

BACnet IP for Quantum



Lighting Hub

Includes BACnet IP Protocol

Description:

License for Quantum lighting hub to enable BACnet IP integration which allows control of EcoSystem ballasts and modules in Lutron's Quantum lighting control system. BACnet IP is embedded in the Quantum Lighting Hub.

Features:

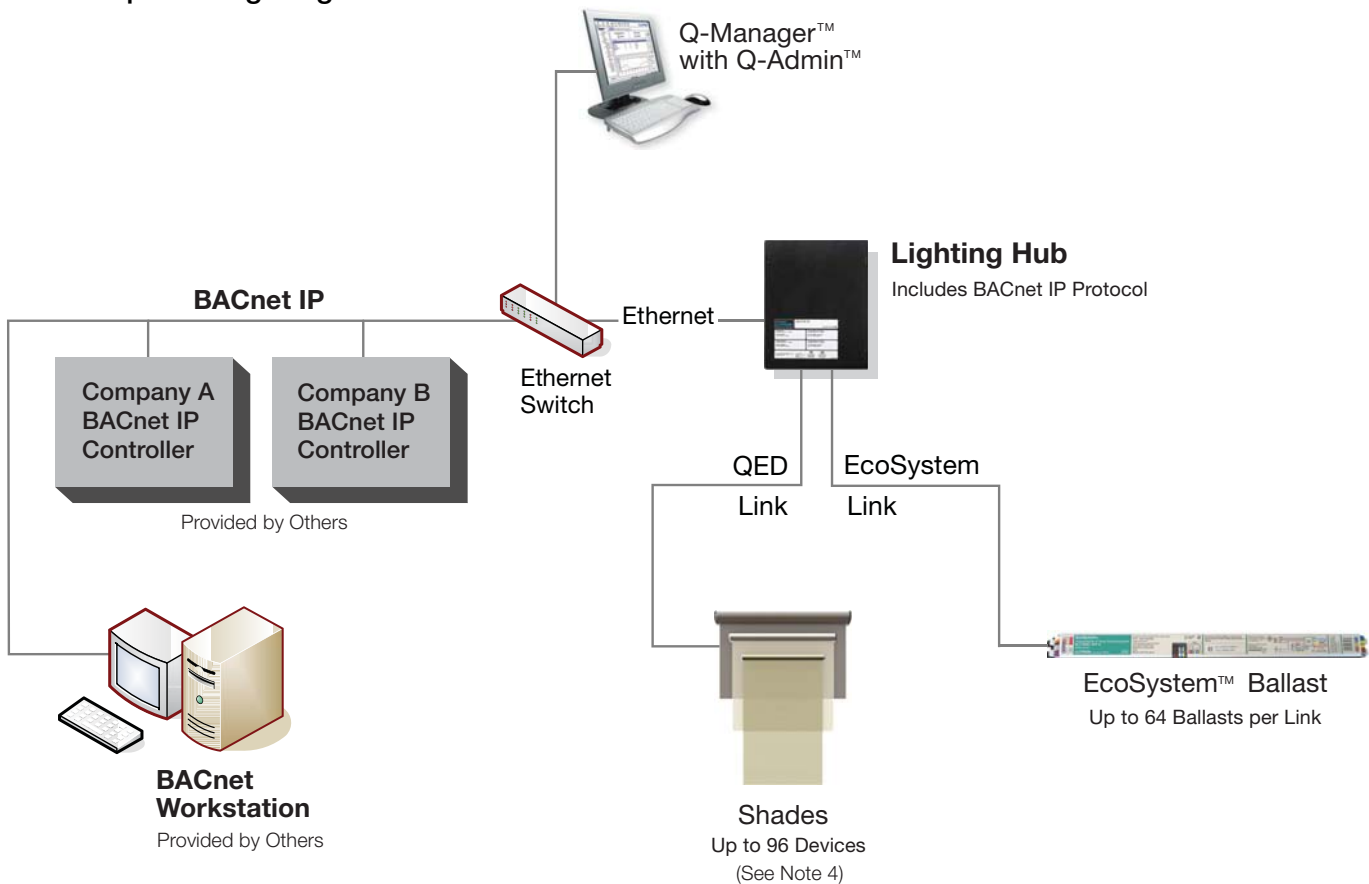
- Set Light Level - write to the present value of the object to send all ballasts in an Area to the commanded level.
- Get Light Level - read the present value of the object to get the average light level in the Area.
- On/Off Status - read the present value of the object to get a report of the On/Off status of the Area, if any ballasts in the Area is on, the Area value is ON. Fault event state of this object will notify the user of a ballast failure or lamp outage in the Area.
- Fault - reading the present value will indicate a fault in the Area such as lamp outage. The object name will indicate fault type.
- Loadshed - write to the present value of the object to command an Area to loadshed by a percentage, 0 is no loadshed.
- Afterhours - begin and end afterhours mode in the Area by writing to the present value of this object.
- Occupancy Status - read the present value to determine if any occupancy sensor in the Area is tripped, indicating that the Area is occupied.
- Reading commandable output objects will report last value written.
- Information will be given based on an Area on an EcoSystem Link. Areas must be setup using a PDA. Ballasts that are not part of an Area will not be accessible by BACnet.
- Each Area will be discovered as a BACnet device. Each device (Area) will have the objects listed below.

