

BASELAYER **EDGE**TM



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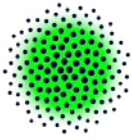
EDGE HPC

XC Series and XA Series Data Module

The EDGE HPC Data Module is designed to meet high power density requirements for both the HPC and Web Scale environments while enabling adaptive scalability in single or multi-module configurations as compute demands changes.



❖ Chilled Water Configuration Shown



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BASELAYER EDGE HPC XA10/15 Data Module



HIGHLIGHTS

Delivers up to 800kW of Critical IT Power and Cooling for up to twenty (20) 52U racks @ N.

Engineered to meet NEMA 4 compliance standards for deployment in all global environments.

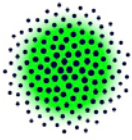
Ships configuration tested from the factory with RunSmart Embedded providing access to key module sensors and controls via a web-based server.

Power and cooling redundancy thresholds are configurable through BASELAYER RunSmart™ OS.

SPECIFICATIONS

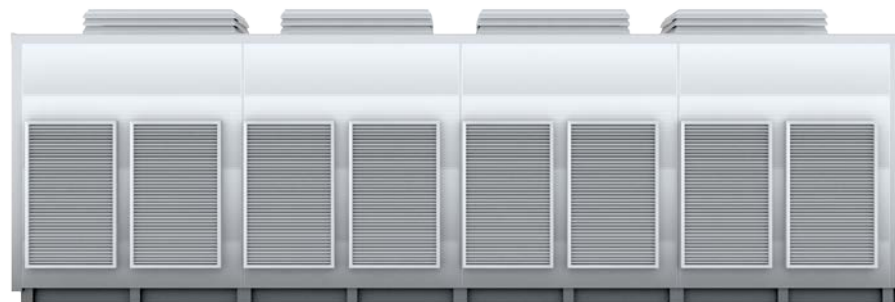
Exterior Dimensions US (Metric)	Length	42' 8" (13.00m)
	Width	24' 6" (7.47m)
	Height	13'3" (4.03m)
Interior Tech Space Dimensions US (Metric)	Length	41' 8" (12.70m)
	Width	11' 0" (3.36m)
	Height	9' 4" (2.84m)
Estimated Module Shipping Weight US (Metric)	57,000 lbs (25,855 kg) Includes both IT and Cooling Blocks (IT gear not included)	
Number of Standard Cabinets	(20) 24" (609.6mm) Cabinets (16) 30" (762.0mm) Cabinets	
Rack U	Up to 52U	
Voltage/Frequency	XA10: 480 V, 3 Phase, 4 Wire, 60Hz XA15: 400 V, 3 Phase, 3 Wire, 50Hz	
Power Distribution (IT)	Up to 800A per Busway (2X) (each Busway A and each Busway B)	
Cooling Mechanics	Outside Air with Evaporative Media	
Heat Removal	10 Fans with Evaporative Media	
Leak Detection	Strip Leak Detection (4 total)	





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SYSTEM PERFORMANCE

* Maximum kW noted references the XA15 configuration

System PUE Range As low as 1.05 (Dependent upon Environmental and Operational Conditions)

Maximum Module Capacity	Maximum Available kW
@ N	800kW MAX CAPACITY @ 30° ΔT
@ N+1	800 kW MAX CAPACITY @ 30° ΔT
@ 2N	400kW MAX CAPACITY @ 30° ΔT

Maximum Module Density/Rack		
@ N	40.0 kW/rack: (20) 24" racks	50.0 kW/rack: (16) 30" racks @ 30° ΔT
@ N+1	40.0 kW/rack: (20) 24" racks	50.0 kW/rack: (16) 30" racks @ 30° ΔT
@ 2N	20.0 kW/rack: (20) 24" racks	20.0 kW/rack: (16) 30" racks @ 30° ΔT

Access Control (Options Available)

Control

- Compartmentalized Architecture
- Role-based Access Control
- Layers of Physical & Logical Protection
- Separate Tech & Support Space Access

Fire System

Dedicated Fire System Dedicated 4-wire loop to signaling devices and initiating devices, with all batteries, amplifiers, transponders provided for a fully addressable fire alarm system.
Pre-Discharge Alarm & Strobe Light

BASELAYER RunSmart™ OS (Optional)

Intelligent Control Available (UI) User Interfaces Customizable: Role-based Visibility, Warnings, Alarms, Thresholds & Control Set Points
Visualizer – Desktop and Mobile, Business Reporting, API
Provides Real-time Visibility, Control, Optimization, and Automation

Environmental Operating Conditions

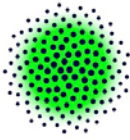
Operating Temp -30°F (-34°C) to 120°F (48.9°C)
Operating Humidity 0 to 100% (RH)
Outdoor Compliance NEMA 4

Listings, Regulatory Compliance, Certifications

UL/CE UL 2755 or CE Compliant (As Appropriate, Certification Options Available)
NFPA Compliant
NEMA 4 Engineered to Meet Standard

Support

Maintainability Concurrently Maintainable
Warranty Standard 1 year limited warranty; upgradable to 3 or 5 year limited warranty



