

MatrixBBC BACnet Network Controller

The MatrixBBC is a high-performance, fully programmable, Native BACnet Building Controller (B-BC) designed to provide dependable global and area control functions to a connected BACnet building automation system. As a BTL-listed device, the MatrixBBC is ideal for various applications ranging from traditional area control, large mechanical rooms, and central plant applications, to other applications that require support for bulk I/O.

Combining both software and hardware flexibility into one package, the MatrixBBC provides support for expansion I/O and high-speed BACnet network data routing. It also allows for centralized control of devices, schedules, calendars, and alarms, along with other features and items. Scalable program routines can be accomplished using line-by-line programming or creatable logic-blocks based on second-generation NB-GPC product technology.

FEATURES

BULK I/O SUPPORT (MATRIX-BBC-DP-SSB)

- Up to 13 STATbus IOX Modules can be connected. This allows a possible maximum count of 144 Universal Inputs (72 Analog Outputs, and 72 Digital Outputs)

BACNET DATA ROUTING

- Routes information between BACnet MS/TP, BACnet/IP, and BACnet/Ethernet (8802-3) networks
- Supports localized, as well as Internet-based BBMD applications that involve Network Address Translation (NAT) equipment
- Acts as a foreign-device registrar, supporting temporary access for engineering tools and other devices across network connections

SCHEDULES (32 max)

- Schedules support the ability to adjust values within the MatrixBBC, as well as values on remote devices connected to the BACnet network. Provides full support for flexible weekly scheduling and exception scheduling
- Data Storage Objects (1000 each, max) Analog Value and Binary Value objects are supported. Both provide support for alarming, and command prioritization

CALENDARS (32 max)

- Supports the ability to define a list of dates, date ranges, and special events for use with schedules and other programmatic routines

SPL PROGRAM SUPPORT (64 program regions max)

- Each region supports up to 8k of compiled program statements with accessibility to all internal objects, as well as data on remote devices connected on the BACnet network

