3691271a 1 06.16.23

BACnet Protocol Implementation Conformance Statement (PICS)

Date: June 16, 2023

Vendor Name: Lutron Electronics Co., Inc.

Product Name: myRoom XC Processor BACnet Integration

BACnet Protocol Revision: 13

Vendor ID: 176

Product Description

BACnet IP is embedded in the myRoom XC processor. There are two types of BACnet devices available in myRoom XC systems: System devices and Area devices.

- The System device provides system level functionality, affecting all areas/rooms in the system, such as master load shed.
- The area devices are virtual BACnet devices, typically one per room or hospitality “key” in a building, that provide area level functionality such as area lighting scenes, occupancy state, thermostats, etc.

Each processor must have a unique BACnet network number. Each network can contain a variable number of areas depending upon the system layout.

BACnet Interoperability Building Blocks Supported (Annex K):

K.1.2 BIBB	Data Sharing	ReadProperty-B (DS-RP-B)
K.1.4 BIBB	Data Sharing	ReadPropertyMultiple-B (DS-RPM-B)
K.1.8 BIBB	Data Sharing	WriteProperty-B (DS-WP-B)
K.1.10 BIBB	Data Sharing	WritePropertyMultiple-B (DS-WPM-B)
K.1.12 BIBB	Data Sharing	COV-B (DS-COV-B)
K.5.2 BIBB	Device Management	DynamicDeviceBinding-B (DM-DDB-B)
K.5.4 BIBB	Device Management	DynamicObjectBinding-B (DM-DOB-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 CreateObject service? No.
2. Dynamically deletable using BACnet DeleteObject service? No.
3. List of optional properties supported: Active COV_Subscriptions, Description, Location, Profile_Name.
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 Value

1. Dynamically creatable using BACnet CreateObject service? No.
2. Dynamically deletable using BACnet DeleteObject service? No.
3. List of optional properties supported: Active_Text, Inactive_Text.
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 CreateObject service? No.
2. Dynamically deletable using BACnet DeleteObject service? No.
3. List of optional properties supported: State_Text.
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

Other: These devices are virtual devices and are represented by a six octet address equal to the 48-bit device instance of the virtual device.

Device Address Binding:

Is static device binding supported? No.

Networking Options:

BACnet/IP Annex J — non-BBMD functionality; the myRoom XC processor is able to register as a foreign device. The myRoom XC processor is able to initiate original-broadcast-NPDU.

Character Sets Supported:

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

- UTF-8

BACnet Routing:

Routes between the connected physical BACnet network and a virtual BACnet network.

3691271a 3 06.16.23

Object Name	Type	Instance	Read	Write	COV	Units	Min PV	Max PV	Inactive Text (0)	Active Text (1)	State Text (Multi-State)
{System Name} {Instance}	DEVICE	22 bit GUID	X	—	—	—	—	—	—	—	—
	Notes: The System Name is the logical name of the myRoom XC system that is used by BACnet clients to interact with system wide functionality. The Instance is the same as the unique Device ID assigned to this myRoom XC System.										
Master Load Shed Enabled[1]	BV	2	X	X	X	—	0	1	Disabled	Enabled	—
	Notes: This value determines whether all areas in the myRoom XC system are being controlled via load shedding. When this value is set to Enabled, for all areas in the system that have load shed allowed, any dimmable lights in each area that are turned on will have their light level reduced by the percentage specified in the Load Shed Goal value in Lutron Designer. The specified switched loads will turn off. When Disabled, the lights will return to their previous level and the specified switched loads will remain at their load shed level e.g., Off.										

BV = Binary-Value
MSV = Multi-State-Value
{SystemName}, {AreaName} and {SceneName} are text strings defined in Lutron Designer
{Instance} is a number defined in Lutron Designer
PV = Present-Value

[1] This object only appears on the processor that is designated as the main processor. Reference your BACnet Report to determine which is the main processor.

Job Name:

Job Number:

Model Numbers:

