

BACnet® Software License for *Quantum* Lights

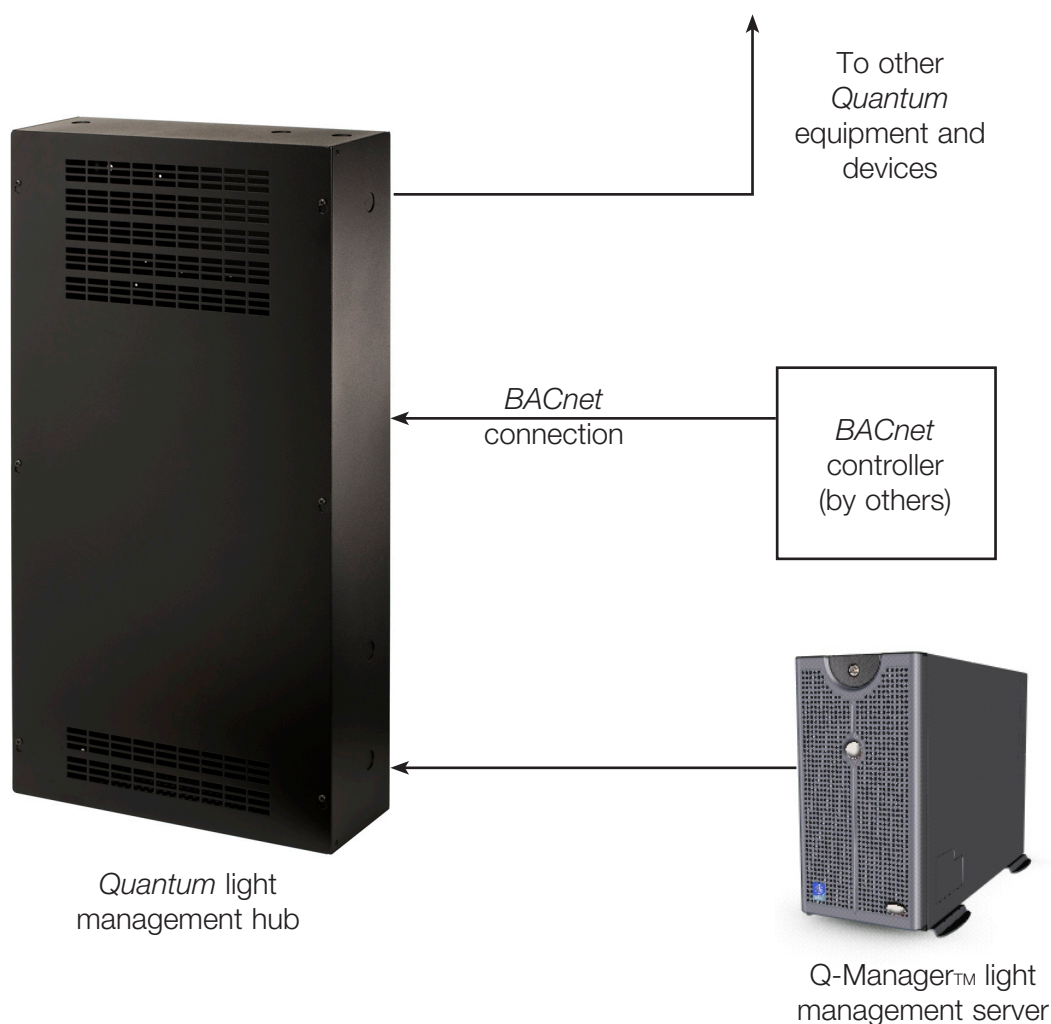


Description

This license for *BACnet* software enables a building management system to control, monitor, and manage energy for lights in the *Quantum* system. This license must be activated by a Lutron Field Service Engineer. One license is required for each processor.

System Network Diagram

Note: Requires use of Q-Admin™ software package



Job Name:	Model Numbers:
Job Number:	

BACnet® Protocol Implementation Conformance Statement (PICS)

Date: January 20, 2010

Vendor Name: Lutron Electronics Co., Inc.

