

1U μ TCA Chassis, 10 AMC, 10GbE, 1100W – VT848

1U μ TCA Chassis, 10 AMC



KEY FEATURES

- 1U chassis platform
- Ten mid-size AMC slots
- Integrated MCH
- AMC.2 and AMC.3 compliant
- 10GbE/1GbE Fabric
- 10GbE on ports 4-7 and 8-11
- GbE on ports 0 and 1
- Telco Alarm and Carrier Locator
- Optional JTAG Switch Module (JSM)
- Telecom/GPS Clock on TCLKA, TCLKB, TCLKC and TCLKD and Fabric Clock on FCLK
- Redundant 1+1 Power supply (1100W each)
- Redundant Cooling Units (CU)
- Removable Power supply, Air Filter and Fan Trays
- IPMI 2.0 compliant
- RoHS compliant

Benefits of Choosing VadaTech

- Ten AMC slots in a 1U chassis with integrated MCH
- Dual redundant AC or DC power supplies
- Electrical, mechanical, software, and system-level expertise in house
- Full ecosystem of front and rear boards, enclosures, specialty modules, and test/dev products from one source
- AS9100 and ISO9001 certified company

The VT848 is a 1U μ TCA chassis that provides ten mid-size AMC slots that supports 10GbE on ports 4-7 and 8-11. It provides FLCK, TCLKA, TCLKB, TCLKC and TCLKD to each AMC. The VT848 has six egress ports via SFP+ connectors for 10 GbE in addition to three 10/100/1000 ports for the GbE.

The VT848 has redundant power supplies as well as redundant Cooling Units for high availability. The power supplies, Air Filter and Fan Trays are all hot-swappable. The air flow is from right to left with some rear exhaust. The air filter is removable from the front.

The chassis has an optional JTAG Switch Module (JSM) per the μ TCA specification. This provides transparent communication between the front JTAG port and the selected AMC device.

The VT848 has an integrated MCH. It implements IPMI management, FRU management, and shelf environment management for power, thermal, E-keying, etc.

VadaTech can modify this product to meet special customer requirements. Contact us to discuss your application.

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POWER SUPPLIES

The VT848 provides single or dual redundant AC or DC power supplies located in the rear of the chassis. The AC versions are 1100W with 110 to 240V AC (frequency from 47 Hz to 63 Hz) input voltage. The DC versions are 936W with -36V to -75V input voltage.

COOLING AND TEMPERATURE SENSORS

The VT848 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.

MANAGED LAYER 2 SWITCHS

The 10GbE/1GbE are fully Layer 2 managed switch fabric routes dual 10GbE/1GbE to each of the AMC slots.

TELCOM, GPS AND FABRIC CLOCKS

The μ TCA specification defines a set of clocks for Telecom and non-Telecom applications. The VadaTech VT848 has the most sophisticated clocking distribution in the market to meet the most stringent requirements such as wireless infrastructure, high speed A/D, etc. The VT848 has three types of clocks defined:

- Telecom clock
- GPS clock
- Fabric clock

TELCO ALARM

The VT848 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 LEDs in the front to show any anomaly.

FRU INFORMATION AND CARRIER LOCATOR

The VT848 has dual redundant FRU information and Carrier Locators which can be set so that each chassis has a unique ID.

SCORPIONWARE™ SOFTWARE

VadaTech's Scorpionware software can be used to access information about the current state of the Shelf or the Carrier, obtain information such as the FRU population, or monitor alarms, power management, current sensor values, and the overall health of the Shelf. The software GUI is very powerful, providing a Virtual Carrier and FRU construct for a simple, effective interface.

INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS

VadaTech has a full ecosystem of ATCA and μ TCA products including chassis platforms, shelf managers, AMC modules, Switch and Payload Boards, Rear Transition Modules (RTM), Power Modules, and more. The company also offers integration services as well as pre-configured Application-Ready Platforms. Please contact VadaTech Sales for more information.

