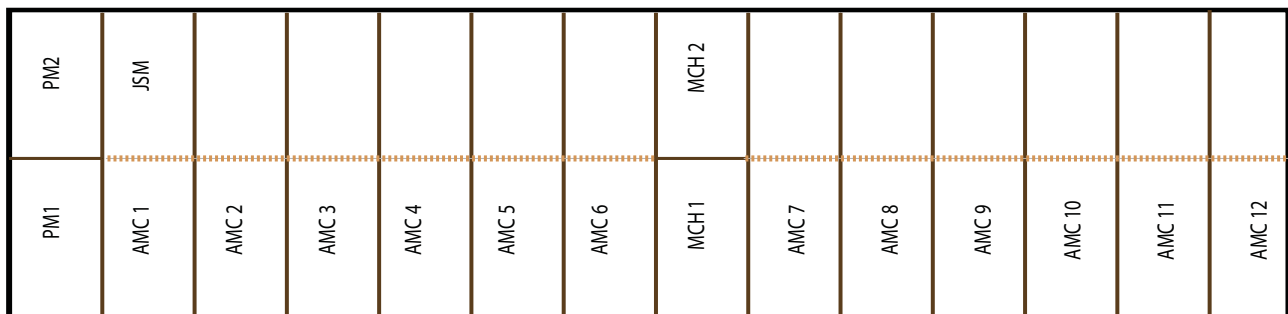


FIGURE 8. VT894 Slot locations

μTCA Chassis with 12 double-width AMC slots

ORDERING OPTIONS

VT894 - ABC - 000 - 00J*

A = AC Power supply

- 0 = None
- 1 = 1000W

B = Ports 2 and 3

- 1 = Direct connection per Fig. 3
- 2 = To MCH

C = CLK3

- 1 = Non-redundant (Telco)
- 2 = Non-redundant (Fabric CLK)
- 3 = Redundant

J = Conformal Coating

- 0 = None
- 1 = Humiseal 1A33 Polyurethane
- 2 = Humiseal 1B31 Acrylic

*VadaTech has an MCH (UTC001, UTC002 and UTC004) and Power Module (UTC010, UTC012 and UTC013) as well as over 75 AMC modules. Contact your sales representative for an end-to-end integrated solution.



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