



Onyxx-MB311



Helixx[®] Taking Modbus BACnet Protocol Translation to the Next Level

LynxSpring's Helixx™ framework embedded on the Onyxx[®] Modbus to BACnet[®] Bridge has revolutionized the construction, implementation, and interaction of Modbus to BACnet network communication. Helixx translates up to 2500 Modbus points to manageable BACnet points; converting Modbus slave devices into virtual BACnet devices using virtual BACnet routing. Acting as the Master Modbus device, Helixx manages all Modbus RTU or TCP slave devices connected to it.

For every Modbus slave device that is added, Helixx creates a corresponding virtual BACnet device. Helixx ensures the virtual BACnet device always emulates the Modbus device it is bridging and safeguards the integrity of the network by automatically assigning a unique BACnet device instance or object ID to each virtual BACnet device used to identify it on the network. Desired Modbus points are simply added under the Modbus slave device. Helixx automatically creates and maps the correct virtual BACnet object to its corresponding virtual BACnet device.

Features

- ✓ Modbus Serial (RTU) to BACnet IP, Modbus TCP to BACnet IP, or *both* Modbus Serial (RTU) and Modbus TCP to BACnet IP.
- ✓ Bridge models available in capacities of 1000 or 2500 Modbus points to BACnet points.
- ✓ Converts any Modbus device to a virtual BACnet device object.
- ✓ Supports maximum of 2500 Modbus points, 32 Modbus RTU slave devices without a repeater or up to 246 with repeaters, 246 Modbus TCP slave devices per network segment, or a combo thereof.
- ✓ DIN rail/flat panel mounting options standard.

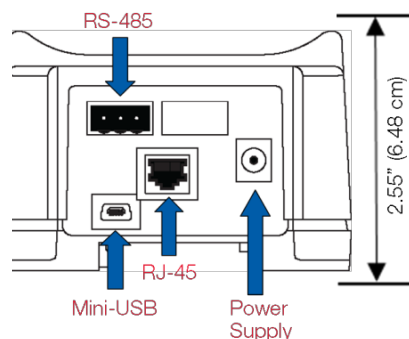
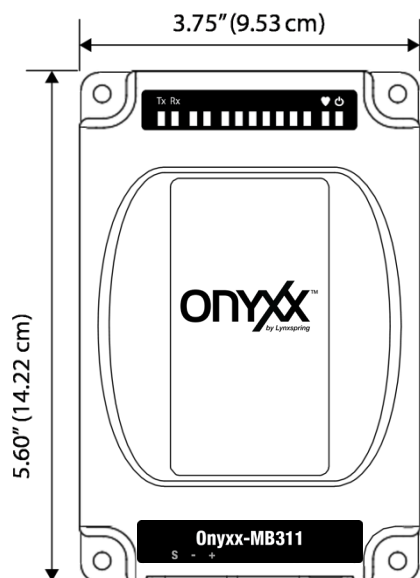
Easy Set-Up, Programming and Install

- ✓ Intuitive Internet standard browser user interface allows for easy set-up and configuration
- ✓ No programming experience or third-party software tools are required
- ✓ Documentation, configuration screens, device settings, and help guides are embedded on the controller
- ✓ 10/100 Mbps Ethernet port with auto-negotiation allowing use of either a Cat-5 straight-through cable or crossover cable.
- ✓ Optically-isolated, transient protected RS-485 serial port makes for easy install of 3-wire (+, -, and shield) RS-485 networks utilizing the 3-screw removable terminal block
- ✓ LEDs indicate power status, unit health, and transmission and receipt of activity

Onyx[®] Modbus to BACnet[®] Bridge

PRODUCT DATA SHEET

Dimensions



Specifications

PLATFORM	
Operating System	Helix [®] Framework by Lynxspring [®]
Processor	1 GHz AM335x ARM Cortex A-8
Memory	512 MB DDR3L 800 MHz, 4 GB 8-bit embedded MMC onboard flash
COMMUNICATION PORTS	
Ethernet Port	10/100 Mbps (<i>RJ-45 Connector</i>)
RS-485 Port	Optically-isolated RS-485 serial port with 3-screw connector
Mini-B USB	USB client connector utilizes 5-pin mini-B USB cable
POWER	
Power Input	External 9 to 15 VDC 1A power supply
CHASSIS	
Construction	Base: Plastic, DIN rail or screw mount Cover: Plastic
Cooling	Internal air convection
Dimensions	3.75" (9.53 cm) width x 5.60" (14.22 cm) length X 2.55" (6.48 cm) depth
Mounting	Flat panel and 35mm DIN rail mounting options standard
ENVIRONMENT	
Operating Temperature	0 – 40 °C (32 – 104 °F)
Storage Temperature	0 – 70 °C (32 – 158 °F)
Relative Humidity	5 – 95% RH, non-condensing
CERTIFICATIONS	
Compliance	FCC Part 15 Class A, RoHS, CE, CAN ICES-3(A)/NMB-3(A)
WEIGHT	
Product with Cables	2 pounds
Product and Packaging	3 pounds

Ordering Information

PART NUMBER(S)	DESCRIPTION
Onyx-MB311-1000	Modbus to BACnet Protocol Translator with 1000 Modbus point capacity. Packaging will include: One (1) Onyx-MB311 Bridge, one (1) 15 VDC 1A external power supply, and one (1) 7 ft. Ethernet cable.
Onyx-MB311-2500	Modbus to BACnet Protocol Translator with 1000 Modbus point capacity. Packaging will include: One (1) Onyx-MB311 Bridge, one (1) 15 VDC 1A external power supply, and one (1) 7 ft. Ethernet cable.

©2021 by Lynxspring, Inc. All rights reserved. The information and/or specifications published here are current as of the date of publication of this document. Lynxspring, Inc. reserves the right to change or modify specifications without prior notice. The latest product specifications can be found by contacting our corporate headquarters in Lee's Summit, Missouri. Products or features contained herein are covered by one or more United States or foreign patents. Other brand and product names are trademarks or registered trademarks of their respective holders. This document may be copied by parties who are authorized to distribute Lynxspring products in connection with distribution of those products, subject to the contracts that authorize such distribution. It may not otherwise, in whole or in part, be copied, photocopied, reproduced, translated, or reduced to any electronic medium or machine-readable form without prior written consent from Lynxspring, Inc. Complete Confidentiality, Trademark, Copyright and Patent notifications can be found at: [Lynxspring Legal Documents](#).

Lynxspring[®], Onyx[®] and Helix[®] are registered trademarks of Lynxspring, Inc.