

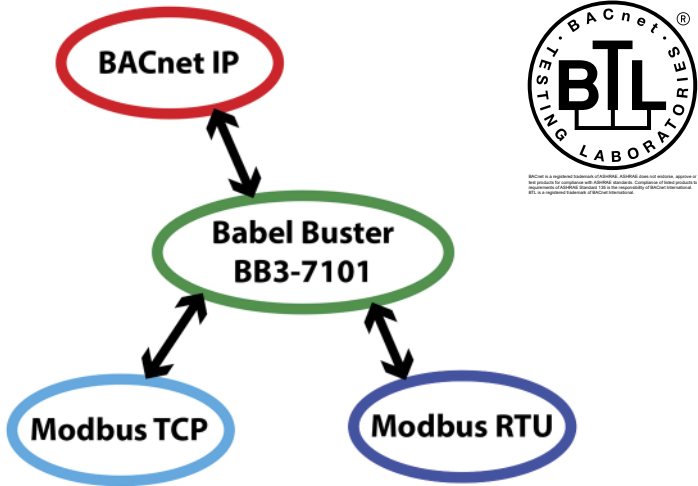


*Control Solutions' Babel Buster BB3-7101* is a BACnet IP client/server device that functions as a Modbus RTU master/slave and/or Modbus TCP client/server. A large number of BACnet objects gives you flexibility in mapping Modbus registers to any combination of BACnet objects. Packed Modbus registers may be parsed to multiple BACnet objects when reading. Multiple BACnet objects may be packed into a single Modbus register when writing. All standard Modbus register types are supported.

Value objects will poll their assigned Modbus register at the interval you specify. The content of the Modbus register will be given as the Present Value of the BACnet object when read. The Modbus register is written each time the BACnet Value object is written. The Value object corresponds well with the Modbus Holding register.

Input objects will poll their assigned Modbus register at the interval you specify, and provide the Modbus data as the Present Value when read. Commandable Output objects are used to write Modbus registers, and will update the Modbus device each time BACnet is updated.

The BB3-7101 can be Modbus RTU master or slave. The BB3-7101 can be Modbus TCP client and server concurrently, and can be BACnet IP client and server concurrently.



*Babel Buster BB3-7101 Object Summary*

- Analog Input, Analog Output, Analog Value
- Binary Input, Binary Output, Binary Value
- Multi-State Input, Output, Value
  
- Up to 5,000 Objects
- Objects from pool can be assigned to any of above types
- Maximum of 1024 states for multi-state, includes state text (actual value supported varies by resource usage per object)

# Babel Buster 3

BACNET-MODBUS  
NETWORK GATEWAY  
MODEL BB3-7101



CONTROL SOLUTIONS MINNESOTA

Built-In Secure Web Server  
for Configuration and Diagnostics



Read/Write any standard Modbus Register  
as a BACnet Property Value,  
or vice versa!

## FEATURES

- Read/Write any standard Modbus register via BACnet objects
  - Up to 5,000 objects
  - Analog, Binary, Multi-State object types
  - Input, Output, Value objects
- BACnet slave is Modbus RTU master or vice versa
- BB3-7101 is also Modbus TCP client/server
- Bidirectional data exchange between BACnet and Modbus
- Direct import of CSV files for faster point mapping
- Supports Modbus "coils", input registers, holding registers
- Single or double Modbus registers, signed, unsigned, IEEE 754
- Modbus register mapping configured via secure web interface
- Modbus registers may be scaled (x10, x100, x0.1, x0.01, etc.)
- Modbus (master) polling interval configurable per point
- Commandable BACnet objects implement priority array
- Hardened EIA-485 transceiver for Modbus RTU
- 10/100BaseT Ethernet for BACnet IP and Modbus TCP
- Powered by 10-30VDC or 24VAC 50/60 Hz
- Power Consumption: 0.1A @ 24VDC
- DIN rail mounting, 100mm H x 70mm W x 60mm D
- Pluggable screw terminal block for power & RTU network
- Operating temperature -40°C to +85°C
- Humidity 5% to 90% non-condensing
- BTL Certified
- FCC Class A, CE Mark
- Listed to UL 916 and (Canadian) C22.2 No. 205-M1983

### BACnet Protocol Implementation Conformance Statement (Abbreviated)

Date: 9 July 2020

Vendor Name: Control Solutions, Inc.

Product Name: Babel Buster BB3-7101

Product Model Number: BB3-7101

Applications Software Version: 3.15

Firmware Revision: 3.15

BACnet Protocol Revision: 15

Product Description: Network gateway allowing Modbus RTU and TCP devices to be accessed via BACnet IP and vice versa.

### BACnet Standardized Device Profile (Annex L):

- ▶ BACnet Application Specific Controller (B-ASC)
- ▶ BACnet Gateway (B-GW)

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

DS-RP-B, DS-RPM-B, DS-WP-B, DS-COV-B, DS-COVP-B,  
DM-DDB-B, DM-DOB-B, DM-RD-B, GW-EO-B

Segmentation Capability: Request & response, window size 8

### Standard Object Types Supported:

Object types: AI, AO, AV, BI, BO, BV, MSI, MSO, MSV, DEV (all static)  
See additional documentation for optional & proprietary properties.

### Data Link Layer Options:

- ▶ BACnet IP (Annex J)

### Device Address Binding:

Is static device binding supported? Yes

Networking Options: BBMD, supports registration by foreign devices

Character Sets Supported: ANSI X3.4

If this product is a communication gateway, describe the types of non-BACnet equipment/networks that the gateway supports:

Modbus RTU and/or Modbus TCP slaves/servers (BACnet slave device functions as Modbus RTU or TCP master)

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