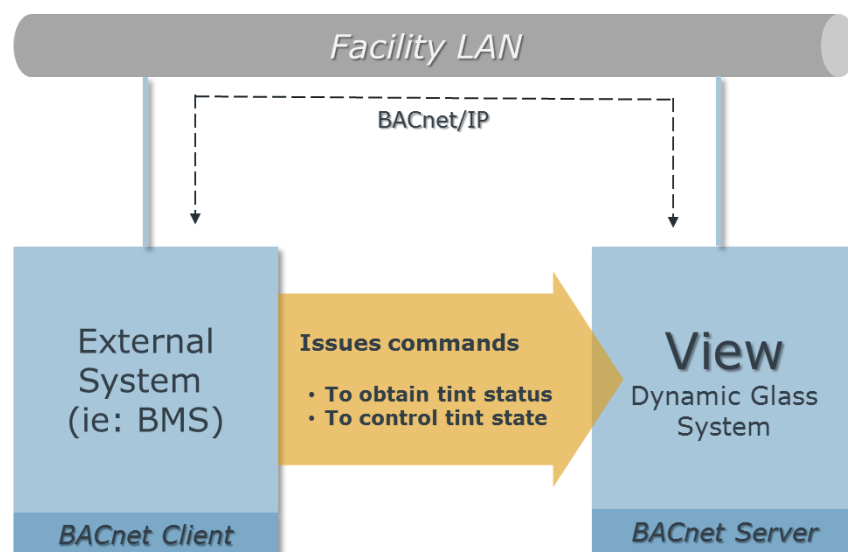


## BACnet Integration with View Dynamic Glass

View Dynamic Glass has a self-contained control system that manages the tinting operations of the glass units (IGUs). For applications that may require integration with an external system (i.e.: BMS system), a BACnet interface add-on option\* is available. Through the BACnet interface, users are able to perform two key functions from an external system:

1. To monitor the tint state of a zone
2. To manually change the tint state of a zone for a set period of time



With this feature, two BACnet Objects are made available in the View controls system. A user could issue commands from an external application to interface with these BACnet objects to monitor and change the tint state of a zone. When changing the tint state of a zone via BACnet, the issued command overrides the prescribed tinting profile from the intelligence algorithm or the scheduler. This works similarly to changing the tint state of a zone using the View wall switch or the View iOS app.

The subsequent sections of this document provides more detailed information on how to interface with the View BACnet objects.

*\* Note that the BACnet interface feature is an optional add-on and must be purchased prior to the commissioning of a View glass system. This feature does not include any programming services related to the integration between View and a 3rd party system. For integration assistance, a qualified BACnet integration consultant is recommended.*

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Date: June 2014

Vendor Name: View, Inc.

Vendor Id: 701

Product Name: Dynamic Glass Master Controller

Product Model Number: 1.1.5

Product Description: Provides zone-level management capabilities for Dynamic Glass.

Profile: BACnet Application Specific Controller (B-ASC)

BACnet Interoperability Building Blocks:

Interoperability Area	BIBBs	Description
Data Sharing (DS)	DS-RP- B	Execute ReadProperty
	DS-WP-B	Execute WriteProperty
Device and Network Management (DM)	DM-DDB-B	Execute Who-Is Initiate I-Am
	DM-DOB-B	Execute Who-Has Initiate I-Have

Data Link Layer options: BACnet/IP

Networking options: BACnet/IP

Routing: No

Static device binding support: No

Segmented request support: No

Segmented response support: No

Character sets: ANSI X3.4

Proprietary Objects: No

Proprietary Properties: No

Dynamic Object Creation: No

Dynamic Object Deletion: No

**Project Submittal Information:**

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Standard Objects Supported:

Object	Optional Properties Supported
Device	Location, Description
Multi-state Value (MSV)	Description, State_Text

Data Model:

Each glass zone is managed by a separate pair of MSV objects. The first member of the pair is a *Zone State Object* whose readonly Present\_Value and State\_Text properties convey the current state of the zone. The second member of the pair is a *Zone Command Object* whose writeable Present\_Value property is used to set the tint level for the zone. The linkage between the pair is established through the readonly Object\_Name property, values of which are of the form ZONE\_<zone\_name>\_STATE and ZONE\_<zone\_name>\_COMMAND for the zone and state objects, respectively. The <zone\_name> component of the name is unique to each zone and provides the basis for linking state and command objects. The I-Have message will be used to broadcast the existence of newly created zones. Supported values and associated state text strings for the zone and command objects are given below.

Zone State Object Values:

Present_Value	State_Text
1	Idle
2	Tint Request
3	Tint Level 4 Tinting
4	Tint Level 4 Complete
5	Clear Request
6	Tint Level 1 Clearing
7	Tint Level 1 Complete
8	Error
9	Reserved, Consult Factory
10	Tint Level 2 Complete
11	Tint Level 3 Complete
12	Tint Level 2 Clearing
13	Tint Level 3 Clearing
14	Tint Level 2 Tinting

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Present_Value	State_Text
15	Tint Level 3 Tinting
16 - 26	Reserved, Consult Factory

Zone State Object Notes:

The Present\_Value and State\_Text properties are readonly.

Zone Command Object Values:

Present_Value	State_Text
1	Tint Level 1
2	Tint Level 2
3	Tint Level 3
4	Tint Level 4
5	No Override Applied, Cancel

Zone Command Object Notes:

The Present Value property is readwrite and the State\_Text property is readonly. Unless the tint setting is overridden by another user or canceled by setting Present\_Value to 5, the applied tint setting will remain in effect for a site-configurable time interval. The factory default interval is 10800 secs (3hrs). After the interval elapses the tint setting will be restored automatically to a level prescribed by the View Scheduler module or the View Intelligence module, whichever is currently in control at the site.

If a zone is transitioning when a tint request is issued, that request will be placed in a pending state and will be executed immediately after the zone reaches steady state. The zone is in steady state when the Present\_Value property of the Zone State Object has the value 1, 4, 7, 10, or 11. When a tint command is pending execution the Boolean OVERRIDDEN flag in the command object's Status Flags property is set to TRUE. Otherwise the OVERRIDDEN flag is set to FALSE.

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