BACnet is a registered trademark of ASHRAE. ASHRAE does not endorse, approve or test products for compliance with ASHRAE standards. Compliance of listed products to the requirements of ASHRAE Standard 135 is the responsibility of BACnet International. BTL is a registered trademark of BACnet International.

BACnet Testing Laboratories Product Listing

BACnet functionality in each Listed product has been successfully tested at a Recognized BACnet Testing Organization utilizing the industry standard BTL test suite and test policies that were current at the time it was tested. For Listings with multiple products, some products may have less functionality than is indicated by the Listing document. The PICS document provides information on the specific functionality of each product. Note that PICS documents on the BTL Listings site are provided by the manufacturer and are not independently verified by BTL.

Listing Information (BTL-31669)

Vendor		Listing Status
SungHan. Co., Ltd. & Laboratory 2F, Hosan Building, 71, Daehak-ro 76beon-gil Yuseong-gu, Daejeon Republic of Korea		Listed Product
Test Requirements	BACnet Protocol Revision	Date Tested
Requirements as of February 2024	Revision 16	November 2025

Product Name	Model Numbers	Version
SmartBEN-EM-4N	SmartBEN-EM-4N-9000	Firmware Revision: 4.14.3.24.6 Application Software Version: Tridium 4.14.3.24.6

Device Profiles

Profile	Model Numbers
BACnet Building Controller (B-BC)	All models

BIBBs Supported

Data Sharing	ReadProperty-A	DS-RP-A
	ReadProperty-B	DS-RP-B
	ReadPropertyMultiple-A	DS-RPM-A
	ReadPropertyMultiple-B	DS-RPM-B
	WriteProperty-A	DS-WP-A
	WriteProperty-B	DS-WP-B
	WritePropertyMultiple-A	DS-WPM-A
	WritePropertyMultiple-B	DS-WPM-B
	Change Of Value-A	DS-COV-A
	Change Of Value-B	DS-COV-B
	Change Of Value Property-A	DS-COVP-A
	Change Of Value Property-B	DS-COVP-B
	Change Of Value Unsubscribed-A	DS-COVU-A
	Change Of Value Unsubscribed-B	DS-COVU-B
	View-A	DS-V-A
	Modify-A	DS-M-A

Alarm and Event Notification	Notification-A	AE-N-A
	Notification Internal-B	AE-N-I-B
	Acknowledge-A	AE-ACK-A
	Acknowledge-B	AE-ACK-B
	Alarm Summary-B	AE-ASUM-B
	Enrollment Summary-B	AE-ESUM-B
	Information-B	AE-INFO-B
	View Notifications-A	AE-VN-A
	Advanced View Notifications-A	AE-AVN-A
	View and Modify-A	AE-VM-A
	Configurable Recipient Lists-B	AE-CRL-B

Scheduling	Internal-B	SCHED-I-B
	External-B	SCHED-E-B
	View and Modify-A	SCHED-VM-A
	Weekly Schedule-A	SCHED-WS-A

Trending	Viewing and Modifying Trends Internal-B	T-VMT-I-B
	Viewing and Modifying Trends External-B	T-VMT-E-B
	Automated Trend Retrieval-A	T-ATR-A
	Automated Trend Retrieval-B	T-ATR-B
	Automated Multiple Value Retrieval-A	T-AMVR-A
	View-A	T-V-A
	Archival-A	T-A-A

Device Management	Dynamic Device Binding-A	DM-DDB-A
	Dynamic Device Binding-B	DM-DDB-B
	Dynamic Object Binding-A	DM-DOB-A
	Dynamic Object Binding-B	DM-DOB-B
	DeviceCommunicationControl-B	DM-DCC-B
	TimeSynchronization-A	DM-TS-A
	TimeSynchronization-B	DM-TS-B
	UTCTimeSynchronization-A	DM-UTC-A
	UTCTimeSynchronization-B	DM-UTC-B
	ReinitializeDevice-B	DM-RD-B
	Backup and Restore-B	DM-BR-B
	Restart-A	DM-R-A
	Restart-B	DM-R-B
	List Manipulation-A	DM-LM-A
	List Manipulation-B	DM-LM-B
	Object Creation and Deletion-B	DM-OCD-B
	Automatic Network Mapping-A	DM-ANM-A
	Automatic Device Mapping-A	DM-ADM-A
	Automatic Time Synchronization-A	DM-ATS-A
	Manual Time Synchronization-A	DM-MTS-A
	Slave Proxy-View and Modify-A	DM-SP-VM-A
	Router Configuration-B	NM-RC-B
	BBMD Configuration-B	NM-BBMDC-B
	Foreign Device Registration-A	NM-FDR-A
	Secure Connect Hub-B	NM-SCH-B
	Secure Connect Direct Connect-A	NM-SCDC-A
	Secure Connect Direct Connect-B	NM-SCDC-B
	Embedded Objects-B	GW-EO-B

Object Type Support

Analog Input	Analog Output	Analog Value
Binary Input	Binary Output	Binary Value
Calendar	Characterstring Value	Device
Event Enrollment	File	Integer Value
Large Analog Value	Loop	Multi-State Input
Multi-State Output	Multi-State Value	Notification Class
Positive Integer Value	Schedule	Structured View
Trend Log		

Data Link Layer Options

Media	Options
BACnet/IP (Annex J)	BBMD Register as Foreign Device BACnet/IP, 'DIX' Ethernet
MS/TP Manager	9600, 19200, 38400, 57600, 76800, 115200
BACnet/SC	Hub

Character Set Support

ISO 10646 (UTF-8)
IBM/Microsoft DBCS
JIS X 0208
ISO 10646 (UCS-2)
ISO 10646 (UCS-4)
ISO 8859-1