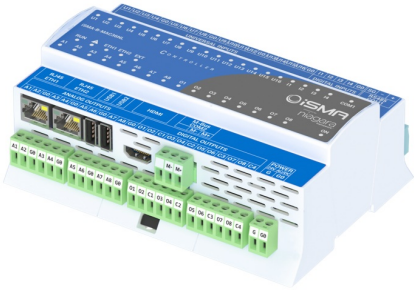
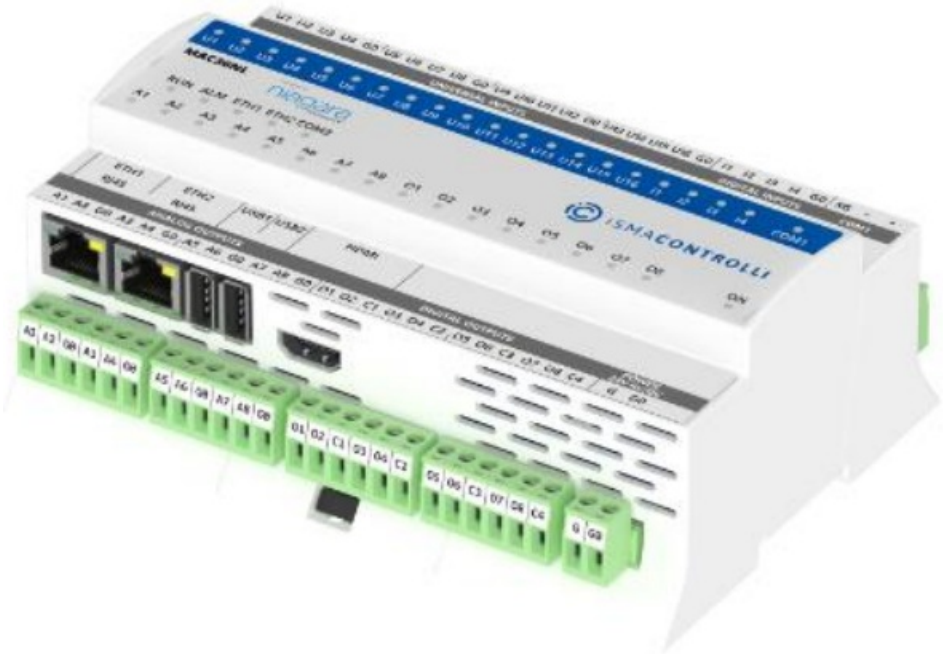


iSMA CONTROLLI MAC36NL Series Master Application Controller Instruction Manual

Master Application Controller
MAC36NL-series
Protocol Implementation Conformance Statement
BACnet PICS



Contents

Protocol implementation conformance statement

1.1 BACnet Protocol Implementation Conformance Statement

Date	2023-11-24
Vendor Name	iSMA CONTROLLI S.p.A.
Product Name	iSMA-B-MAC36NL Series
Product Model Number	iSMA-B-MAC36NL iSMA-B-MAC36NL-RS iSMA-B-MAC36NL-M
Firmware Revision	4.12.2.16
BACnet Protocol Revision	1.15

Table 1 BACnet Protocol Implementation Conformance Statement
1.2 BACnet Standardized Device Profile

Product Model	Standardized Device Profile
iSMA-B-MAC36NL iSMA-B-MAC36NL-RS iSMA-B-MAC36NL-M	B-BC

1.3 BACnet Interoperability Building Blocks Supported

Application Service	Designation
Data Sharing BIBBs-Read Property – The A device is a user of data from device B.-The “A ” Device acts as the user of data (client).	DS-RP-A
Read Property – The B device is a provider of data to device A.-The “B” Device acts as the provider of the data (server).	DS-RP-B
Read Property Multiple – The A device is a user of data from device B and requests multiple values at one time.-The “A” Device acts as the user of data (client).	DS-RPM-A
Read Property Multiple – The B device is a provider of data to device A and returns multiple values at one time.-The “B” Device acts as the provider of the data (server)	DS-RPM-B
Write Property – The A device sets a value in device B.-The “A” Device acts as the user of data (client).	DS-WP-A
Write Property – The B device allows a value to be changed by device A.- The “B” Device acts as the provider of the data (server)	DS-WP-B

