

BACnet Protocol Implementation Conformance Statement

Date: March, 2025

Vendor Name: Cimetrics Inc.

Product Name: BACstac/DN version 2.3

Product Model Number: NA

Application Software Version: 2 **Firmware Revision:** NA **BACnet Protocol Revision:** 22

Product Description:

BACstac/DN is a BACnet protocol stack designed for the development of BACnet-compliant Windows applications that run on the Microsoft .NET 8. It was designed for development of managed code applications, and has ready examples of projects for Microsoft Visual Studio.

BACnet Standardized Device Profile (Annex L):

- ☒ BACnet Operator Workstation (B-OWS)
- ☒ BACnet Advanced Operator Workstation (B-AWS)
- ☒ BACnet Cross-Domain Advanced Workstation (B-XAWS)
- ☒ BACnet Operator Display (B-OD)
- ☒ BACnet Life Safety Annunciator Panel (B-LSAP)
- ☒ BACnet Advanced Life Safety Workstation (B-ALSWS)
- ☒ BACnet Life Safety Workstation (B-LSWS)
- ☒ BACnet Access Control Workstation (B-ACWS)
- ☒ BACnet Advanced Access Control Workstation (B-AACWS)
- ☒ BACnet Access Control Security Display (B-ACSD)
- ☒ BACnet Advanced Elevator Workstation (B-AEWS)
- ☒ BACnet Elevator Workstation (B-EWS)
- ☒ BACnet Elevator Display (B-ED)
- ☒ 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 Advanced Life Safety Controller (B-ALSC)
- ☒ BACnet Life Safety Controller (B-LSC)
- ☒ BACnet Access Control Controller (B-ACC)
- ☒ BACnet Advanced Access Control Controller (B-AACC)
- ☒ BACnet Advanced Elevator Controller (B-AEC)

- ☒ **BACnet Elevator Controller (B-EC)**
- ☒ **BACnet Elevator Monitor (B-EM)**
- ☒ **BACnet Broadcast Management Device (B-BBMD)**
- ☒ **BACnet Access Control Door Controller (B-ACDC)**
- ☒ **BACnet Access Control Credential ReALWSader (B-ACCR)**
- ☒ **BACnet General (B-GENERAL)**
- ☒ **BACnet Advanced Lighting Workstation (B-ALWS)**
- ☒ **BACnet Lighting Operator Display (B-LOD)**
- ☒ **BACnet Advanced Lighting Control Station (B-ALCS)**
- ☒ **BACnet Lighting Control Station (B-LCS)**
- ☒ **BACnet Lighting Supervisor (B-LS)**
- ☒ **BACnet Lighting Device (B-LD)**

* Although these device profiles are supported, the primary purpose of BACstac/DN is development BACnet client applications.

List all BACnet Interoperability Building Blocks Supported (Annex K):

- K.1.1 BIBB - Data Sharing - ReadProperty-A (DS-RP-A)
- K.1.2 BIBB - Data Sharing-ReadProperty-B (DS-RP-B)
- K.1.3 BIBB - Data Sharing-ReadPropertyMultiple-A (DS-RPM-A)
- K.1.4 BIBB - Data Sharing-ReadPropertyMultiple-B (DS-RPM-B)
- K.1.7 BIBB - Data Sharing-WriteProperty-A (DS-WP-A)
- K.1.8 BIBB - Data Sharing-WriteProperty-B (DS-WP-B)
- K.1.9 BIBB - Data Sharing-WritePropertyMultiple-A (DS-WPM-A)
- K.1.10 BIBB - Data Sharing-WritePropertyMultiple-B (DS-WPM-B)
- K.1.11 BIBB - Data Sharing-COV-A (DS-COV-A)
- K.1.12 BIBB - Data Sharing-COV-B (DS-COV-B)
- K.1.13 BIBB - Data Sharing-COVP-A (DS-COVP-A)
- K.1.14 BIBB - Data Sharing-COVP-B (DS-COVP-B)
- K.1.15 BIBB - Data Sharing-COV-Unsubscribed-A (DS-COVU-A)
- K.1.16 BIBB - Data Sharing-COV-Unsubscribed-B (DS-COVU-B)
- K.1.17 BIBB - Data Sharing - View - A (DS-V-A)
- K.1.18 BIBB - Data Sharing - Advanced View - A (DS-AV-A)