3691271a 4 06.16.23

Object Name	Type	Instance	Read	Write	COV	Units	Min PV	Max PV	Inactive Text (0)	Active Text (1)	State Text (Multi-State)
{AreaName} {Instance}	DEVICE	22 bit GUID	X	—	—	—	—	—	—	—	—
	Notes: The Area Name is the logical name that typically corresponds to a physical location in a building. The Instance is the same as the unique Device ID assigned to each area.										
Lighting State	BV	3	X	X	X	—	0	1	Off	On	—
	Notes: If any lighting zone in the area is On, this will return On. Receptacles are not included.										
Lighting Scene	MSV	4	X	X	X	—	1	Number of scenes defined for this area in Lutron Designer +2	—	—	{Scene Name}
	Notes: A "write" sends the lighting fixtures in the room to a lighting preset. 1 is the Off scene, which will turn the lights off. A "read" returns the lighting preset selected in the room, via this point. If the area is not in a pre-defined lighting preset, Unknown will be returned. Lighting Scenes are not used as part of in-room control or automation in myRoom XC, they are used primarily for lighting integration. {SceneName} is a text string of the name of each scene that is defined in Lutron Designer.										
Total Lighting Power	AV	18	X	—	X	Watts	0	None	—	—	—
Maximum Lighting Power	AV	19	X	—	X	Watts	0	None	—	—	—
Guest Presence Detection State	MSV	20	X	—	—	—	1	256	—	—	1 = Unoccupied 2 = Occupied 256 = Unknown[2]
{HVACZoneName} Temperature Celsius	AV	7100	X	X	X	Degrees Celsius	0	100	—	—	—
	Notes: If no FCU controller nor VRV/VRF interface is connected directly to the Palladiom thermostat, this point is write-only for a BACnet client. The HVAC system (provided by others) must write the temperature to this point, where it will be displayed on the Palladiom thermostat. Otherwise, this point is read-only for a BACnet client. The Lutron system will write to this point using the Palladiom thermostat's temperature sensor.										
{HVACZoneName} Temperature Farenheit	AV	7103	X	X	X	Degrees Farenheit	32	212	—	—	
	Notes: If no FCU controller nor VRV/VRF interface is connected directly to the Palladiom thermostat, this point is write-only for a BACnet client. The HVAC system (provided by others) must write the temperature to this point, where it will be displayed on the Palladiom thermostat. Otherwise, this point is read-only for a BACnet client. The Lutron system will write to this point using the Palladiom thermostat's temperature sensor.										
{HVACZoneName} Operating Mode	MSV	7106	X	X	X	—	1	256	—	—	1 = Off 4 = Auto 256 = Unknown[2]
	Notes: A write will set the operating mode of the thermostat. A read will return the current operating mode of the thermostat.										

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[2] "Unknown" is a transitional state after a power cycle.

Job Name:

Job Number:

Model Numbers:

Object Name	Type	Instance	Read	Write	COV	Units	Min PV	Max PV	Inactive Text (0)	Active Text (1)	State Text (Multi-State)
{HVACZoneName} Operating State	MSV	7107	X	X	X	—	1	256	—	—	Operating State: 1 = None, Heat Last 2 = Heating 6 = None, Cool Last 7 = Cooling 9 = Off 256 = Unknown[2]
	Notes: The stage information currently reported for the HVAC zone and its unit. This value will be read-only if the HVAC equipment is connected to the thermostat's modbus link. This value will be read/write if the HVAC equipment is connected over BACnet.										
{HVACZoneName} Fan Mode	MSV	7108	X	X	X	—	1	256	—	—	1 = Auto 4 = No Fan 5 = High 6 = Medium 7 = Low 256 = Unknown[2]
	Notes: The fan operating mode commanded for HVAC zone. This value will be read-only if the HVAC equipment is connected to the thermostat's modbus link. This value will be read/write if the HVAC equipment is connected over BACnet.										
{HVACZoneName} Fan State	MSV	7109	X	X	X	—	1	256	—	—	1 = Unknown 2 = Off 3 = High/On 4 = Medium 5 = Low 256 = Unknown[2]
	Notes: If no FCU controller nor VRV/VRF interface is connected directly to the Palladiom thermostat, this point is write-only for a BACnet client. The HVAC system (provided by others) must write the state to this point, where it will be displayed on the Palladiom thermostat. Otherwise, this point is read-only for a BACnet client. The Lutron system will write to this point.										
{HVACZoneName} HVAC Power	AV	7113	X	—	X	Watts	0	None	—	—	—
	Notes: A read-only, calculated value which indicates the instantaneous power consumption of this HVAC zone in watts.										
{HVACZoneName} Single Setpoint Celsius	AV	7114	X	X	X	Degrees Celsius	0	100	—	—	—
{HVACZoneName} Single Setpoint Fahrenheit	AV	7115	X	X	X	Degrees Fahrenheit	32	212	—	—	—
{HVACZoneName} Negative (Heating) Drift Celsius	AV	7116	X	X	X	Degrees Celsius	0	8	—	—	—
{HVACZoneName} Positive (Cooling) Drift Celsius	AV	7117	X	X	X	Degrees Celsius	0	8	—	—	—
{HVACZoneName} Negative (Heating) Drift Fahrenheit	AV	7118	X	X	X	Degrees Fahrenheit	0	15	—	—	—

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Object Name	Type	Instance	Read	Write	COV	Units	Min PV	Max PV	Inactive Text (0)	Active Text (1)	State Text (Multi-State)
{HVACZoneName} Positive (Cooling) Drift Fahrenheit	AV	7119	X	X	X	Degrees Fahrenheit	0	15	—	—	—
{HVACZoneName} Relative Humidity	AV	7120	X		X	Percent	0	100	—	—	—
	Notes: The relative humidity currently measured in the HVAC zone of this area.										

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