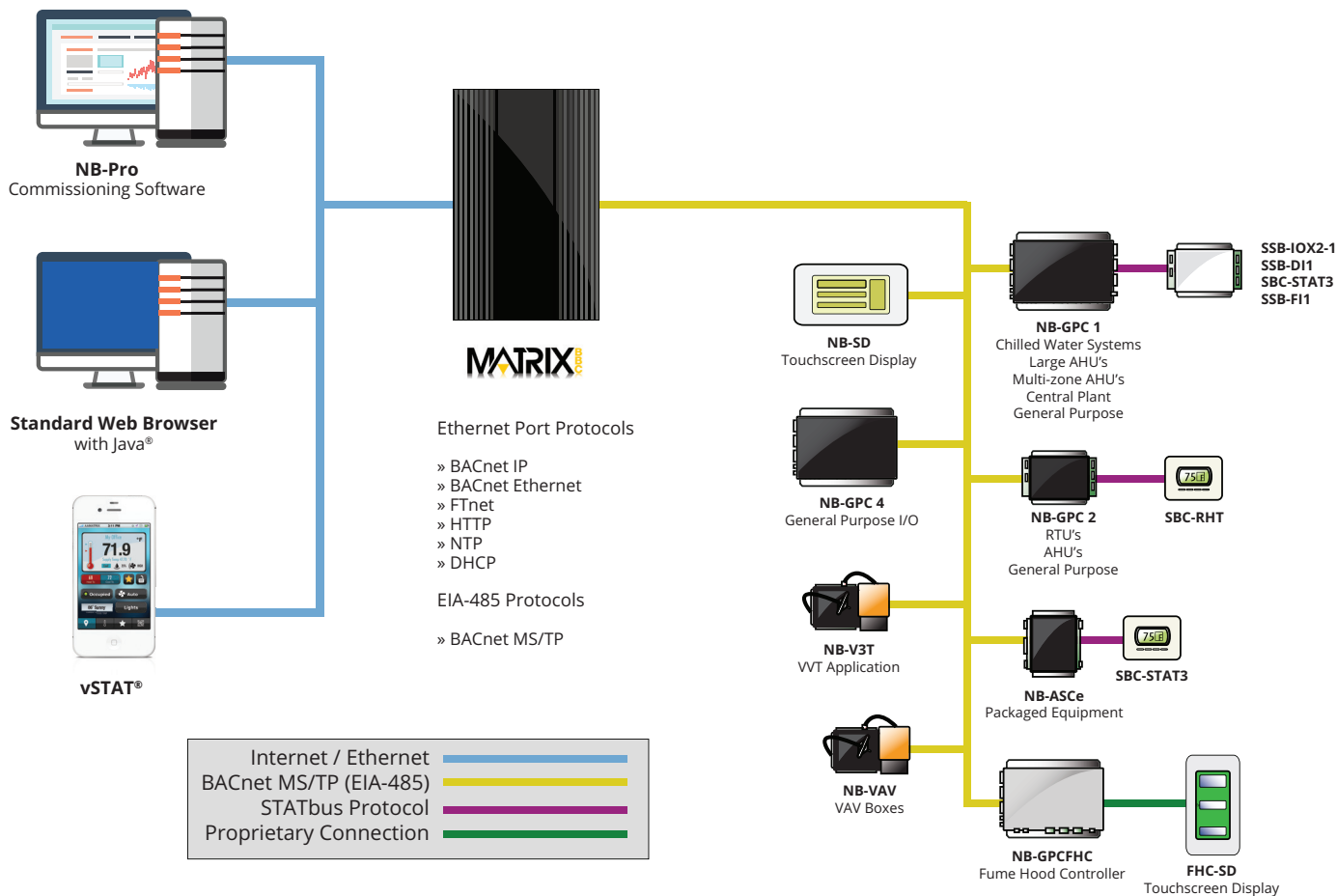


GPC LOGIC BLOCKS

- Common blocks such as control loops (PID, Thermostatic, Pulse Pair), data movement (Remaps, Netmaps, Broadcasts) and data manipulation (Math, Logic, Scale, Input Select, Staging, etc.) can be created and used when necessary

TREND LOGS (256 max)

- Contains BACnet compliant Trend Log objects which sample a single data point within the MatrixBBC or a connected network device. Supports collection in polled duration, or change of value (COV).



SPECIFICATIONS

Processor: ARM9 with embedded Linux OS
Memory: 128 MB SDRAM, 128 MB flash

Connections
EIA-485:
 Connection: 3 position - 2 connections
 Baud Rates: 9.6 / 19.2 / 38.4 / 57.6 / 76.8 / 115.2 kbps
 Termination: 249 Ohm - switch selectable
 Biasing: 510 Ohm - switch selectable
 LED: indication for TXD, RXD
 Protocol: BACnet MS/TP
 Network Load: license enforced, up to 64 devices per port

Ethernet:
 Connection Type: 1 RJ-45 female - 10/100 MB auto-sensing

STATbus (Model Specific):
 Connection: 4 position - 1 connection, STATbus Master indication for TXD, RXD
 LED:
 Network Load: up to 13 STATbus IOX modules. Consult user documentation for maximum device limit when using SmartSTAT products

Power Requirements 24 VAC, 50/60 Hz - 1.35 A max

Dimensions: 12.90" x 8.34" x 4"

Software: NB-Pro v2.10 or higher
Browser: Internet Explorer 7 or later, Mozilla Firefox 3.0 or later, Safari 3.2 or later, Google Chrome 1.0 or later

Operating Conditions
 Temperature: 32° F to 122° F (0° C to 50° C)
 Humidity: 0 to 90% RH non-condensing

Part Numbers / Upgrade Options

MATRIX-BBC-DP: Controller with two (2) EIA-485 ports. Support for up to 64 BACnet MS/TP devices per port (128 total) and SPL Programming for up to 64 programs.

MATRIX-BBC-DP-SSB: Controller with two (2) EIA-485 ports and one (1) enabled STATbus port. Support for up to 64 BACnet MS/TP devices per port (128 total) and SPL Programming for up to 64 programs. Support for I/O expansion up to a maximum of 144 inputs, 72 AO, 72 BO, and 12 DI using up to 13 STATbus devices

Agency Approvals

CE Approved FCC, Class A Computing Device; Part 15 UL/cUL 916 Listed, Open Energy Management (PAZX/PAZX7), E95642 UL 864 (UUKL) - Pending BTL Listed (B-BC Profile)



American Auto-Matrix
 One Technology Lane
 Export, PA 15632
 (724) 733-2000

aam@aamatrix.com
www.aamatrix.com

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