Write Property Multiple – The A device sets multiple values in device B at one time.-The “A ” Device acts as the user of data (client).	DS-WPM-A
Write Property Multiple – The B device allows multiple values to be changed by device A a t one time.-The “B” Device acts as the provider of the data (server).	DS-WPM-B
COV – The A device is a user of COV data from device B.-The “A” Device acts as the user of data (client).	DS-COV-A
COV – The B device is a provider of COV data to device A.-The “B” Device acts as the pro vider of the data (server).	DS-COV-B
COV-Property – The B device is a provider of COV data of an arbitrary property of a specifi ed object to device A.-The “B” Device acts as the provider of the data (server).	DS-COVP-B
COV-Unsubscribed – The B device generates unsubscribed COV notifications.-The “B” De vice acts as the provider of the data (server).	DS-COVU-B
View – The A device retrieves values from a minimum set of objects and properties and pr esents them to the user.-The “A” Device acts as the user of data (client).	DS-V-A
Modify – The A device writes properties that are generally expected to be adjusted during normal operation of the system.-The “A” Device acts as the user of data (client).	DS-M-A
Alarm and Event Management BIBBs-Notification – The A device processes notifications about alarms and other events.-The “A” Device acts as the user of data (client).	AE-N-A
Notification Internal – Device B generates notifications about alarms and other events.-The “B” Device acts as the provider of the data (server).	AE-N-I-B
Notification External – Device B contains an Event Enrolment object that monitors values i n another device. Device B is capable of generating event notifications for alarm conditions based on value(s) in another device. Devices conforming to this BIBB must conf orm to DS-RP-A, AE- N-I-B, and must support at least 1 Event Enrollment object with an O bject Property Reference property that supports references to properties in objects contain ed in other devices. Any device that supports the generation of event notifications that req uire operator acknowledgment must support AE-ACK-B.-The “B” Device acts as the provid er of the data (server)	AE-N-E-B
Acknowledgement – Device A acknowledges alarm/event notifications.- The “A” Device act s as the user of data (client).	AE-ACK-A
Acknowledgement – Device B processes acknowledgments of previously transmitted alar m/event notifications.-The “B” Device acts as the provider of the data (server)	AE-ACK-B
Alarm Summary – Device B provides summaries of alarms device A.-The “B” Device acts as the provider of the data (server).	AE-ASUM-B
Enrollment Summary – Device B provides event enrollments to device A.- The “B” Device acts as the provider of the data (server).	AE-ESUM-B
Information – Device B provides event information to device A.-The “B” Device acts as the provider of the data (server).	AE-INFO-B
View Notifications – Device A presents basic alarm and event notifications to the user.-The “A” Device acts as the user of data (client).	AE-VN-A
View and Modify – Device A displays and modifies limits and related parameters in event g enerating objects.-The “A” Device acts as the user of data (client)	AE-VM-A
Configurable Recipient Lists – Device B supports configuration of its Recipient List properti es.	AE-CRL-B

Scheduling Internal – The B device provides date and time scheduling of the values of specific properties of specific objects within the device.- The “B” Device acts as the provider of the data (server)	SCHED-I-B
Scheduling View and Modify – The A device manipulates schedules and calendars on the B device.-The “A” Device acts as the user of data (client).	SCHED-VM-A
Viewing and Modifying Trends Internal – The B device collects the trend log data records in an internal buffer.-The “B” Device acts as the provider of the data (server)	T-VMT-I-B
Viewing and Modifying Trends External – The B device is capable of trending properties of objects contained in other devices.-The “B” Device acts as the provider of the data (server) .	T-VMT-E-B
Automated Trend Retrieval – The A device responds to a notification that a trend log is ready with new data and acquires the new data from the log.- The “A” Device acts as the user of data (client).	T-ATR-A
Automated Trend Retrieval – The B device notifies the A device that a trending buffer has acquired a predetermined number of data samples	T-ATR-B
using the BUFFER_READY event algorithm either intrinsically in the Trend Log object or algorithmically using an Event Enrollment object.- The “B” Device acts as the provider of the data (server).	
Trending – View – The A device displays trend data from the B device.- The “A” Device acts as the user of data (client).	T-V-A
Dynamic Device Binding – The A device seeks information about device attributes of other devices and interprets device announcements.-The “A” Device acts as the user of data (client).	
Dynamic Device Binding – The A device seeks information about device attributes of other devices and interprets device announcements.-The “A” Device acts as the user of data (client).	DM-DDB-A
Dynamic Device Binding – The B device provides information about its device attributes and responds to requests to identify itself.-The “B” Device acts as the provider of the data (server)	DM-DDB-B
Dynamic Object Binding – The A device seeks address information about objects.-The “A” Device acts as the user of data (client).	DM-DOB-A
Dynamic Object Binding – The B device provides address information about its objects upon request.-The “B” Device acts as the provider of the data (server)	DM-DOB-B
Device Communication Control – The B device responds to communication control exercised by the A device.-The “B” Device acts as the provider of the data (server)	DM-DCC-B
Time Synchronization – The A device provides time synchronization to B devices. The time parameter contained in the service request contains the date and time as determined by the clock in the device issuing the service request. Normally this will be “local time,” i.e., the time in the local time zone corrected for daylight savings time as appropriate.-The “A” Device acts as the user of data (client).	DM-TS-A
Time Synchronization – The B device interprets time synchronization messages from the A device.-The “B” Device acts as the provider of the data (server).	DM-TS-B
UTC Time Synchronization – The A device provides time synchronization to B devices. The time parameter contained in the service request contains “Coordinated Universal Time” (UTC). For all practical purposes, UTC is synonymous with Greenwich Mean Time, the time at the zero or Greenwich meridian.-The “A” Device acts as the user of data (client)	DM-UTC-A

