

PROTOCOL IMPLEMENTATION
CONFORMANCE
STATEMENT (PICS)



NB-GPC PRODUCT FAMILY

Vendor Name: American Auto-Matrix

Product Name: NB-GPC Family

Product Model Number: NB-GPC1, NB-GPC2, NB-GPC3, NB-GPC4

Firmware Revision: 2.00

BACnet Protocol Revision: 4

Product Description:

NB-GPC controllers are powerful, and scalable advanced application controllers designed to provide superior flexibility through both software and hardware I/O when it is needed the most. Providing complete stand-alone control as well as full peer-to-peer networking capabilities, NB-GPC products can be programmed to perform building automation control routines. This can be achieved through the use of built-in logic blocks, as well as traditional custom programming.

BACNET STANDARDIZED DEVICE PROFILE:

- 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 Smart Actuator (B-SA)
- BACnet Other (B-OTHER)

BACNET INTEROPERABILITY BUILDING BLOCKS SUPPORTED:

DS-RP-A	AE-N-I-B	DM-DCC-B
DS-RP-B	AE-INFO-B	DM-PT-A
DS-RPM-B	AE-ACK-B	DM-PT-B
DS-WP-A	AE-ASUM-B	DM-TS-A
DS-WP-B	SCHED-I-B	DM-TS-B
DS-WPM-B		DM-UTC-B
		DM-RD-B

SEGMENTATION CAPABILITY:

Able to transmit segmented messages yes no Window Size:

Able to receive segmented messages yes no Window Size:

STANDARD OBJECT TYPES SUPPORTED

Dynamically Creatable Objects

None

Dynamically Deletable Objects

None

Properties

Bold indicates writable properties

Italics indicates optional properties

Device

object-identifier
object-name
object-type
system-status
vendor-name
vendor-id
model-name
firmware-revision
application-software-revision
protocol-version
protocol-revision
protocol-services-supported
protocol-object-types-supported
object-list
max-apdu-length
segmentation-supported
local-time
local-date
utc-offset
daylight-savings-status
apdu-timeout
number-of-apdu-retries
max-master
max-info-frames
**time-synchronization-
recipients**
device-address-binding
database-revision
profile-name

Analog Input

object-identifier
object-name
object-type
present-value
status-flags
event-state
out-of-service
units
min-pres-value
max-pres-value
reliability
resolution
time-delay
notification-class
high-limit
low-limit
deadband
limit-enable
event-enable
acked-transitions
notify-type
event-time-stamps
profile-name

Analog Output

object-identifier
object-name
object-type
present-value
status-flags
event-state
out-of-service
units
min-pres-value
max-pres-value
priority-array
relinquish-default
time-delay
notification-class
high-limit
low-limit
deadband
limit-enable
event-enable
acked-transitions
notify-type
event-time-stamps
profile-name

Analog Value

object-identifier
object-name
object-type
present-value
status-flags
event-state
out-of-service
units
priority-array
relinquish-default
notification-class
high-limit
low-limit
deadband
limit-enable
acked-transitions
notify-type
event-time-stamps
profile-name

Binary Input

object-identifier
object-name
object-type
present-value
status-flags
event-state
out-of-service
reliability
polarity
time-delay
notification-class
alarm-value
event-enable
acked-transitions
notify-type
event-time-stamps
profile-name

Binary Output

object-identifier
object-name
object-type
present-value
status-flags
event-state
reliability
out-of-service
polarity
minimum-off-time
minimum-on-time
priority-array
relinquish-default
time-delay
notification-class
feedback-value
event-enable
acked-transitions
notify-type
event-time-stamps
profile-name

Binary Value

object-identifier
object-name
object-type
present-value
status-flags
event-state
out-of-service
time-delay
priority-array
relinquish-default
notification-class
alarm-value
event-enable
acked-transitions
notify-type
event-time-stamps
profile-name

Calendar

object-identifier
object-name
object-type
present-value
date-list
profile-name

File

object-identifier
object-name
object-type
file-type
file-size
modification-date
archive
read-only
file-access-method
profile-name

Notification Class

object-identifier
object-name
object-type
notification-class
priority
ack-required
recipient-list
profile-name

Program

object-identifier
object-name
object-type
program-state
program-change
reason-for-halt
description-of-halt
program-location
status-flags
out-of-service
profile-name

Schedule

object-identifier
object-name
object-type
present-value
effective-period
weekly-schedule
exception-schedule
schedule-default
list-of-object-property-references
priority-for-writing
status-flags
reliability
out-of-service
profile-name

NON-STANDARD PROPERTY DECLARATION

This product contains non-standard properties in the following standard objects listed below.

