

Fortis™ R-class HPEC Systems**Rugged Rack-Mountable Servers for Secure and Reliable Edge Computing**

- VMware vSphere® certified for secure virtualization
- Fanless and vent-free 19" ruggedized enclosure
- Designed for high reliability in extreme environments
- Modular and customizable to meet program-specific requirements
- Commercial off-the-shelf (COTS) technology for cost-effective flexibility

The Dynatem Fortis™ family is a modular and scalable line of High Performance Embedded Computing (HPEC) systems for use in compute and data intensive mobile and edge of network applications. The rugged and compact Fortis family leverages commercial-off-the-shelf (COTS) technology to enable data center performance in applications that are size, weight and power (SWaP) constrained. The Fortis product family offers an ideal solution for large scale data acquisition and real-time data processing in mobile manned/unmanned land, sea or air platforms.

Fortis R-class HPEC servers bring data center intelligence and processing closer to where the data is created. The rugged, standards-based 19" rack mount design makes it a reliable and cost-effective choice for mobile and edge applications. With a fanless, vent-free chassis, soldered down CPUs, conformal coating, key-locked storage bays, and high reliability components, R-class servers are built to withstand harsh conditions, including shock and vibration and extreme temperatures.

Based on standard COM Express technology, R-class servers are available in a range of high performance configurations with flexible CPU, power supply, memory, storage and I/O subsystem options. With four (4) mini-PCIe slots for expansion, systems can easily be customized and certified with options such as 1553, ARINC, AIO/DIO, etc. to meet specific application or program requirements.

R-class systems are available with VMware vSphere® virtualization technology for remotely securing, monitoring and managing the edge infrastructure. This boosts device and data management capabilities, enables operational analytics, and enhances system security—ultimately extending the data center to the edge.

Fortis™ R-class HPEC Systems

System Specifications	
CPU Options	Dual Core Celeron 3955U 2.3GHz; Dual Core i7-6600U 2.6GHz; Quad Core i5-6442EQ 1.9GHz; Quad Core i7-6822EQ 2.0GHz; Quad Core Xeon D-15XX
Memory	Up to 16GB DDR3L: Celeron 3955U, Core i7-6600U Up to 32GB DDR4: Core i5-6442EQ, Core i7-6822EQ Up to 24GB DDR4 ECC: Xeon D
Storage	One (1) mSATA SSD Drive One (1) Removable Drive Bay for up to Two (2) 2.5" SATA Drives with Key Lock Software RAID 0, 1 (Option available for HW RAID Controller) One (1) SDHC/SDXC Card Slot: UHS-1 50MB/s max (Service Panel)
Display	One (1) Mini DisplayPort (Service Panel)
I/O Interfaces	Two (2) 10/100/1000Mbps Auto Sensing IEEE 1588-M12 X-coded Connector Two (2) USB Host 2.0 Noise and Surge Protected (Service Panel) One (1) Serial Console TTL (Service Panel)
Radio Interfaces	Cellular: Up to Two (2) LTE Cat 4 Modems GPS: Available Option Wireless: 802.11 a/b/g/n, BLE 4.0 External Antennas: Up to 4 SMA Cellular (LTE Diversity: 2 Tx, 2 Rx); 1 SMA GPS; Up to 2 RSMA Wi-Fi/BT (Wi-Fi Diversity: 1 Tx, 1 Rx) SIM Slot: Up to Three (3) 2FF (Mini) Dual-SIM Support for up to 3 Modems
Other	RTC with SuperCAP (2 Month Retention @25°C) Optional TPM 2.0 Temperature Sensors (Optional Accelerometer) LEDs: One (1) Power, One (1) SATA Activity, Four (4) Programmable
Expandability	Up to Four (4) Full/Half Size Mini PCIe Slots (PCIe/USB/mSATA)
Power	Input: 24VDC or 110VDC Isolated EN50155 S2 Consumption: 80W Max
Environmental	Operating Temp: -25 to +70°C (Celeron and Core I CPUs); -40 to +70°C (Xeon D CPUs) Storage Temp: -40 to +85°C
Mechanical	Fanless and Vent-Free Steel Enclosure Ingress: IP-40 Dimensions: 483 x 313 x 44 mm / 19 x 12.3 x 1.7 in (W x D x H) Weight: ~7Kg /15lbs
Software	CentOS 7.3, Windows 10 IoT Enterprise' VMware vSphere® Certified

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Since 1981, Dynatem has been a trusted supplier of rugged and secure mission-critical solutions for defense and aerospace applications. We are proven experts in designing and building rugged, small form factor technology products for use in harsh environments. Dynatem solutions can be found in mission-critical defense systems around the world—powering airborne, ground and shipboard deployments.