BASELAYER EDGE HPC XA10/15 Data Module

SPECIFICATIONS

Exterior Dimensions	L 42'8" (13.00m) (No Vestibule) W 24'6" (7.47m) H 13'3" (4.03m)
Shipping Weight of Module	Max. 30,000lbs for IT Block (Without IT Gear)
Door Specifications (IT Block)	1 Door per aisle at end of the module, low threshold for rolling 3,500lbs cabinets in and out Panic door open hardware, door stops and exterior rated closer
Exterior Wall	White Galvelum Exterior Skin
Interior Wall	White Painted Aluminum Interior Skin
Insulation	Mineral Fiber 4" R-3.6 Thermal Insulation
Roof	600 lbs./ft2 (25.28 kg/m) Max Roof Loading
Flooring	Nonslip floor, resistance of no less than 150k Ohm when measured between any 2 points 3ft apart
Maintenance	Access per code requirements to all equipment requiring maintenance.
Interior Dimensions (IT Block)	L 41' 8" (12.7m) W 11' 0" (3.35 m) H 9' 4" (2.84 m)
Coatings	High performance coatings with min. 15 year lifetime. Exterior ferrous metals shall be protected from corrosion through galvanizing, plating or high performance coatings. Dissimilar metals should be avoided and steps taken to avoid corrosion.
IT Power: Bus Bar A	Up to 600V, 800A
IT Power: Bus Bar B	Up to 600V, 800A
IT Rack Envelope	480-in long x 48-in deep x 112-in tall
Max. rack qty.	20 X 24in racks or, 16 X 30in racks
Rack U	Up to 52U
Max. rack weight	3500lbs.
Rack mobility	Rack roll in/roll out at full weight
Cold aisle clearance	57-in (door 45-in wide x 94-in tall)
Hot aisle clearance	36-in (door 22-in wide x 94-in tall)
Above rack clearance	14" to 20" of clearance based on rack heights of 52U to 48U
ME Voltage	480V, 3 ϕ 4 Wire, 60Hz 400V, 3 ϕ , 3 Wire, 50 Hz
IT Distribution	Up to 800A per Busway (each Busway A and each Busway B)
IT Metering	Metering capability build into bus plugs
Lugs	Provide three-hole irreversible NEMA compression lugs for all connections
Breakers	All breakers over 125A-rated frame LSI type with electronic trip functions. All breakers 100% rated.
Panel boards	Panel boards: NEMA PB 1, UL 50, 61, with overcurrent protective devices, enclosure suitable for use, copper bus, compression type main and neutral lugs, IEEE C62.1 surge arresters.
Maximum Breaker Size	Up to 100A for distribution @ Bus Plug
Neutrals	200% neutral
Grounding System	Ground bar internal to module for frame and equipment grounding All equipment and metallic surfaces bonded to ground Single point grounding system designed to meet IEEE Emerald Standard 1100-1999 UL467, copper conductors, NEC wire and cable conductors. \leq 5 Ohm impedance. 2 x Outlets (GFCI) in the cooling block 120V (Max Current 20A)
Convenience Outlets	According to TIA-942A, 500lux at 30" from floor
Lighting Internal	Occupancy sensors installed within all modular infrastructure. Dual technology: (Infra-red, ultrasonic); High Efficiency LED Light Fixtures
Lighting External	Pre-wire accommodation for external lights on each end of the module for min 5fc at ground
Cooling fluid	Domestic water
Supply/Return Connections	3/4" Domestic water line
Leak Detection	Strip Leak Detection in the Cooling Block

PERFORMANCE

* Maximum kW noted references the XC15 configuration

System PUE Range As low as 1.05 (Dependent upon Environmental and Operational Conditions)

Maximum Module Capacity	Maximum Available kW
@N	800kW MAX CAPACITY @ 30° ΔT
@N+1	800kW MAX CAPACITY @ 30° ΔT
@2N	400kW MAX CAPACITY @ 30° ΔT

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@ 2N	20.0 kW/rack: (20) 24" racks	25.0 kW/rack: (16) 30" racks @ 30° ΔT

Access Control (Options Available)

Control	Compartmentalized Architecture Role-based Access Control Layers of Physical & Logical Protection Separate Tech & Support Space Access
Cameras	Pre-wired (IP based), customer selectable option. One per aisle. Above each entry point on module outside
Identification	Pre-wired customer selectable option. Card Reader or Biometric Check Points
Request to Exit	4 x Request To Exit Sensors Built into Door Handles (Inside Tech Space)
Door Locks	Electronic Locks

Fire System

Dedicated Fire System	Dedicated 4-wire loop to signaling devices and initiating devices, with all batteries, amplifiers, transponders provided for a fully addressable fire alarm system Pre-Discharge Alarm & Strobe Light
Smoke Detection	Spot detection
Suppression agent	1 x 560lb (254kg) Novec 1230 Fire Protection Fluid Storage Tank

BASELAYER RunSmart™ OS (Optional)

Intelligent Control	Customizable: Role-based Visibility, Warnings, Alarms, Thresholds & Control Set Points
Available (UI) User Interfaces	Visualizer – Desktop and Mobile, Business Reporting, API Provides Real-time Visibility, Control, Optimization, and Automation

Environmental Operating Conditions

Operating Temperatures	-30°F (-34°C) to 120°F (48.9°C)
Operating Humidity	0 to 100% (RH)
Operating Altitude	Up to 10,000 ft (3,048 m)
Outdoor Compliance	NEMA 4

Listings, Regulatory Compliance, Certifications

UL/CE	UL 2755 or CE Compliant (As Regionally Appropriate, Certification Options Available)
NFPA	Compliant
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