



OptimumEDGE®

True Optimization® Starts Here.

OptimumEDGE is a patented, turnkey software solution which significantly reduces energy costs in water-cooled chilled water systems with up to 3 chillers and a combined cooling capacity of between 400 and 3,000 tons.

OptimumEDGE runs on a JACE® 8000 controller which operates with Niagara 4, the latest version of Niagara Framework®, for optimal security and performance.

The JACE 8000 controller which ships with OptimumEDGE becomes the integration point between any building automation system and the OptiCx® cloud-hosted platform. OptiCx provides real time chiller plant performance monitoring and reporting.



Software Specifications

The controller comes preloaded with a setup wizard that configures and installs the OptimumEDGE software to meet the equipment specifications for each site. OptimumEDGE uses BACnet® or Modbus Ethernet-based protocols to interface with any BAS or PLC system.

Control Points Optimized

- Primary chilled water pump speed
- Chilled water differential pressure set point
- Condenser water pump speed
- Cooling tower fan speed
- Chilled water set point



Connectivity Specifications

Connectivity between the OptimumEDGE controller and the OptiCx cloud-hosted platform requires a high speed data connection provided by a secure, M2M cellular network connection.

OptimumEDGE ships with a Cradlepoint COR IBR600 Series integrated broadband router to provide that connection.



Cradlepoint IBR600 Specifications

WAN

Integrated LTE-only, HSPA+, or LTE/HSPA+/EVDO
Two 10/100 Ethernet ports (WAN or LAN)

LAN

Two 10/100 Ethernet ports (WAN or LAN)

Ports

Power
Two Ethernet LAN or WAN
Two cellular antenna connectors (SMA)
Two WiFi connectors* (reverse SMA)

Temperature

-20 °C to 60 °C (-4°F to 140°F)

Humidity (non-condensing)

10% to 85% operating, 5% to 90% storage

Power

DC input steady state voltage range: 9 – 18VDC
IDLE: 350mA@12V(4.2W) to 700mA@12V(8.4W)
TX/RX: 600mA@12V(7.2W) to 1200mA@12V(14.4W)

Size

3.3 x 4.0 x 0.9 in (85 x 102 x 22 mm)

Certifications

FCC, WiFi Alliance
Shock/Vibration (MIL STD 810G and SAEJ1455)

JACE® 8000 Hardware Specifications

Features

- TI AM3352: 1000MHz ARM® Cortex™-A8 with secure boot
- 1GB DDR3 SDRAM
- Removable micro-SD card with 4GB flash total storage/2GB user storage
- Wi-Fi (Client or WAP)
 - IEEE802.11a/b/g/n
 - IEEE802.11n HT20 @ 2.4GHz
 - IEEE802.11n HT20/HT40 @ 5GHz
 - Configurable radio (Off, WAP, or Client)
 - WPAPSK/WPA2PSK supported
- USB type A connector
 - Back-up and restore support
- (2) isolated RS-485 with switch-selectable bias and termination
- (2) 10/100MB Ethernet ports
- 24VAC/DC power supply
- Runs Niagara 4.1 and later
- Real time clock
- Batteryless

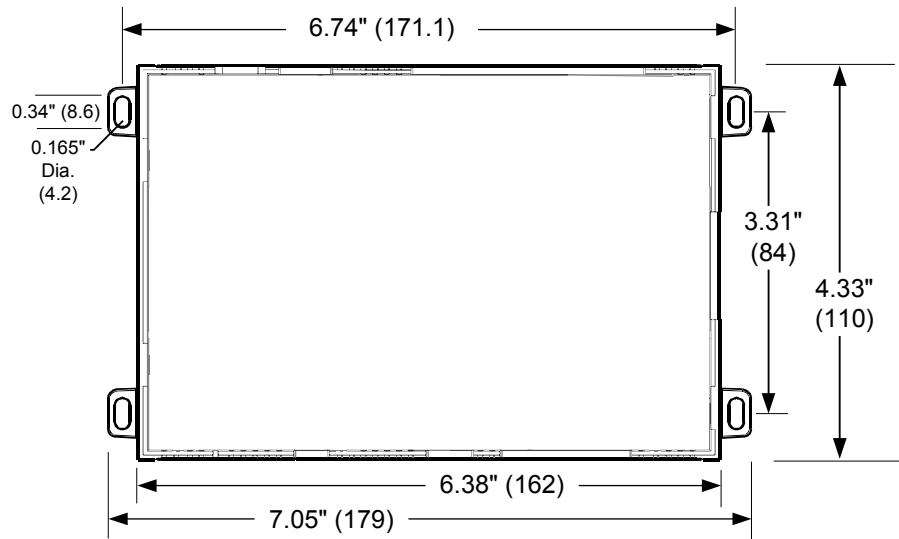
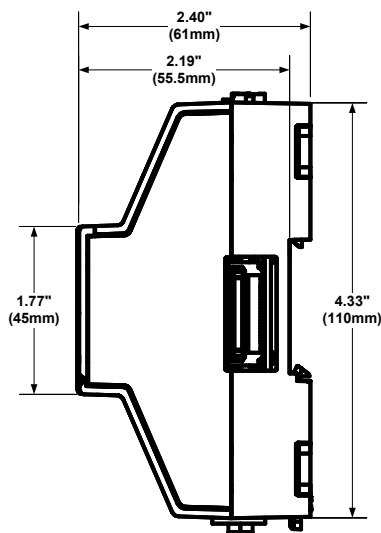
Agency Certifications

- UL 916
- CE EN 61326-1
- FCC Part 15 Subpart B, Class B
- FCC Part 15 Subpart C
- C-UL listed to Canadian Standards Association (CSA) C22.2 No. 205-M1983 "Signal Equipment"
- 1999/5/EC R&TTE Directive
- CCC
- SRRC
- RSS
- ROHS

Environmental Specifications

- Operating temperature: -20–60°C
- Storage temperature: -40–85°C
- Humidity: 5%–95% — Non condensing
- Shipping & vibration: ASTM D4169, Assurance Level II
- MTTF: 10 years+

Controller Mounting & Dimensions



Compatible with (DIN43880) enclosures
Suitable for mounting to a panel or to an EN50022 standard 35mm rail



ABOUT OPTIMUM ENERGY

Optimum Energy software helps customers reduce energy use in heating and cooling systems, which are the largest consumer of energy in buildings. Our software is being utilized in hospitals, data centers, universities and commercial office buildings. Energy savings and lighter carbon footprints in commercial buildings are becoming increasingly important to the bottom line of corporations.