Feature	Naming Convention	BACnet Object Type	Present value	Monitor/Command
Set Light Level	Area Name, Target Intensity	Analog Output	0-100%	Command
Get Light Level	Area Name, Average Intensity	Analog Input	0-100%	Monitor
On/Off Status <i>Fault Event State</i>	Area Name, On/Off	Binary Input <i>Indicates</i>	On/Off (1,0) <i>Lamp Outage/Ballast Failure</i>	Monitor
Loadshed	Area Name, Loadshed	Analog Output	0-100% Loadshed (0 = Disabled)	Command
Afterhours	Area Name, Afterhours	Binary Output	Enable/Disable (1,0)	Command
Occupancy Status	Area Name, Occupancy	Multi-state Value	Occupied/Unoccupied/No Sensor (1,2,3)	Monitor
Fault	Area Name, Fault (Fault Type)	Binary Input	Fault/No Fault (1,0)	Monitor

Job Name:	Model Numbers:
Job Number:	

System Network Diagram:

Example Wiring Diagram



Notes:

1. An Area may consist of 1 or more ballasts up to a maximum of 64.
2. A maximum of 64 Areas per EcoSystem Link are allowed.
3. A ballast may only belong to one Area.
4. Shade control over BACnet is not available.
5. Areas do not cross EcoSystem Links.
6. Requires use of Q-Admin software package.
7. The get light level may not match the set light level due to daylighting, loadshed and local or Q-Admin control.

Job Name:

Model Numbers:

Job Number:

BACnet Protocol Implementation Conformance Statement (PICS)**Date:** April 18, 2008**Vendor Name:** Lutron Electronics Co., Inc.**Product Name:** Quantum BACnet Integration**Product Model Number:** Q-BAC-SFT-LIC**Applications Software Version:** 04**Firmware Revision:** 00.08**BACnet Protocol Revision:** 2**Product Description:**

License for Quantum lighting hub to enable BACnet IP Integration. Allows control of EcoSystem ballasts and modules in Lutron's Quantum lighting control system. BACnet IP is embedded in the Quantum Lighting Hub.

BACnet Interoperability Building Blocks Supported (Annex K):

K.1.1 BIBB	Data Sharing	ReadProperty-B (DS-RP-B)
K.1.8 BIBB	Data Sharing	WriteProperty-B (DS-WP-B)
K.1.4 BIBB	Data Sharing	ReadPropertyMultiple-B (DS-RPM-B)
K.1.10 BIBB	Data Sharing	WritePropertyMultiple-B (DS-WPM-B)
K.5.2 BIBB	Device Management	DynamicDeviceBinding-B (DM-DDB-B)
K.5.6 BIBB	Device Management	DeviceCommunicationControl-B (DM-DCC-B)
K.5.12 BIBB	Device Management	TimeSynchronization-B (DM-TS-B)
K.5.14 BIBB	Device Management	UTCTimeSynchronization-B (DM-UTC-B)
K.5.16 BIBB	Device Management	ReinitializeDevice-B (DM-RD-B)

BACnet Standardized Device Profile (Annex L):

BACnet Application Specific Controller (B-ASC)

Segmentation Capability:

Segmented requests supported? **No.** Window Size: **n/a**
 Segmented responses supported? **No.** Window Size: **n/a**

Non-Standard Application Services:

Non-standard application services are not supported.

Standard Object Types Supported:***Device***

1. Dynamically creatable using BACnet's CreateObject service? **No.**
2. Dynamically deletable using BACnet's DeleteObject service? **No.**
3. List of optional properties supported: **None.**
4. List of all properties that are writable where not otherwise required by this standard: **Object Name.**
5. List of proprietary properties: **None.**
6. List of any property value range restrictions: **None.**

Job Name:**Model Numbers:****Job Number:**

Analog Output

1. Dynamically creatable using BACnet's CreateObject service? **No.**
2. Dynamically deletable using BACnet's DeleteObject service? **No.**
3. List of optional properties supported: **None.**
4. List of all properties that are writable where not otherwise required by this standard: **None.**
5. List of proprietary properties: **None.**
6. List of any property value range restrictions: **Present Value: 0 to 100 (%)**.

Analog Input

1. Dynamically creatable using BACnet's CreateObject service? **No.**
2. Dynamically deletable using BACnet's DeleteObject service? **No.**
3. List of optional properties supported: **None.**
4. List of all properties that are writable where not otherwise required by this standard: **None.**
5. List of proprietary properties: **None.**
6. List of any property value range restrictions: **None.**

Binary Output

1. Dynamically creatable using BACnet's CreateObject service? **No.**
2. Dynamically deletable using BACnet's DeleteObject service? **No.**
3. List of optional properties supported: **None.**
4. List of all properties that are writable where not otherwise required by this standard: **None.**
5. List of proprietary properties: **None.**
6. List of any property value range restrictions: **None.**

Binary Input

1. Dynamically creatable using BACnet's CreateObject service? **No.**
2. Dynamically deletable using BACnet's DeleteObject service? **No.**
3. List of optional properties supported: **None.**
4. List of all properties that are writable where not otherwise required by this standard: **None.**
5. List of proprietary properties: **None.**
6. List of any property value range restrictions: **None.**

Multi-State Value

1. Dynamically creatable using BACnet's CreateObject service? **No.**
2. Dynamically deletable using BACnet's DeleteObject service? **No.**
3. List of optional properties supported: **None.**
4. List of all properties that are writable where not otherwise required by this standard: **None.**
5. List of proprietary properties: **None.**
6. List of any property value range restrictions: **None.**

Data Link Layer Options:

BACnet IP

Job Name:

Model Numbers:

Job Number:

Device Address Binding:

Is static device binding supported? **No.**

Networking Options:

None

Character Sets Supported:

Indicating support for multiple character sets does not imply that they can all be supported simultaneously.

ANSI X3.4

If this product is a communication gateway, describe the types of non-BACnet equipment/network(s) that the gateway supports:

The device is a communication gateway between the BACnet protocol and EcoSystem ballasts and modules in Lutron's Quantum lighting control system.

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Job Number:	