Onyxx® SkySpark® Edge Analytics
PRODUCT DATA SHEET

Onyxx-FS311

Onyxx® SkySpark® Edge Analytics
Model/Part Number: Onyxx-FS311

Lynxspring's Onyxx platform *(an embedded edge family of modular, open, hardware, bridges and gateways that support Cloud applications),* partnered with SkyFoundry's SkySpark® Everywhere™, provides the capability to run SkySpark® analytics locally at the edge and send data to SkySpark in the Cloud.

Onyxx SkySpark® Edge Analytics is a stand-alone, SkySpark® Everywhere™ embedded device. SkySpark® Analytics allows users to analyze important data at the edge and gather real-time intelligence. This device enables data from BACnet and Modbus to connect locally with SkyFoundry's SkySpark®, adding value at the device level.

Connectivity, Control, Data Access, Analytics Now at the Edge

It is said that the data produced from a device is more valuable than the cost of the device itself. The use of data within buildings and facilities is now becoming mandatory. We are in an era where data technologies and analytics enable us to capture data from different sources, make it consistent and meaningful, and use it across multiple applications.

Today, we are moving from collecting data from *connected devices* to *distributing data presentation and analytics independently at the edge.*

With more devices at the edge, we are provided with insights into how to better manage and operate facilities. No longer can we require data to be transported to a Cloud before we can begin to derive value from it. Software functions and applications need to reside at every level of the architecture from the edge *(on an equipment system or in an electrical closet);* to the building level where data from multiple smaller nodes can be aggregated and analyzed; and to the portfolio level where data analysis occurs at the server or Cloud level.

Product Offering

- ✓ Allows data to be collected from BACnet/MSTP devices
- ✓ Fulfills the need for speed
- ✓ Accesses and uses real-time data
- ✓ Reduces latency
- ✓ Supports the use of real-time use of analytics
- ✓ The exchange of data between the Cloud or a remote data center is slower than processing directly at the edge
- ✓ Conserves network bandwidth
- ✓ Reduces operational costs and overall data management *(prevent data from causing issues within the networks by less data being sent elsewhere)*
- ✓ Increases uptime
- ✓ Helps ensure other connected systems stay operational even when one device malfunctions
- ✓ Shorter response and reactionary times
- ✓ Opportunities for organizations leveraging advantages of IoT

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Why Onyxx SkySpark Edge Analytics?

Onyxx SkySpark Edge Analytics addresses a key challenge in implementing next generation device level/IoT applications, which disseminate data and computation between edge devices and server/Cloud environments in a unified, distributed system.

It has been designed to run on everything from a small low-cost device, to server clusters hosted in the Cloud. Throughout the architecture Onyxx SkySpark Edge Analytics provides the exact same software architecture, data model, functions and features as regular SkySpark.

There is only one platform to learn and one set of tools to work with. The result of this unified end-to-end software is faster development, an easier learning curve and a streamlined, near seamless user interface across the entire data architecture.

Benefits of Analytics at the Edge: Why it is Important and to Who?

Analytics at the edge ensures receipt of optimal data in a timely manner so that accurate conclusions may be derived directly from the data, enabling quicker response and resolution, delivering the maximum system value.

For Building Operators and System Integrators Alike:

- ✓ Enables devices to work better together based on analytics driven by data at the device level
- ✓ Building automation systems easier to use
- ✓ Extends the lifetime value of equipment
- ✓ Reduces operational costs
- ✓ Conserves network bandwidth
- ✓ Processing is distributed across multiple devices ensuring connected systems stay operational when one device fails

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Additional Strengths, Benefits and Value

- ✓ Proven technology and widely accepted *(deployed in over 1 billion square feet of facilities/more than 13,000 buildings)*
- ✓ Most advanced analytics package for building/facilities, energy, IoT applications
- ✓ Cost effective at point counts from: 10 points to millions
- ✓ Fully programmable analytics tailor rules to your specific use cases
- ✓ Visualization of data results without engineering custom graphics
- ✓ Deployment on premise—advantage over Cloud-only solutions
- ✓ Organize data automatically via equipment applications to see trends
- ✓ No need to assemble graphical presentations to clearly see analytic results
- ✓ Comprehensive built-in energy application
- ✓ General purpose historian
- ✓ Embraces distributed architecture and the leaner and flatter nature of today's architectures
- ✓ Provides the ability to apply SkySpark across multiple nodes that can work together in a unified system
- ✓ The full SkySpark feature set is included in each node
- ✓ Data access, collection storage, analytics, processing, visualizations are done locally
- ✓ Provides maximum flexibility, scalability reliability, and simplicity
- ✓ Disseminates data seamlessly and computations between the edge and server/Cloud environments
- ✓ Provides more fault tolerance for data collection, storage, and processing
- ✓ Collects data closer to the source
- ✓ Supports applications with *constrained* networks with intermittent connections
- ✓ Reduces data transfer costs and data bandwidth
- ✓ Provides near seamless responsive user experience across systems both large and small
- ✓ Reduces the risk of loss of data due to network interruptions
- ✓ Performs real time analytics at the edge for equipment that is being controlled
- ✓ Enables scaling to large systems in easy, manageable increments

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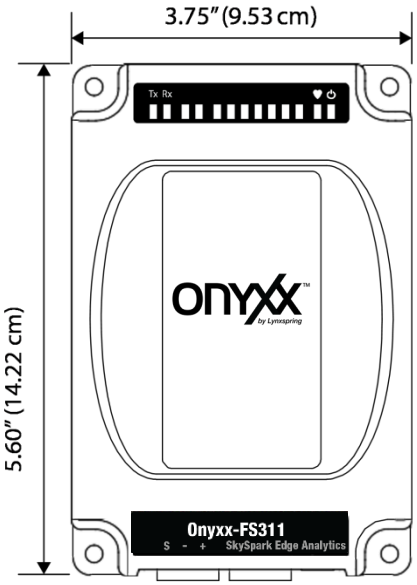
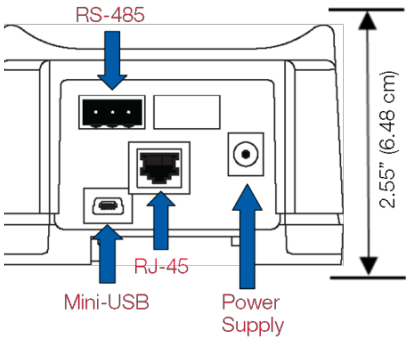
Product Data Sheet

Dimensions





Specifications

Platform	
Operating System	Helixx™ 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 *(RJ-45 Connector)*
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
Onyxx-FS311	Onyxx SkySpark Edge Analytics. Packaging will include: One (1) Onyxx-FS311 SkySpark Edge Analytics device, one (1) 15 VDC 1A external power supply, and one (1) 7 ft. Ethernet cable.

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