- K.1.19 BIBB - Data Sharing - Modify - A (DS-M-A)
- K.1.20 BIBB - Data Sharing - Advanced Modify - A (DS-AM-A)
- K.1.21 BIBB - Data Sharing-WriteGroup-A (DS-WG-A)
- K.1.22 BIBB - Data Sharing-WriteGroup-Internal-B (DS-WG-I-B)
- K.1.23 BIBB - Data Sharing-WriteGroup-External-B (DS-WG-E-B)
- K.1.24 BIBB - Data Sharing-Value Source Information-B (DS-VSI-B)
- K.1.25 BIBB - Data Sharing-Change Of Value Multiple-A (DS-COVM-A)
- K.1.26 BIBB - Data Sharing-Change Of Value Multiple-B (DS-COVM-B)
- K.1.27 BIBB - Data Sharing-Life Safety View-A (DS-LSV-A)
- K.1.28 BIBB - Data Sharing-Life Safety Advanced View-A (DS-LSAV-A)
- K.1.29 BIBB - Data Sharing-Life Safety Modify-A (DS-LSM-A)
- K.1.30 BIBB - Data Sharing-Life Safety Advanced Modify-A (DS-LSAM-A)
- K.1.31 BIBB - Data Sharing-Access Control View-A (DS-ACV-A)
- K.1.32 BIBB - Data Sharing-Access Control Advanced View-A (DS-ACAV-A)
- K.1.33 BIBB - Data Sharing-Access Control Modify-A (DS-ACM-A)
- K.1.34 BIBB - Data Sharing-Access Control Advanced Modify-A (DS-ACAM-A)
- K.1.35 BIBB - Data Sharing-Access Control User Configuration-A (DS-ACUC-A)
- K.1.36 BIBB - Data Sharing-Access Control User Configuration-B (DS-ACUC-B)
- K.1.37 BIBB - Data Sharing-Access Control Site Configuration-A (DS-ACSC-A)
- K.1.38 BIBB - Data Sharing-Access Control Site Configuration-B (DS-ACSC-B)
- K.1.39 BIBB - Data Sharing-Access Control Access Door-A (DS-ACAD-A)
- K.1.40 BIBB - Data Sharing-Access Control Access Door-B (DS-ACAD-B)
- K.1.41 BIBB - Data Sharing-Access Control Credential Data Input-A (DS-ACCDI-A)
- K.1.42 BIBB - Data Sharing-Access Control Credential Data Input-B (DS-ACCDI-B)
- K.1.43 BIBB - Data Sharing-Advanced Lighting Output-A (DS-ALO-A)
- K.1.44 BIBB - Data Sharing-Lighting Output-B (DS-LO-B)
- K.1.45 BIBB - Data Sharing-Binary Lighting Output-B (DS-BLO-B)
- K.1.46 BIBB - Data Sharing-Lighting View-A (DS-LV-A)
- K.1.47 BIBB - Data Sharing-Lighting Advanced View-A (DS-LAV-A)

K.1.48 BIBB - Data Sharing-Lighting Modify-A (DS-LM-A)

K.1.49 BIBB - Data Sharing-Lighting Advanced Modify-A (DS-LAM-A)

K.1.50 BIBB - Data Sharing-Elevator View-A (DS-EV-A)

K.1.51 BIBB - Data Sharing-Elevator Advanced View-A (DS-EAV-A)

K.1.52 BIBB - Data Sharing-Elevator Modify-A (DS-EM-A)

K.1.53 BIBB - Data Sharing-Elevator Advanced Modify-A (DS-EAM-A)

K.2.1 BIBB - Alarm and Event-Notification-A (AE-N-A)

K.2.2 BIBB - Alarm and Event-Notification Internal-B (AE-N-I-B)