REAR VIEW



CHASSIS CONFIGURATION

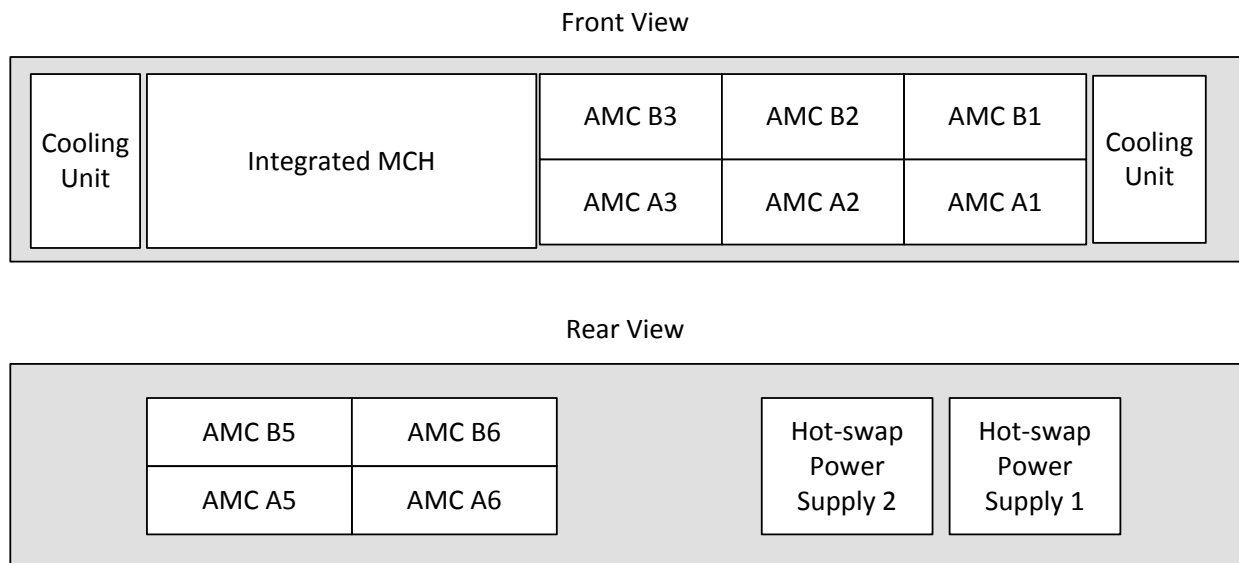


Figure 1: VT848 Chassis Layout

FRONT PANEL

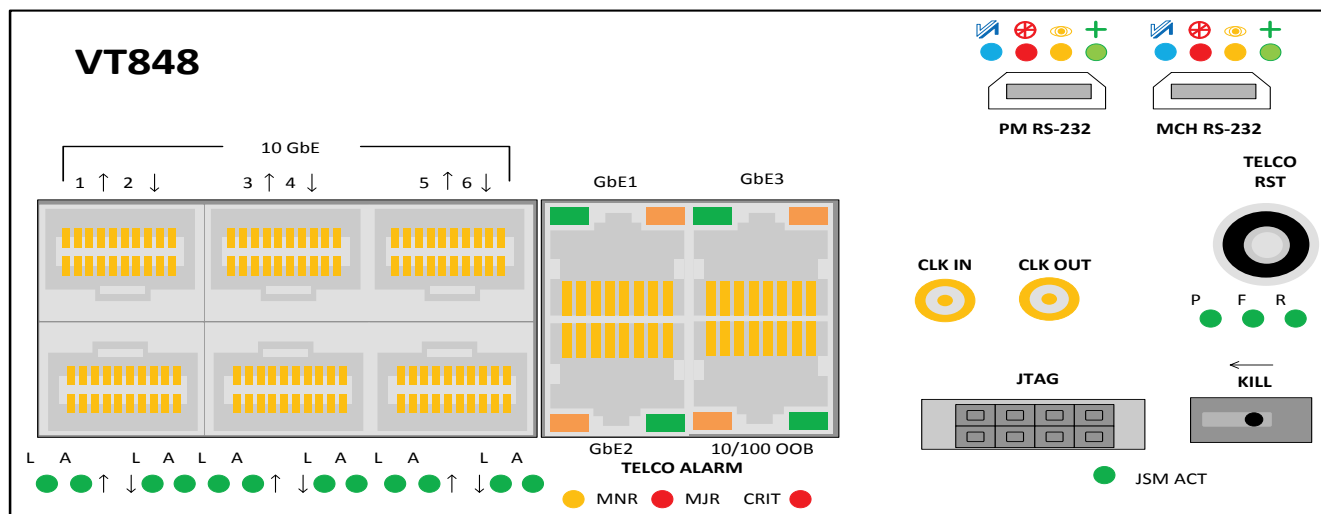


Figure 2: Integrated MCH Front Panel (Sample representation)

