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BACnet Protocol Implementation Conformance Statement (PICS)

Date: April 14, 2021

Vendor Name: Lutron Electronics Co., Inc.

Product Name: Athena Processor BACnet Integration

NOTE: All features listed in this document are available to be configured on-site by Lutron field service for new or existing systems by October 15, 2021.

BACnet Protocol Revision: 13

Vendor ID: 176

Product Description

BACnet IP is embedded in the Athena processor. There are two types of BACnet devices available in Athena 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 of the building, that provide area level functionality such as area lighting scenes, occupancy state, 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.

Job Name:	Model Numbers:
Job Number:	

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:

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 Athena processor is able to register as a foreign device. The Athena 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.

Job Name:	Model Numbers:
Job Number:	

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 Athena 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 Athena System.											
Master Loadshed Enabled	BV	2	X	X	X	—	0	1	Disabled	Enabled	—
Notes: This value determines whether all areas in the Athena 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 return to their previous 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 Scene	MSV	4	X	X	X	—	1	Number of scenes defined for this area in Lutron Designer +2	—	—	{Scene Name}
Notes: The lighting preset to which the lighting fixtures in that area are currently set. If the value is set to 1, the Off Scene will be selected, which will turn all lights to OFF. An area that is not in any of the predefined scenes will return the highest value defined in the Present Value column for Lighting Scenes, corresponding to 'Unknown'. {SceneName} is a text string of the name of each scene that is defined in Lutron Designer.											
Occupancy State	MSV	8	X	—	X	—	1	4	—	—	1 = Un-occupied 2 = Occupied 3 = Inactive (unused) 4 = Unknown
Notes: A read-only property that indicates the occupancy of the entire area. Occupied means that at least one sensor in the area is indicating occupancy. Unoccupied means that all the sensors in the area are indicating unoccupied. Unknown indicates that not all the sensors in the area have reported their status.											

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

Job Name:	Model Numbers:
Job Number:	