

Chipkin BACnet SC Hub - Fact Sheet

Chipkin Automation Systems Inc. · Version 1.1.1 · <https://store.chipkin.com/>

A **BACnet Secure Connect hub** built on the [CAS BACnet Stack](#). BACnet/SC devices connect to it over TLS 1.3 WebSockets and it relays their BACnet traffic between them. It is BACnet/SC only: no unencrypted BACnet reaches it, and its own device is managed over BACnet/SC like any other.

Demo mode: without a licence you type demo to start the hub; it accepts **up to 4 BACnet/SC connections** at a time and **stops after 24 hours** (start it again to continue). For a licence, contact sales@chipkin.com.

At a glance

Item	Details
BACnet device profile	B-SCHUB - BACnet/SC Hub (ANSI/ASHRAE 135 Annex L)
Vendor / model	Chipkin Automation Systems (vendor ID 389) / Chipkin BACnet SC Hub
BIBBs	NM-SCH-B, DS-RP-B, DS-RPM-B, DM-DDB-B, DM-DOB-B, DM-DCC-B
BACnet Protocol_Revision	30
Data links	BACnet/SC (Annex AB) only: hub function, plus optional hub connector with failover
Services executed	ReadProperty, ReadPropertyMultiple, Who-Is/I-Am, Who-Has/I-Have, DeviceCommunicationControl, AtomicReadFile, AtomicWriteFile and WriteProperty (certificate files), ReinitializeDevice (ACTIVATE_CHANGES, WARMSTART)
Objects	Device, Analog Input, Network Port 2 (BACnet/SC), File (4 certificate files)
BACnet/SC connections	Up to 4 at a time in demo mode
Platforms	Windows 10/11 and Server 2016+ (x64); Linux x64 (current distributions)
Packaging	Windows installer; Debian/Ubuntu .deb and Linux archive; signed downloads and checksums. The demo runs from a console; running as a Windows or systemd service needs a licence

Security

- **TLS 1.3 only**, with **mutual certificate authentication** for every BACnet/SC connection; WebSocket subprotocol `hub.bsc.bacnet.org`.
- **Certificates from your Certificate Authority:** the hub makes its own key and a CARL request (ANSI/ASHRAE 135-2024 Annex AA.2), and installs the CA's CARL response after checking it. Works with the Chipkin BACnet SC Certificate Authority, BACnet International's BACCARI, or any CARL-compatible CA. The hub never signs certificates and holds no CA key.
- **Certificate management over BACnet** (ANSI/ASHRAE 135 clause 19.8.3): replace the hub's certificate (also with a new key pair) and add a second trusted CA remotely; new certificates are validated before they are used, so a mistake can't lock the hub out.

- **Certificate revocation** with CRLs, fail-closed.
- **Connection rate limiting** per source address and in total, before the TLS handshake; per-connection transmit limits.
- **Audit trail** naming each device by address, certificate, VMAC and device UUID.
- **BACnet/SC only**: no BACnet/IP port, so no unencrypted BACnet traffic.
- **Set-up guide** in the browser: download the hub's request, install the CA's response (gated by the hub key's password), inspect any certificate file, and see live why a connection attempt failed and what to change.

Operations

- Status page with a health checklist (each check pass, warning or fail, with what to do), `/health` (for monitors and load balancers) and `/metrics` over HTTP or HTTPS; it opens in your browser when the hub starts from a console. Styled to the Chipkin design guide; works offline.
- Console log coloured by level; rotating log files; configuration file; per-site device name and network number.

Security support (EU Cyber Resilience Act)

- **Software bill of materials** (CycloneDX) with every release.
- **Vulnerability-handling policy**: `SECURITY.md`.
- **Support period**: security fixes for 5 years from each MAJOR version's first release; `SUPPORT.md`.

Documents

- **User manual** - `manual.pdf`
- **PICS** (Protocol Implementation Conformance Statement) - `PICS.pdf`
- **CAS BACnet Stack** - <https://store.chipkin.com/services/stacks/bacnet-stack>

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