

BACnet Protocol Implementation Conformance Statement

Vendor Name: McQuay International

Product Name: MicroTech Communications Gateway for BACnet

Product Model Number: BACdrop

Product Description

The MicroTech Communications Gateway for BACnet ("BACdrop") is a gateway between the BACnet communication protocol and the MicroTech communication protocol. The BACdrop will provide the means for nodes on a MicroTech network to appear to BACnet networks as BACnet nodes offering BACnet services. This will make application-level data communications between the two networks possible. No modifications to MicroTech applications will be necessary to make the MicroTech nodes appear as BACnet nodes through the BACdrop gateway.

The physical layer of the BACnet side of the gateway must be ISO 8802-3, and the MicroTech side of the gateway will appear to be BACnet riding on ISO 8802-3.

BACnet Conformance Class Supported

Class 1	<input checked="" type="checkbox"/>	Class 4	<input type="checkbox"/>
Class 2	<input type="checkbox"/>	Class 5	<input type="checkbox"/>
Class 3	<input type="checkbox"/>	Class 6	<input type="checkbox"/>

BACnet Functional Groups Supported

Clock	<input type="checkbox"/>	Files	<input type="checkbox"/>
HHWS	<input type="checkbox"/>	Reinitialize	<input type="checkbox"/>
PCWS	<input type="checkbox"/>	Virtual Operator Interface	<input type="checkbox"/>
Event Initiation	<input type="checkbox"/>	Virtual Terminal	<input type="checkbox"/>
Event Response	<input type="checkbox"/>	Device Communications	<input type="checkbox"/>
COV Event Initiation	<input type="checkbox"/>	Time Master	<input type="checkbox"/>
COV Event Response	<input type="checkbox"/>		

BACnet Standard Application Services Supported

Application Service	Initiate Requests	Executes Requests
AcknowledgeAlarm	<input type="checkbox"/>	<input type="checkbox"/>
ConfirmedCOVNotification	<input type="checkbox"/>	<input type="checkbox"/>
ConfirmedEventNotification	<input type="checkbox"/>	<input type="checkbox"/>
GetAlarmSummary	<input type="checkbox"/>	<input type="checkbox"/>
GetEnrollmentSummary	<input type="checkbox"/>	<input type="checkbox"/>
SubscribeCOV	<input type="checkbox"/>	<input type="checkbox"/>
UnconfirmedCOVNotification	<input type="checkbox"/>	<input type="checkbox"/>
UnconfirmedEventNotification	<input type="checkbox"/>	<input type="checkbox"/>
AtomicReadFile	<input type="checkbox"/>	<input type="checkbox"/>
AtomicWriteFile	<input type="checkbox"/>	<input type="checkbox"/>
AddListElement	<input type="checkbox"/>	<input type="checkbox"/>
RemoveListElement	<input type="checkbox"/>	<input type="checkbox"/>
CreateObject	<input type="checkbox"/>	<input type="checkbox"/>
DeleteObject	<input type="checkbox"/>	<input type="checkbox"/>
ReadProperty	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ReadPropertyConditional	<input type="checkbox"/>	<input type="checkbox"/>
ReadPropertyMultiple	<input type="checkbox"/>	<input type="checkbox"/>
WriteProperty	<input type="checkbox"/>	<input type="checkbox"/>
WritePropertyMultiple	<input type="checkbox"/>	<input type="checkbox"/>

BACnet Standard Application Services Supported - cont.

Application Service	Initiate Requests	Executes Requests
DeviceCommunicationControl	<input type="checkbox"/>	<input type="checkbox"/>
ConfirmedPrivateTransfer	<input type="checkbox"/>	<input type="checkbox"/>
UnconfirmedPrivateTransfer	<input type="checkbox"/>	<input type="checkbox"/>
ReinitializeDevice	<input type="checkbox"/>	<input type="checkbox"/>
ConfirmedTextMessage	<input type="checkbox"/>	<input type="checkbox"/>
UnconfirmedTextMessage	<input type="checkbox"/>	<input type="checkbox"/>
TimeSynchronization	<input type="checkbox"/>	<input type="checkbox"/>
Who-Has	<input type="checkbox"/>	<input type="checkbox"/>
I-Have	<input type="checkbox"/>	<input type="checkbox"/>
Who-Is	<input type="checkbox"/>	<input checked="" type="checkbox"/>
I-Am	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VT-Open	<input type="checkbox"/>	<input type="checkbox"/>
VT-Close	<input type="checkbox"/>	<input type="checkbox"/>
VT-Data	<input type="checkbox"/>	<input type="checkbox"/>
Authenticate	<input type="checkbox"/>	<input type="checkbox"/>
RequestKey	<input type="checkbox"/>	<input type="checkbox"/>

Standard Object Types Supported

Object Type	Supported	Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties
Analog Input	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
Analog Output	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
Analog Value	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
Binary Input	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
Binary Output	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
Binary Value	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
Calendar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
Command	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
Device	Yes	N/A	N/A	description, location	_____
Event Enrollment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
File	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
Group	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
Loop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
Multi-state Input	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
Multi-state Output	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
Notification Class	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
Program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
Schedule	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____

Data Link Layer Option

- | | | |
|---|--|---|
| <input type="checkbox"/> ISO 8802-3, 10Base5 | <input type="checkbox"/> ARCNET, coax star | <input type="checkbox"/> MS/TP master, baud rate(s): _____ |
| <input type="checkbox"/> ISO 8802-3, 10Base2 | <input type="checkbox"/> ARCNET, coax bus | <input type="checkbox"/> MS/TP slave, baud rate(s): _____ |
| <input checked="" type="checkbox"/> ISO 8802-3, 10BaseT | <input type="checkbox"/> ARCNET, twisted pair star | <input type="checkbox"/> Point-To-Point, EIA 232, baud rate(s): _____ |
| <input type="checkbox"/> ISO 8802-3, Fiber | <input type="checkbox"/> ARCNET, twisted pair bus | <input type="checkbox"/> Point-To-Point, modem, baud rate(s): _____ |
| | <input type="checkbox"/> ARCNET, fiber star | <input type="checkbox"/> LonTalk, medium: _____ |
- Other

Character Sets Supported

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

- ANSI X3.4 IBM/Microsoft DBCS JIS C 6226 ISO 10646 (ICS-4) ISO 10646 (UCS2)
- ISO 8859-1

Special Functionality

- Segmented Requests Supported Yes No Window Size _____
- Segmented Responses Supported Yes No Window Size _____
- Router

Describe the supported routing capabilities:

The BACdrop gateway links a BACnet Ethernet sub-network to a MicroTech network. This characteristic makes the BACdrop a router, but it cannot be called a “BACnet router” since a MicroTech network is not a real BACnet network. However, the MicroTech network can be thought of as a *virtual* BACnet Ethernet sub-network.

The MicroTech side of the gateway is passive. That is, it cannot initiate requests.

As a result, the BACdrop gateway's routing functionality can be described as follows:

1. The routing table contains only two entries: an entry for the directly connected real BACnet Ethernet network and another entry for the virtual BACnet Ethernet (i.e., MicroTech) network.
2. Only two network layer messages are responded to: Who-Is-Router-To-Network and Initialize-Routing-Table.
3. The network layer messages that are initialized are as follows:
Reject-Message-To-Network,
I-Am-Router-To-Network,
Initialize-Routing-Table-Ack, and
Router-Busy-To-Network.

Property Range Restrictions:

This section does not apply to the BACdrop gateway since it has no commandable properties.