K.2.3 BIBB - Alarm and Event-Notification External-B (AE-N-E-B)

K.2.4 BIBB - Alarm and Event-ACK-A (AE-ACK-A)

K.2.5 BIBB - Alarm and Event-ACK-B (AE-ACK-B)

K.2.6 BIBB - Alarm and Event-Alarm Summary-A (AE-ASUM-A)

K.2.7 BIBB - Alarm and Event-Alarm Summary-B (AE-ASUM-B)

K.2.8 BIBB - Alarm and Event-Enrollment Summary-A (AE-ESUM-A)

K.2.9 BIBB - Alarm and Event-Enrollment Summary-B (AE-ESUM-B)

K.2.10 BIBB - Alarm and Event-Information-A (AE-INFO-A)

K.2.11 BIBB - Alarm and Event-Information-B (AE-INFO-B)

K.2.12 BIBB - Alarm and Event-LifeSafety-A (AE-LS-A)

K.2.13 BIBB - Alarm and Event-LifeSafety-B (AE-LS-B)

K.2.14 BIBB - Alarm and Event Management - View Notifications - A (AE-VN-A)

K.2.15 BIBB - Alarm and Event Management - Advanced View Notifications - A (AE-AVN-A)

K.2.16 BIBB - Alarm and Event Management - View and Modify - A (AE-VM-A)

K.2.17 BIBB - Alarm and Event Management - Advanced View and Modify - A (AE-AVM-A)

K.2.18 BIBB - Alarm and Event Management - Alarm Summary View - A (AE-AS-A)

K.2.19 BIBB - Alarm and Event Management - Event Log View - A (AE-ELV-A)

K.2.20 BIBB - Alarm and Event Management - Event Log View and Modify - A (AE-ELVM-A)

K.2.21 BIBB - Alarm and Event Management - Event Log - Internal - B (AE-EL-I-B)

K.2.22 BIBB - Alarm and Event Management - Event Log - External - B (AE-EL-E-B)

- K.2.23 BIBB - Alarm and Event-Notification Forwarder-B (AE-NF-B)
- K.2.24 BIBB - Alarm and Event-Notification Forwarder-Internal-B (AE-NF-I-B)
- K.2.25 BIBB - Alarm and Event Management-Configurable Recipient Lists-B (AE-CRL-B)
- K.2.26 BIBB - Alarm and Event Management-Temporary Event Subscription-A (AE-TES-A)
- K.2.27 BIBB - Alarm and Event Management-Life Safety View Notifications-A (AE-LSVN-A)
- K.2.28 BIBB - Alarm and Event Management-Life Safety Advanced View Notifications-A (AE-LSAVN-A)
- K.2.29 BIBB - Alarm and Event Management-Life Safety View and Modify-A (AE-LSVM-A)
- K.2.30 BIBB - Alarm and Event Management-Life Safety Advanced View and Modify-A (AE-LSAVM-A)
- K.2.31 BIBB - Alarm and Event Management-Access Control-A (AE-AC-A)
- K.2.32 BIBB - Alarm and Event Management-Access Control-B (AE-AC-B)
- K.2.33 BIBB - Alarm and Event Management-Access Control Advanced View Notifications-A (AE-ACAVN-A)
- K.2.34 BIBB - Alarm and Event Management-Access Control View and Modify-A (AE-ACVM-A)
- K.2.35 BIBB - Alarm and Event Management-Access Control Advanced View and Modify-A (AE-ACAVM-A)
- K.2.36 BIBB - Alarm and Event Management-Elevator View Notifications-A (AE-EVN-A)
- K.2.37 BIBB - Alarm and Event Management-Elevator Advanced View Notifications-A (AE-EAVN-A)
- K.2.38 BIBB - Alarm and Event Management-Elevator View and Modify-A (AE-EVM-A)
- K.2.39 BIBB - Alarm and Event Management-Elevator Advanced View and Modify-A (AE-EAVM-A)
- K.3.1 BIBB - Scheduling-A (SCHED-A)
- K.3.2 BIBB - Scheduling-Internal-B (SCHED-I-B)
- K.3.3 BIBB - Scheduling-External-B (SCHED-E-B)
- K.3.4 BIBB - Scheduling-Readonly-B (SCHED-R-B)
- K.3.5 BIBB - Scheduling-Advanced View and Modify-A (SCHED-AVM-A)
- K.3.6 BIBB - Scheduling-View and Modify-A (SCHED-VM-A)
- K.3.7 BIBB - Scheduling-Weekly Schedule-A (SCHED-WS-A)
- K.3.8 BIBB - Scheduling-Weekly Schedule Internal-B (SCHED-WS-I-B)
- K.3.9 BIBB - Scheduling-Timer-Internal-B (SCHED-TMR-I-B)
- K.3.10 BIBB - Scheduling-Timer-External-B (SCHED-TMR-E-B)
- K.4.1 BIBB - Trending-Viewing and Modifying Trends-A (T-VMT-A)

