

BASELAYER **EDGE**TM



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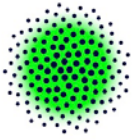
EDGE HPC

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 XC10/15 Data Module



HIGHLIGHTS

Delivers up to 900kW of Critical IT Power and Cooling for up to twenty (20) 52U racks @ N.

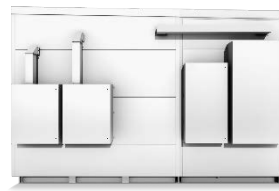
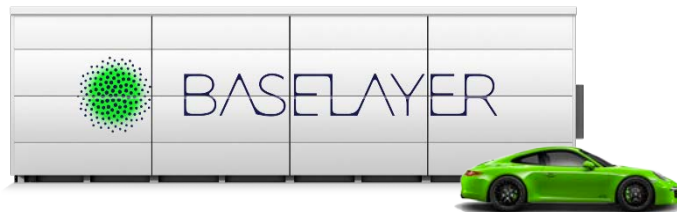
Engineered to meet NEMA 4 compliance standards for deployment in all global environments.

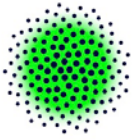
Ships configuration-tested from the factory with RunSmart Embedded providing access to key module sensors and controls via a web-based server.

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

SPECIFICATIONS

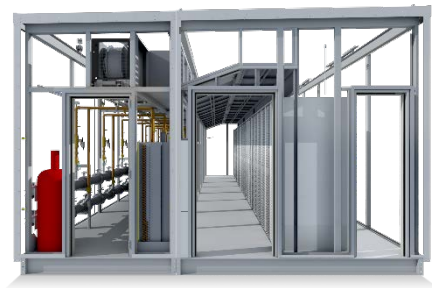
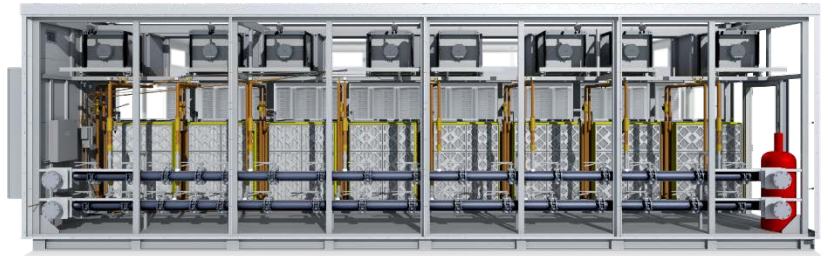
Exterior Dimensions US (Metric)	Length	42' 8" (13.00m)
	Width	20' 6" (6.24m)
	Height	13'3" (4.03m)
Interior Tech Space Dimensions US (Metric)	Length	41' 8" (12.70m)
	Width	11' 0" (3.36m)
	Height	9' 4" (2.84m)
Estimated Module Shipping Weight US (Metric)	57,000 lbs (25,855 kg) Includes both IT and Cooling 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	XC10: 480 V, 3 Phase, 4 Wire, 60Hz XC15: 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	Chilled Water	
Heat Removal	8 Total: Fan/Coil pairs	
Leak Detection	Strip Leak Detection (4 total)	





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SYSTEM PERFORMANCE

* Maximum kW noted references the XC15 configuration

System PUE Range As low as 1.15 (Dependent upon Environmental and Operational Conditions)

Maximum Module Capacity*	Maximum Available kW*
@ N	900kW MAX CAPACITY @ 25° ΔT
@ N+1	900kW MAX CAPACITY @ 25° ΔT
@ 2N	450kW MAX CAPACITY @ 25° ΔT

Maximum Module Density/Rack		
@ N	45.0 kW/rack: (20) 24" racks	56.2 kW/rack: (16) 30" racks @ 25° ΔT
@ N+1	45.0 kW/rack: (20) 24" racks	56.2 kW/rack: (16) 30" racks @ 25° ΔT
@ 2N	22.5 kW/rack: (20) 24" racks	28.1 kW/rack: (16) 30" racks @ 25° 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

Fire Rating 1 Hour

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

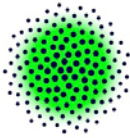
Operating Temp -30°F (-34°C) to 140°F (60°C)
Operating Humidity 0 to 100% (RH)
Outdoor Compliance NEMA 4

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



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BASELAYER EDGE HPC XC10/15 Data Module

SPECIFICATIONS

Exterior Dimensions	L 42'8" (13.00m) (No Vestibule) W 20'6" (6.24m) 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 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 Galvalum Exterior Skin
Interior Wall	White Painted Aluminum Interior Skin
Insulation	Mineral Fiber 4" R14 Thermal Insulation
Roof	600 lbs./ft ² (25.28 kg/m) Max Roof Loading
Flooring	Non-slip 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)
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) 24in racks or, (16) 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 4W, 60Hz 400V, 3 ϕ , 3 Wire, 50 Hz
IT Distribution	Up to 800A per Busway (each Busway A and each Busway B)
IT Metering	Branch Circuit Monitoring capability optional in 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.
Convenience Outlets	2 x Outlets (GFCI) in the cooling block 120V (Max Current 20A)
Lighting Internal	According to TIA-942A, 500lux at 30" from floor 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	Water
Supply/Return Connections	4-ct 6-inch flanged pipe coupling
Leak Detection	Strip Leak Detection in the Cooling Block

PERFORMANCE

* Maximum kW noted references the XC15 configuration

System PUE Range	As low as 1.15 (Dependent upon Environmental and Operational Conditions)	
Maximum Module Capacity*	@N	Maximum Available kW*
		900kW MAX CAPACITY @ 25° Δ T
	@N+1	900kW MAX CAPACITY @ 25° Δ T
	@2N	450kW MAX CAPACITY @ 25° Δ T
Maximum Module Density/Rack	@ N	45.0 kW/rack (20 x 24" racks)
	@ N+1	45.0 kW/rack (20 x 24" racks)
	@ 2N	22.5 kW/rack (20 x 24" racks)
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	
	Fire Rating	
	NFPA72	
BASELAYER RunSmart™ OS (Optional)	Intelligent Control	
	Customizable: Role-based Visibility, Warnings, Alarms, Thresholds & Control Set Points	
	Available (UI) User	
	Visualizer – Desktop and Mobile, Business Reporting, API	
	Interfaces	
	Provides Real-time Visibility, Control, Optimization, and Automation	
Environmental Operating Conditions	Operating Temperatures	
	-30°F (-34°C) to 140°F (60°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	
	NEMA 4	
	Engineered to Meet Standard	
Support	Maintainability	
	Concurrently Maintainable	
	Warranty	
	Standard 1 year limited warranty; upgradable to 3 or 5 year limited warranty	