Product Name: *Quantum BACnet* Integration

Product Model Number: QSW-BAC-L-PP-A

Applications Software Version: 1.9

Firmware Revision: 1.9

BACnet® Protocol Revision: 4

Version History

Applications Software Versions: 1.6, 1.7, 1.8

Firmware Revisions: 1.6, 1.7, 1.8

BACnet® Protocol Revision: 2

Product Description

License for *Quantum* light management hub to enable *BACnet* IP Integration. Allows control of *Quantum* system components. *BACnet* IP is embedded in the *Quantum* light management 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.1.12 BIBB	Data Sharing	DS-COV-B
K.5.2 BIBB	Device Management	DynamicDeviceBinding-B (DM-DDB-B)
K.5.6 BIBB	Device Management	DeviceCommunicationControl-B (DM-DCC-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: **None.**
5. List of proprietary properties: **None.**
6. List of any property value range restrictions: **None.**

Job Name:	Model Numbers:
Job Number:	

Analog Value

- 1. Dynamically creatable using the *BACnet*® CreateObject service? **No.**
- 2. Dynamically deletable using *BACnet*'s DeleteObject service? **No.**
- 3. List of optional properties supported: **Min, Max.**
- 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: **See Table.**

Binary 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: **See Table.**

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: **See Table.**

Data Link Layer Options:

BACnet IP

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* light control system.

Job Name:	Model Numbers:
Job Number:	

BACnet® Objects												
Area Device	Read	Write	Type	Instance	{Area Name}	COV Supported	Units	Min PV	Max PV	Active Text	Inactive Text	State Text
Lighting Level: Allows you to set all the lights in an area to a level.	X	X	AV	2	Lighting Level		%	0	100 101=Mixed On			
Lighting State: Control/Monitor the lights in an area. On indicates that there is at least one light on in the area. Off indicates that all lights are off in the area.	X	X	BV	3	Lighting State	X		0	1	On (1)	Off (0)	
Lighting Scene: Control/Monitor the lighting scenes in an area.	X	X	MSV	4	Lighting Scene			1	Total Scenes + 1			{Scene Name}
Daylighting Enabled: Control/Monitor the daylighting function in the area.	X	X	BV	5	Daylighting Enabled			0	1	Enabled (1)	Disabled (0)	
Daylighting Level: Configuration parameter to adjust the daylighting target level in the area.	X	X	AV	6	Daylighting Amount		none	0	90			
Permanently Disable Occupancy: Prevent any occupancy events or occupancy mode changes from having any effect.	X	X	BV	7	Permanently Disable Occupancy			0	1	True (1)	False (0)	
Occupancy State: Indicates if an area is currently occupied.	X		MSV	8	Occupancy State	X		1	4			1 = Unoccupied, 2 = Occupied, 3 = After Hours, 4 = Unknown
Unoccupied Level: Configuration parameter to adjust the level the lights in an area should go to when it becomes unoccupied.	X	X	AV	9	Unoccupied Level		%	0	100 101=Unaffected 102=Daylighting			
Occupied Level: Configuration parameter to adjust the level the lights in an area should go to when it becomes occupied.	X	X	AV	10	Occupied Level		%	0	100 101=Unaffected 102=Daylighting			
Additional Occupied Timeout: Configuration parameter to adjust the occupancy timeout.	X	X	AV	11	Additional Occupied Timeout		min	0	42			

(continued on the next page)

Job Name:	Model Numbers:
Job Number:	

BACnet® Objects												
Area Device	Read	Write	Type	Instance	{Area Name}	COV Supported	Units	Min PV	Max PV	Active Text	Inactive Text	State Text
Loadshed Allowed: Indicates if an area is allowed to load shed.	X	X1	BV	12	Loadshed Allowed			0	1	Yes (1)	No (0)	
Loadshed Goal: Indicates how much load an area will shed when the load shed function is enabled.	X	X1	AV	13	Loadshed Goal		none	0	90			
Occupancy Mode: Control/monitor the occupancy mode in an area	X	X	MSV	14	Occupancy Mode			1	4			1 = Inactive, 2 = Occupancy & Vacancy, 3 = Vacancy, 4 = Not applicable
Number of Lamp Failures: Indicates the number of failed lamps in an area.	X		AV	15	Number of Lamp Failures	X	none	0	none			
Number of Devices Not Responding: Indicates the number of control devices not responding in an area.	X		AV	16	Number of Devices Not Responding	X	none	0	none			
Zone Level: Control/Monitor the level of individual lighting zones in an area.	X	X	AV	1000 - 1999	{ZoneName} Level		%	0	100 101=Unaffected 102=Day/lighting			
System Device												
Master Loadshed Enabled: Control/Monitor the system-wide load shed function.	X	X	BV	2	Master Loadshed Enabled	X		0	1	Enabled (1)	Disabled (0)	
Timeclock Enabled: Control/Monitor the state of each system timeclock.	X	X	BV	1000 - 1999	{TimeclockName} Enabled			0	1	Enabled (1)	Disabled (0)	
AV = Analog Value												
BV = Binary Value												
MSV = Multi-State Value												
COV = Change of Value												
PV = Present Value												
{ } = Name specified in the system by Lutron												
1 = Features only available in Quantum 1.7 or later.												
2 = "Timeclock" will be prefixed if the name does not include the word "Timeclock".												

Job Name:	Model Numbers:
Job Number:	