

UNIVERSIDAD CENTROAMERICANA JOSÉ SIMEÓN CAÑAS

SAN SALVADOR, EL SALVADOR

Reliable® controls

EDUCATION

OVERVIEW

A team of engineers and architects, with input from students, designed a net-zero energy building at the Universidad Centroamericana José Simeón Cañas in San Salvador. Researchers there gather climate-related data and perform environmental experiments to investigate appropriate sustainable building technologies for the region.

Energy use, weather conditions, surface air temperature, and air velocity in the building are monitored to determine how energy consumption and thermal behavior are affected by its operation. The 1,076 square-foot structure, a living laboratory with classrooms, study areas, and offices, is the first of its kind in El Salvador.

PROJECT DETAILS

Reliable Controls Authorized Dealer MP Service successfully implemented a MACH-System during construction of the new net-zero energy building at the Universidad Centroamericana José Simeón Cañas.

To integrate the building's automation systems, MP Service installed a MACH-ProWebCom controller that uses BACnet/IP to communicate over the LAN. Three MACH-ProPoint expansion modules with 24 inputs each collect signals from more than 70 sensors distributed throughout the facility. Two MACH-ProZone controllers connected to the MACH-ProWebCom by a local BACnet MS/TP network operate the HVAC system and monitor temperature, relative humidity, and CO₂ levels in each zone. RC-Reporter and RC-Archive software provides teachers, students, and researchers with a simple way to collect data under varying conditions.

Reliable Controls and MP Service were pleased to implement a MACH-System in the first net-zero energy building in Central America.

To learn more about projects using Reliable Controls visit
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PROJECT TYPE

New construction

INSTALLATION TYPE

CO₂ monitoring, fan coil unit, HVAC, laboratory, lighting, power, water monitoring

TOTAL AREA

100 m² (1,076 ft²)

NETWORK

EIA-485, Ethernet

PROTOCOL

BACnet

BACNET

Loytec L-DALI lighting control system, DENT power scout, LG variant refrigerant flow system

TOTAL SYSTEM POINTS

80 hard points, 200 soft points

EQUIPMENT INSTALLED

**1 MACH-ProWebCom™ controller
3 MACH-ProPoint™ Input accessories
2 MACH-ProZone™ 88 controllers
3 SPACE-Sensor™ Temperature devices
RC-Archive® software
RC-Reporter® software
RC-Studio® software**

**RELIABLE CONTROLS AUTHORIZED
DEALER**

MP Service



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