BACKPLANE CONNECTIONS

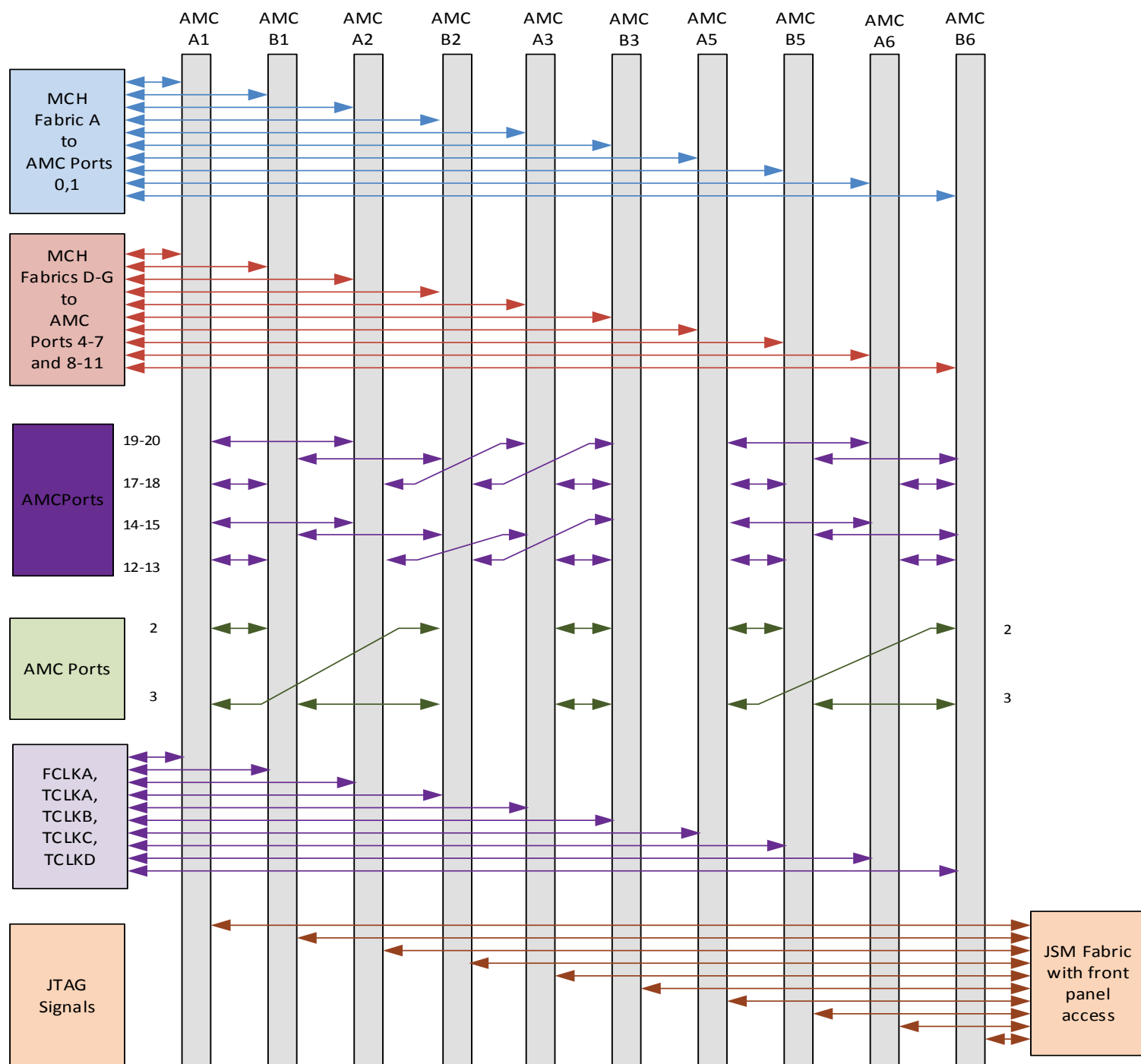


Figure 3: Backplane Routings of Clocks

BLOCK DIAGRAM

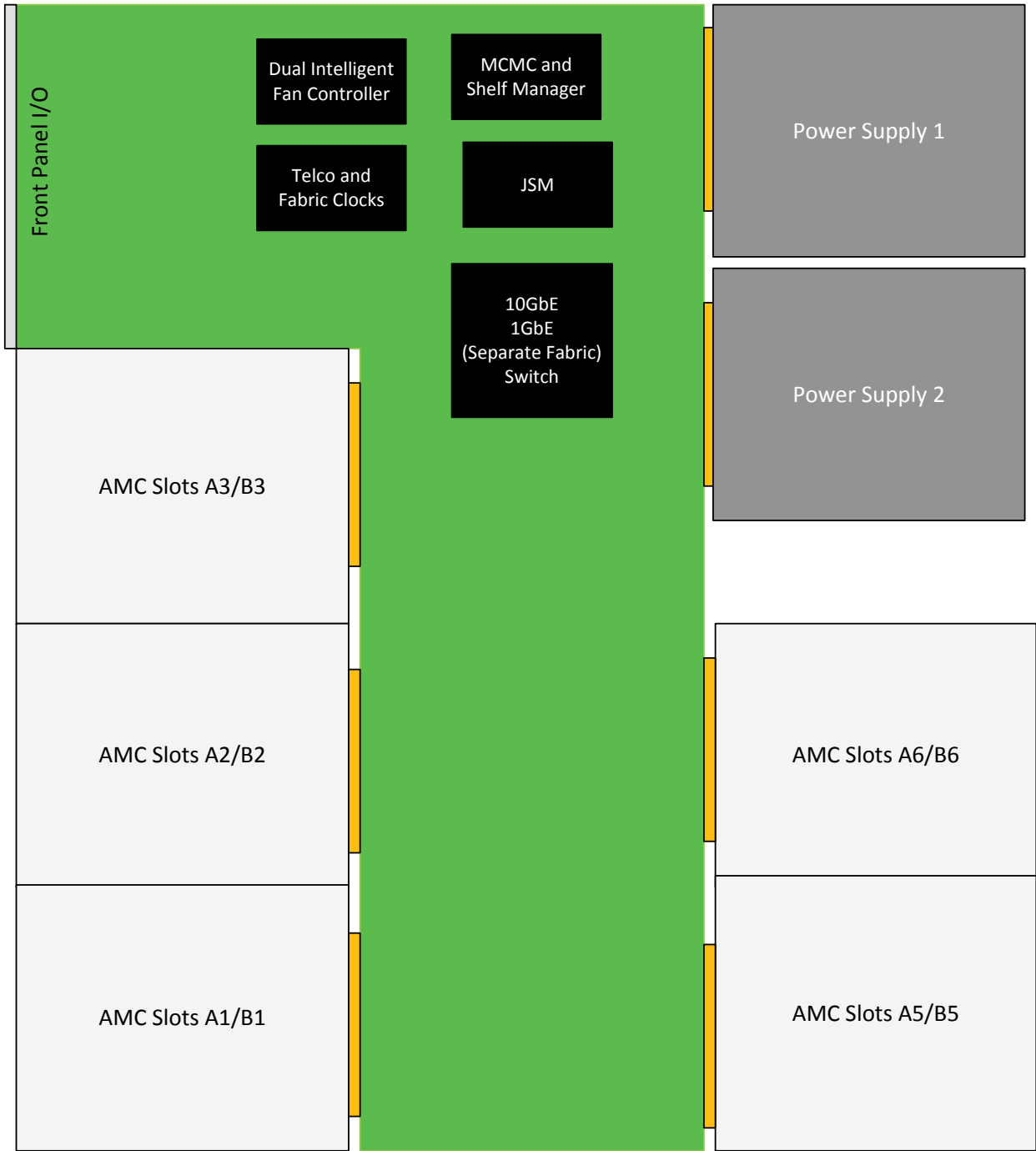


Figure 4: Functional Block Diagram

SPECIFICATIONS

Architecture		
Physical	Dimensions	Height 1U
		Width 19"
		Depth 23.6"(600 mm)
Type	μ TCA Chassis	10 AMC.0 mid-size slots (or 5 full-size slots), Telco Alarm, MCH, dual Power Module and dual intelligent Cooling units
Standards		
AMC	Type	AMC.0, AMC.2 and AMC.3
μ TCA	Type	MicroTCA.0
GbE	1000-BX	Dual GbE SerDes per AMC
10 GbE	Lanes	Each AMC slot has dual XAUI interface routed
Telco Clock	MLVDS	Per AMC.0 specifications for TCLKA, TCLKB, TCLKC and TCLKD
Fabric Clock	HCSL	Per AMC.1 100 MHz HCSL
Module Management	IPMI	IPMI version 2.0
Configuration		
Power	VT848	1100 W, 110V to 240V AC with frequency from 47 to 63 Hz