UTC Time Synchronization – The B device interprets time synchronization messages from the A device.-The “B” Device acts as the provider of the data (server)	DM-UTC-B
Reinitialize Device – The B device performs reinitialization requests from the A device. The optional password field shall be supported.-The “B” Device acts as the provider of the data (server).	DM-RD-B
Backup And Restore – The B device provides its configuration file to the A device and allo ws the A device to write this file to recover its configuration in the event of a failure.-The “B ” Device acts as the provider of the data (server).	DM-BR-B
Restart – The B device informs the A device(s) each time it restarts.-The “B” Device acts a s the provider of the data (server).	DM-R-B
List Manipulation – Many BACnet object types have properties that are lists of a particular datatype. The A device can add and remove list elements in properties of objects in the B device.-The “A” Device acts as the user of data (client).	DM-LM-A
List Manipulation – The B device responds to requests to add or remove list elements.- The “B” Device acts as the provider of the data (server).	DM-LM-B
Object Creation and Deletion – The B device creates and deletes object instances based on requests from the A device. The object types whose dynamic creation and deletion is s upported shall be enumerated in the Standard Object Types Supported section of device B ’s PICS.-The “B” Device acts as the provider of the data (server)	DM-OCD-B
Device Management BIBBs-Automatic Network Mapping – The A device finds all devices currently connected to the BACnet internetwork.-The “A” Device acts as the user of data (cl ient).	DM-ANM-A
Automatic Device Mapping – The A device is capable of retrieving and presenting a list of all objects contained in any BACnet device.-The “A” Device acts as the user of data (client)	DM-ADM-A
Automatic Time Synchronization – The A device provides periodic time synchronization to B devices. The time parameter contained in the service request contains the date and time as determined by the clock in the device issuing the service request. Normally this will be “l ocal time,” i.e., the time in the local time zone corrected for daylight savings time as appropriate.- The “A” Device acts as the user of data (client)	DM-ATS-A
Manual Time Synchronization – The A device provides time synchronization to B devices on request by the operator. The time parameter contained in the service request contains t he date and time as determined by the clock in the device issuing the service request. Normally this will be “local time,” i.e., the time in the local time zone corrected for daylight s avings time as appropriate.-The “A” Device acts as the user of data (client).	DM-MTS-A
Router Configuration – The B device responds to router management commands and mus t meet the requirements for BACnet Routers as stated in Clause 6.-The “B” Device acts as the provider of the data (server)	NM-RC-B
Embedded Objects- The B device provides access to data and functionality in non-BACnet devices. The B device includes the data and functionality of the other devices through BAC net objects and services within the B device	GW-EO-B

Table 3 Building Blocks Supported

1.4 Data Link Layer Option

- Master-Slave/Token-Passing (MS/TP) master (Clause 9), baud rates: 2400, 4800, 9600, 19200, 38400, 57600,

76800, 115200

- MS/TP slave (Clause 9), baud rates: 2400, 4800, 9600, 19200, 38400, 57600, 76800, 115200
- BACnet Internet Protocol (IP) (Annex J)
- BACnet IP (Annex J), Foreign Device

1.5 Character Sets Supported
ISO 10646 (UTF-8)
1.6 Standard Object types supported

- Calendar, Event-Enrollment, Notification-Class, Schedule, and Trend-Log Object
- types can be dynamically created and deleted
- No general range restrictions exist; however, certain specific applications may have
- specific range restrictions.
- All potentially available properties are listed for each object type.
- Optional properties are listed in italics. Not all instances support all optional
- properties.
- Writable properties are listed in bold. Any range limitations are expressed in
- parentheses following the property name

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Documents / Resources

	iSMA CONTROLLI MAC36NL Series Master Application Controller [pdf] Instruction Manual MAC36NL Series, MAC36NL Series Master Application Controller, Master Application Controller , Application Controller, Controller

References

- © iSMA CONTROLLI S.p.A.
- User Manual