

# BASELAYER™ **EDGE**

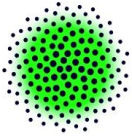


# BASELAYER™ EDGE

## D500E – Data Module (60Hz)

The EDGE D500E 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.





# BASELAYER

## BASELAYER EDGE D500E Data Module (60Hz)



### HIGHLIGHTS

Delivers up to 500kW of Critical IT power and Cooling for up to twenty (20) 52U racks @ N.

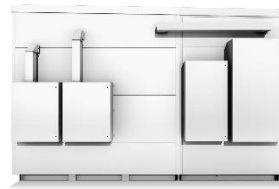
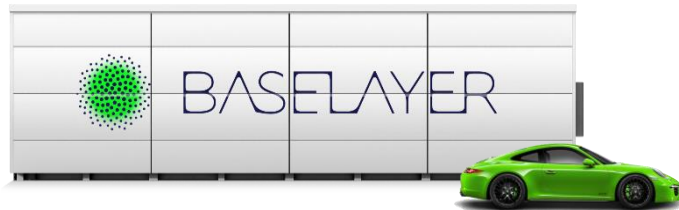
Engineered to meet NEMA 4 compliance standards for deployment in all global environments.

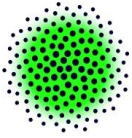
Ships configuration tested from the factory with an enhanced integrated Module Control Unit (MCU) providing access to key module sensors and controls via a web based server.

Power and cooling redundancy thresholds are configurable through BASELAYER™ OS

### SPECIFICATIONS

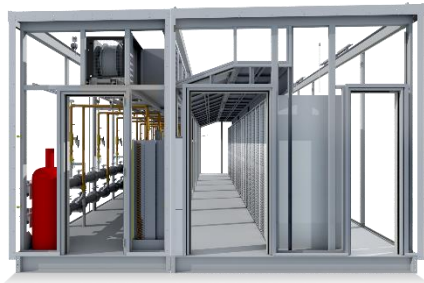
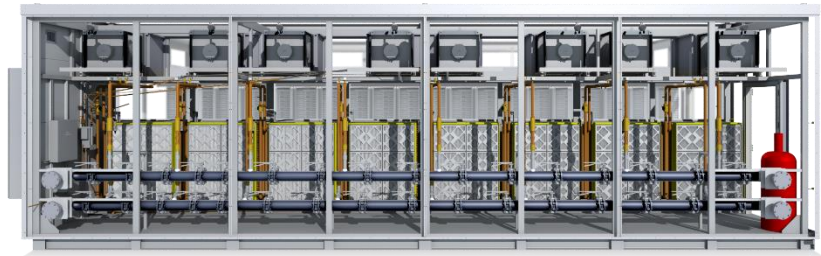
<b>Exterior Dimensions</b> US (Metric)	Length	42' 8" (13.00m)
	Width	20' 6" (6.24m)
	Height	13' 0" (3.96m)
<b>Interior Tech Space Dimensions</b> US (Metric)	Length	41' 8" (12.70m)
	Width	11' 0" (3.36m)
	Height	8' 4" (2.54m)
<b>Estimated Module Shipping Weight</b> US (Metric)	57,000 lbs (25,855 kg) Includes both IT and Cooling block (IT gear not included)	
<b>Number of Standard Cabinets</b>	20 x 24" (609.6mm) Cabinets	
	16 x 30" (609.6mm) Cabinets	
<b>Rack U</b>	Up to 52U	
<b>Voltage Frequency</b>	480 V, 3 Phase, 4 Wire 60Hz	
<b>Power Distribution (IT)</b>	Up to 800A per Busway (2X) (each Busway A and each Busway B)	
<b>Cooling Mechanics</b>	Chilled Water	
<b>Heat Removal</b>	8 Total: Fan/Coil combinations	
<b>Leak Detection</b>	Spot Leak Detection (9 total)	





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## BASELAYER EDGE D500E Data Module (60Hz)



### SYSTEM PERFORMANCE

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

Maximum Module Capacity	Maximum Available kW
@ N	500kW MAX CAPACITY
@ N+1	500 kW MAX CAPACITY
@ 2N	250kW MAX CAPACITY

Maximum Module Density/Rack		
@ N	25.0kW/rack (20 x 24" racks)	31.3kW/rack (16 x 30" racks)
@ N+1	25.0kW/rack (20 x 24" racks)	31.3kW/rack (16 x 30" racks)
@ 2N	12.5kW/rack (20 x 24" racks)	15.6kW/rack (16 x 30" racks)

### Access Control

**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.

**Fire Rating** Pre-Discharge Alarm & Strobe Light  
1 Hour

### Baselayer OS Data Center Operating System

**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 140°F (60°C)

**Operating Humidity** 0 to 100% (RH)

**Outdoor Compliance** NEMA 4

### Listings, Regulatory Compliance, Certifications

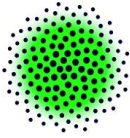
**Underwriters Laboratories (UL)** UL 2755