Environmental	Temperature	Operating Temperature: 0° to 55° C
		Storage Temperature: -40° to +70° C
	Vibration	0.5Gs RMS, 20 Hz to 20000 Hz random (operational); 6Gs RMS (non-operational)
	Shock	30Gs on each axis
Conformal Coating	Relative Humidity	5 to 95 percent, non-condensing
		Humiseal 1A33 Polyurethane (Optional)
		Humiseal 1B31 Acrylic (Optional)
Front Panel	Ports	6 SFP+, 4 RJ-45, 2 RS-232,
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 Disclaimer	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	

ORDERING OPTIONS

VT848 – ABC – D00 – GHJ

A = Management Software

- 1 = MCMC
- 2 = MCMC and Shelf Manager

B = Telecom/GPS Clock

- 0 = None
- 1 = Telecom, TCXO*
- 2 = GPS TCVCXO** 30.72MHz**
- 3 = GPS TCVCXO** 10.00MHz**
- 4 = Clock Distribution only
- 5 = Reserved

C = JSM

- 0 = None
- 1 = Included

D = SFP+ Transceivers (6 total)

- 0 = None
- 1 = 10GBase-SR
- 2 = 10GBase-LR

G = Power Supply***

- 0 = Single AC 1100W
- 1 = Dual AC 1100W
- 2 = Single DC -36V to -75V (900W)
- 3 = Dual DC -36V to -75V (900W)

H = Operating Temperature

- 1 = Commercial
- 2 = Industrial

J = Conformal Coating

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

* The Crystal Oscillator is Stratum-3; for lower cost solutions contact VadaTech Sales.

** Frequencies from 8 MHz to 52 MHz are available.

*** When installing two power supplies they will run as redundant when the total power demand is less than a single supply.

RELATED PRODUCTS



**AMC515 Virtex-7
FPGA**



**AMC534
100G FPGA**



**AMC626
Storage Module**

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