K.4.2 BIBB - Trending-Viewing and Modifying Trends Internal-B (T-VMT-I-B)

K.4.3 BIBB - Trending-Viewing and Modifying Trends External-B (T-VMT-E-B)

K.4.4 BIBB - Trending-Automated Trend Retrieval-A (T-ATR-A)

K.4.5 BIBB - Trending-Automated Trend Retrieval-B (T-ATR-B)

K.4.6 BIBB - Trending-Viewing and Modifying Multiple Values-A (T-VMMV-A)

K.4.7 BIBB - Trending-Viewing and Modifying Multiple Values Internal-B (T-VMMV-I-B)

K.4.8 BIBB - Trending-Viewing and Modifying Multiple Values External-B (T-VMMV-E-B)

K.4.9 BIBB - Trending-Automated Multiple Value Retrieval-A (T-AMVR-A)

K.4.10 BIBB - Trending-Automated Multiple Value Retrieval-B (T-AMVR-B)

K.4.11 BIBB - Trending-View-A (T-V-A)

K.4.12 BIBB - Trending-Advanced View and Modify-A (T-AVM-A)

K.4.13 BIBB - Trending-Archival-A (T-A-A)

K.5.1 BIBB - Device Management-Dynamic Device Binding-A (DM-DDB-A)

K.5.2 BIBB - Device Management-Dynamic Device Binding-B (DM-DDB-B)

K.5.3 BIBB - Device Management-Dynamic Object Binding-A (DM-DOB-A)

K.5.4 BIBB - Device Management-Dynamic Object Binding-B (DM-DOB-B)

K.5.5 BIBB - Device Management-DeviceCommunicationControl-A (DM-DCC-A)

K.5.6 BIBB - Device Management-DeviceCommunicationControl-B (DM-DCC-B)

K.5.9 BIBB - Device Management-Text Message-A (DM-TM-A)

K.5.10 BIBB - Device Management-Text Message-B (DM-TM-B)

K.5.11 BIBB - Device Management-TimeSynchronization-A (DM-TS-A)

K.5.12 BIBB - Device Management-TimeSynchronization-B (DM-TS-B)

K.5.13 BIBB - Device Management-UTCTimeSynchronization-A (DM-UTC-A)

K.5.14 BIBB - Device Management-UTCTimeSynchronization-B (DM-UTC-B)

K.5.15 BIBB - Device Management-ReinitializeDevice-A (DM-RD-A)

K.5.16 BIBB - Device Management-ReinitializeDevice-B (DM-RD-B)

K.5.17 BIBB - Device Management-Backup and Restore-A (DM-BR-A)

K.5.18 BIBB - Device Management-Backup and Restore-B (DM-BR-B)