ANALOG INPUTS

Identifier	Meaning	Datatype
51526	Input Filter Delay	Unsigned
53062	Input Offset	Real
53832	Run Hours	Unsigned
50497	Enable Alarming	Boolean
54100	Sensor Type	Unsigned
51017	GID	Unsigned
51491	Input Index	Unsigned

ANALOG OUTPUTS

Identifier	Meaning	Datatype
52558	Min Scale	Real
52568	Max Scale	Real
53077	Actual Value	Real
54612	Update Time	Real
53832	Run Hours	Unsigned
50497	Enable Alarming	Boolean
51017	GID	Unsigned
51491	Output Index	Unsigned

ANALOG VALUES

Identifier	Meaning	Datatype
50497	Enable Alarming	Boolean

BINARY INPUTS

Identifier	Meaning	Datatype
53832	Run Hours	Unsigned
50497	Enable Alarming	Boolean
54100	Sensor Type (BI, 1 thru BI, 24 only)	Unsigned
51017	GID	Unsigned
51491	Input Index	Unsigned
51526	Filt Delay (BI,1001thru BI,1008 only)	Unsigned
52548	Pulse Count Mode	Unsigned
52816	Pulse Accumulated	Unsigned
54086	Pulse Multiplier	Real
54102	Scaled Pulse Count	Real

BINARY OUTPUTS

Identifier	Meaning	Datatype
53077	Actual Output	Unsigned
53335	Pulse Width	Real
53832	Run Hours	Unsigned
50497	Enable Alarming	Boolean
51017	GID	Unsigned
51491	Output Index	Unsigned

BINARY VALUE

Identifier	Meaning	Datatype
50497	Enable Alarming	Boolean

NOTIFICATION CLASS

Identifier	Meaning	Datatype
49457	Rec 1 Active?	Boolean
49458	Rec 2 Active?	Boolean
49459	Rec 3 Active?	Boolean
49460	Rec 4 Active?	Boolean
49461	Rec 5 Active?	Boolean

PROGRAMS

Identifier	Meaning	Datatype
42033	\$1 Register	Unsigned
42052	\$D Register	Unsigned
42053	\$E Register	Unsigned
42071	\$W Register	Unsigned
42062	\$N Register	Unsigned
42305	Register A	NULL
42306	Register B	NULL
42307	Register C	NULL
42308	Register D	NULL
42309	Register E	NULL
42310	Register F	NULL
42311	Register G	NULL
42312	Register H	NULL
42313	Register I	NULL
42314	Register J	NULL
42315	Register K	NULL
42316	Register L	NULL
42317	Register M	NULL
42318	Register N	NULL
42319	Register O	NULL
42320	Register P	NULL

SCHEDULE

Identifier	Meaning	Datatype
50005	Occ?	Boolean
50007	Unocc?	Boolean
49999	Warmup?	Boolean
50003	NightSB?	Boolean

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): 9.6k, 19.2k, 38.4k, 76.8k
- 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 11), medium:
- Other:

DEVICE ADDRESS BINDING:

Is static device binding supported? Yes No

(This is currently necessary for two-way communication with MS/TP slaves and certain other devices.)

NETWORKING OPTIONS:

- Router, Clause 6 - IP, MS/TP, Ethernet
- 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.

- | | |
|---|--|
| <input checked="" type="checkbox"/> ANSI X3.4 | <input type="checkbox"/> ISO 10646 (UCS-4) |
| <input type="checkbox"/> IBM™/Microsoft™ DBCS | <input type="checkbox"/> ISO 10646 (UCS-2) |
| <input type="checkbox"/> JIS C 6226 | <input type="checkbox"/> ISO 8859-1 |

GATEWAY

This product does not support gateway functionality for any types of non-BACnet equipment/network(s).