

# BACnet® Protocol Implementation Conformance Statement (PICS)

Date: 2011-12-16

Vendor Name: LG Electronics Co. Ltd

Product Name: BNU-BAC BACnet Gateway

Product Model Number: PQNFB17B0

Application Software Version: 2.00.1 Firmware Revision: 4.0 BACnet Revision: 4.0

Product Description: This gateway converts between BACnet/IP or Modbus TCP protocol and RS-485 LGAP (LG Aircon protocol) allowing third party control and monitoring of the LG A/C system. It has a built in web server that does not require any additional software.

## BACnet Standardized Device Profile (Annex L):

- BACnet Operator Workstation (B-OWS)
- BACnet Building Controller (B-BC)
- BACnet Advanced Application Controller (B-AAC)
- BACnet Application Specific Controller (B-ASC)
- BACnet Smart Sensor (B-SS)
- BACnet Actuator (B-SA)

## BACnet Interoperability Building Blocks Supported (BIBBs)

### Data Sharing BIBBs

Bibb Type		Supported	BACnet Service	Initiate	Execute
DS-RP-B	Data Sharing-Read Property-B	<input checked="" type="checkbox"/>	ReadProperty		-
DS-RPM-B	Data Sharing-ReadPropertyMultiple-B	<input checked="" type="checkbox"/>	ReadPropertyMultiple		-
DS-WP-B	Data Sharing-WriteProperty-B	<input checked="" type="checkbox"/>	WriteProperty		-
DS-WPM-B	Data Sharing-WritePropertyMultiple-B	-	WritePropertyMultiple		-
DS-COV-B	Data Sharing-COV-B	<input checked="" type="checkbox"/>	SubscribeCOV		-
			ConfirmedCOVNotification	-	
			UnconfirmedCOVNotification	-	

### Alarm & Event Management BIBBs

Bibb Type		Supported	BACnet Service	Initiate	Execute
AE-NI-B	Alarm and Event-Notification Internal-B	<input checked="" type="checkbox"/>	ConfirmedEventNotification	-	
			UnconfirmedEventNotification	-	

## Device Management BIBBs (1)

Bibb Type		Supported	BACnet Service	Initiate	Execute
DM-DDB-A	Device Management – Dynamic Device, Binding-A	<input checked="" type="checkbox"/>	Who-Is	-	
			I-Am		-
DM-DDB-B	Device Management – Dynamic Device, Binding-B	<input checked="" type="checkbox"/>	Who-Is		-
			I-Am	-	
DM-DOB-B	Device Management – Dynamic Object, Binding-B	<input checked="" type="checkbox"/>	Who-Has		-
			I-Have	-	
DM-TS-B	Device Management – TimeSynchronization-B	<input checked="" type="checkbox"/>	TimeSynchronization		-
DM-UTC-B	Device Management – UTCTimeSynchronization-B	<input checked="" type="checkbox"/>	UTCTimeSynchronization		-
DM-LM-B	Device Management-List Manipulation-B	<input checked="" type="checkbox"/>	AddListElement		-
			RemoveListElement		-

### Segmentation Capability:

- Segmented requests supported      Window Size - 16  
 Segmented responses supported      Window Size – 16

### Standard Object Types Supported:

Object-Type	Dynamically Creatable	Dynamically Deletable	Optional Properties Supported	Writable Properties
Analog Input	No	No	Description, Reliability, Resolution, COV Increment, Time Delay, Notification Class, High Limit, Low Limit, Deadband, Limit Enable, Event Enable, Acked Transitions, Notify type, Event Time Stamps	N/A
Analog Value	No	No	Description, Reliability, Resolution, COV Increment, Time Delay, Notification Class, High Limit, Low Limit, Deadband, Limit Enable, Event Enable, Acked Transitions, Notify type, Event Time Stamps	Present_Value
Binary Input	No	No	Description, Reliability, Time Delay, Notification Class, High Limit, Low Limit, Deadband, Limit Enable, Event Enable, Acked Transitions, Notify type, Event Time Stamps	N/A
Binary Output	No	No	Description, Reliability, Time Delay, Notification Class, High Limit, Low Limit, Deadband, Limit Enable, Event Enable, Acked Transitions, Notify type, Event Time Stamps	Present_Value
Binary Value	No	No	Description, Reliability, Time Delay, Notification Class, High Limit, Low Limit, Deadband, Limit Enable, Event Enable, Acked Transitions, Notify type, Event Time Stamps	Present_Value
Device	No	No	Description, Location, Max Segments Accepted, UTC Offset, Daylight Saving Status, Device Address Binding, APDU Segment Timeout, Database Revision, Active COV Subscriptions	N/A

Object-Type	Dynamically Creatable	Dynamically Deletable	Optional Properties Supported	Writable Properties
Multi-State Input	No	No	Description, Reliability, State Text, Time Delay, Notification Class, Feedback Value, Event Enable, Acked Transitions, Notify type, Event Time Stamps	N/A
Multi-State Output	No	No	Description, Reliability, State Text, Time Delay, Notification Class, Feedback Value, Event Enable, Acked Transitions, Notify type, Event Time Stamps	Present_Value

**Data Link Layer Options:**

- BACnet IP, (Annex J)
- BACnet IP, (Annex J), Foreign Device
- ISO 8802-3, Ethernet (Clause 7)
- ANSI/ATA 878.1, 2.5 Mb. ARCNET (Clause 8)
- ANSI/ATA 878.1, RS-485 ARCNET (Clause 8), baud rate(s)
- MS/TP Master (Clause 9), baud rate(s):
- MS/TP Slave (Clause 9), baud rate(s):
- Point-to-Point, EIA 232 (Clause 10), baud rate(s):
- Point-to-Point, modem, (Clause 10), baud rate(s):
- LonTalk, (Clause), medium:
- Other:

**Device Address Binding:**

Is static device binding supported? (This is currently necessary for two-way communication with MS/TP slaves and certain devices)

- Yes  No

**Networking Options:**

- Router, Clause 6 - List all routing configurations, e.g., ARCNET-Ethernet, Ethernet-MS/TP, etc.
- Annex H, BACnet Tunneling Router over IP
- BACnet/IP Broadcast Management Device (BBMD)

Does the BBMD support registrations by foreign devices?

- Yes  No

**Character Sets Supported:**

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

- ANSI x 3.4
- IBM™ /Microsoft, DBCS
- ISO 8859-1
- ISO 10646 (USC-2)
- ISO 10646 (UCS-4)
- JIS C 6226

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

This gateway converts between BACnet IP or Modbus TCP protocol and RS-485 LGAP (LG Aircon protocol) allowing third party control and monitoring of the LG A/C system.