- K.5.19 BIBB - Device Management-Restart-A (DM-R-A)
- K.5.20 BIBB - Device Management-Restart-B (DM-R-B)
- K.5.21 BIBB - Device Management-List Manipulation-A (DM-LM-A)
- K.5.22 BIBB - Device Management-List Manipulation-B (DM-LM-B)
- K.5.23 BIBB - Device Management-Object Creation and Deletion-A (DM-OCD-A)
- K.5.24 BIBB - Device Management-Object Creation and Deletion-B (DM-OCD-B)
- K.5.31 BIBB - Device Management-Automatic Network Mapping-A (DM-ANM-A)
- K.5.32 BIBB - Device Management-Automatic Device Mapping-A (DM-ADM-A)
- K.5.33 BIBB - Device Management-Automatic Time Synchronization-A (DM-ATS-A)
- K.5.34 BIBB - Device Management-Manual Time Synchronization-A (DM-MTS-A)
- K.5.37 BIBB - Network Management-BBMD Configuration-A (NM-BBMDC-A)
- K.5.38 BIBB - Network Management-BBMD Configuration-B (NM-BBMDC-B)
- K.5.39 BIBB - Network Management-Foreign Device Registration-A (NM-FDR-A)
- K.8.1 BIBB - Audit Reporting-Logging- A (AR-L-A)
- K.8.2 BIBB - Audit Reporting-Reporter-B (AR-R-B)
- K.8.3 BIBB - Audit Reporting-Reporter-Simple-B (AR-R-S-B)
- K.8.4 BIBB - Audit Reporting-Forwarder-B (AR-F-B)
- K.8.5 BIBB - Audit Reporting-View-A (AR-V-A)
- K.8.6 BIBB - Audit Reporting-Advanced View and Modify-A (AR-AVM-A)

Segmentation Capability:

Able to transmit segmented messages	Window Size: <u>Up to 127</u>
Able to receive segmented messages	Window Size: <u>Up to 127</u>

Standard Object Types Supported:

AuditLog, AuditReporter, Staging, AccessCredential, AccessDoor, AccessPoint, AccessRights, AccessUser, AccessZone, Accumulator, AlertEnrollment, AnalogInput, AnalogOutput, AnalogValue, Averaging, BinaryInput, BinaryOutput, BinaryValue, BinaryLightingOutput, BitStringValue, Calendar, Channel, CharStringValue, Command, CredentialDataInput, DatePatternValue, DateValue, DatetimePatternValue, DatetimeValue, Device, ElevatorGroup, Escalator, EventEnrollment, EventLog, File, GlobalGroup, Group, IntegerValue, LargeAnalogValue, LifeSafetyPoint, LifeSafetyZone, LightingOutput, LoadControl, Loop, MultiStateInput, MultiStateOutput, MultiStateValue, NetworkPort, NotificationClass, NotificationForwarder, OctetStringValue, PositiveIntegerValue, Program, PulseConverter, Schedule, StructuredView, TimePatternValue, TimeValue, TrendLog, TrendLogMultiple.

An object type is supported if it may be present in the device. For each standard Object Type supported provide the following data:

- 1) All object types except 'Device' object can be dynamically creatable using the CreateObject service. The actual list depends on the application.
- 2) All object types except 'Device' object can be dynamically deletable using the DeleteObject service. The actual list depends on the application.
- 3) All optional properties in the standard object types are supported. The actual list depends on the application.
- 4) All properties in the standard object types can be writable. The actual list depends on the application.
- 5) Conditional writability is implemented in the application.
- 6) Can have any number of proprietary properties. The actual list, their type, and meaning depend on the application.
- 7) BACnet Unsigned, Integer, Enumerated are 32-bit values. Other range restrictions can exist depending on the application.

Data Link Layer Options:

BACnet IP, (Annex J)

BACnet IP, (Annex J), Foreign Device

ISO 8802-3, Ethernet (Clause 7)

BACnet/SC

NOTE: Support for ISO 8802-3 Ethernet requires installation of the Npcap driver.

Device Address Binding:

Is static device binding supported? Yes

Networking Options:

BACnet/IP Broadcast Management Device (BBMD)

Does the BBMD support registrations by Foreign Devices? Yes

Does the BBMD support network address translation? Yes

Character Sets Supported:

ISO 10646 (UTF-8)

IBM™/Microsoft™ DBCS

ISO 8859-1

ISO 10646 (UCS-2)

ISO 10646 (UCS-4)

JIS X 0208