**National Fire Protection Agency (NFPA)** Compliant

### Support

**Maintainability** Concurrently Maintainable

**Warranty** Standard 1 year limited warranty; upgradable to 3 year limited warranty



# BASELAYER

## BASELAYER EDGE D500E Data Module (60Hz)

### SPECIFICATIONS

<b>Exterior Dimensions</b>	L 42'8" (13.00m) (No Vestibule) W 20'6" (6.24m) H 13'0" (3.96m)
<b>Shipping Weight of Module</b>	Max. 30,000lbs for IT Block (Without IT Gear)
<b>Door Specifications</b> (IT Block)	1 Door per aisle at end of the module, Zero-threshold for rolling 3,500lbs cabinets in and out Panic door open hardware, door stops and exterior rated closer
<b>Exterior Wall</b>	White Aluminum Exterior Skin
<b>Interior Wall</b>	White Painted Galvelum Interior Skin
<b>Insulation</b>	Mineral Fiber 4" R-3.6 Thermal Insulation
<b>Roof</b>	600 lbs./ft2 (25.28 kg/m) Max Roof Loading
<b>Flooring</b>	Nonslip floor, resistance of no less than 150kOhm when measured between any 2 points 3ft apart
<b>Maintenance</b>	Access per code requirements to all equipment requiring maintenance.
<b>Interior Dimensions</b> (IT Block)	L 41' 8" (12.7m) W 11' 0" (3.35 m) H 8' 4" (2.54 m)
<b>Coatings</b>	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.
<b>IT Power: Bus Bar A</b>	288KVA, 800A, 208V-3 $\phi$ , 120V-1 $\phi$
<b>IT Power: Bus Bar B</b>	288KVA, 800A, 208V-3 $\phi$ , 120V-1 $\phi$
<b>IT Rack Envelope</b>	480-in long x 48-in deep x 112-in tall
<b>Max. rack qty.</b>	20 X 24in racks or, 16 X 30in racks
<b>Rack U</b>	Up to 52U
<b>Max. rack weight</b>	3500lbs.
<b>Rack mobility</b>	Rack roll in/roll out at full weight
<b>Cold aisle clearance</b>	57-in (door 45-in wide x 94-in tall)
<b>Hot aisle clearance</b>	36-in (door 22-in wide x 94-in tall)
<b>Above rack clearance</b>	14" to 20" of clearance based on rack heights of 52U to 48U
<b>Voltage</b>	480V, 3 $\phi$ 4W
<b>Frequency</b>	60 Hz
<b>IT Distribution</b>	Up to 800A per Busway (each Busway A and each Busway B)
<b>IT Metering</b>	Metering capability build into buss plugs
<b>Lugs</b>	Provide three-hole irreversible NEMA compression lugs for all connections
<b>Breakers</b>	All breakers over 125A-rated frame LSI type with electronic trip functions. All breakers 100% rated.
<b>Panel boards</b>	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.
<b>Maximum Breaker Size</b>	Up to 100A for distribution
<b>Neutrals</b>	200% output neutral currents
<b>Grounding System</b>	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)
<b>Convenience Outlets</b>	
<b>Lighting Internal</b>	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
<b>Lighting External</b>	Pre-wire accommodation for external lights on each end of the module for min 5fc at ground
<b>Cooling fluid</b>	Water
<b>Supply/Return Connections</b>	2-ct 6-inch flanged pipe coupling
<b>Max Heat Removal Capacity</b>	8 fan coils @N yields 640KW
<b>Leak Detection</b>	Spot Leak Detection in the Cooling Block

### PERFORMANCE

<b>System PUE Range</b>	As low as 1.15	(Dependent upon Environmental and Operational Conditions)
<b>Maximum Module Capacity</b>	<b>Maximum Available kW</b>	
@N		500kW MAX CAPACITY
@N+1		500kW MAX CAPACITY
@2N		250kW MAX CAPACITY
<b>Maximum Module Density/Rack</b>		
@ N	25.0kW/rack (20 x 24" racks)	31.3kW/rack (16 x 30" racks)
@ N+1	25.0kW/rack (20 x 24" racks)	31.3kW/rack (16 x 30" racks)
@ 2N	12.5kW/rack (20 x 24" racks)	15.6kW/rack (16 x 30" racks)
<b>Access Control</b>		
<b>Control</b>	Compartmentalized Architecture Role Based Access Control Layers of Physical & Logical Protection Separate Tech & Support Space Access	
<b>Cameras</b>	Pre-wired (IP based), customer selectable option. One per aisle. Above each entry point on module outside	
<b>Identification</b>	Card Reader or Biometric Check Points (Fingerprint or Retina Technologies)	
<b>Request to Exit</b>	4 x Request To Exit Sensors Built into Door Handles (Inside Tech Space)	
<b>Door Locks</b>	Magnetic Locks	
<b>Fire System</b>		
<b>Dedicated Fire System</b>	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	
<b>Smoke Detection</b>	Spot detection	
<b>Suppression agent</b>	1 x 560lb (254kg) Novec 1230 Fire Protection Fluid Storage Tank	
<b>Fire Rating</b>	NFPA72	
<b>BASELAYER OS Data Center Operating System</b>		
<b>Intelligent Control</b>	Customizable: Role Based Visibility, Warnings, Alarms, Thresholds & Control Set Points	
<b>Available (UI) User</b>	Visualizer – Desktop and Mobile, Business Reporting, API	
<b>Interfaces</b>	Provides Real-time Visibility, Control, Optimization, and Automation	
<b>Environmental Operating Conditions</b>		
<b>Operating Temperatures</b>	-30°F (-34°C) to 140°F (60°C)	
<b>Operating Humidity</b>	0 to 100% (RH)	
<b>Operating Altitude</b>	Up to 10,000 ft (3,048 m)	
<b>Outdoor Compliance</b>	NEMA 4	
<b>Listings, Regulatory Compliance, Certifications</b>		
<b>Underwriters Laboratories</b>	UL 2755	
<b>National Fire Protection Agency (NFPL)</b>	Compliant	
<b>Support</b>		
<b>Maintainability</b>	Concurrently Maintainable	
<b>Warranty</b>	Standard 1 year limited warranty; upgradable to 3 year limited warranty	