

**Date:** July 30, 2025

**Vendor Name:** LOYTEC electronics GmbH

**Product Name:** BACnet Router

**Product Model Number:** LIP-ME201C, LIP-ME202C, LIP-ME204, LIP-ME204C

**Applications Software Version:** V8.4.x

**Firmware Revision:** 7.6

**BACnet Protocol Revision:** 135-2020 (1.16)

### Product Description:

This product implements a router between BACnet MS/TP, BACnet/IP, and BACnet/SC. For BACnet/IP the product is also equipped with BBMD functionality. It supports operation as a router, router + BBMD, and router as foreign device behind NAT. It can act as a BACnet time master and as a slave proxy for BACnet MS/TP slave devices. The LIP-ME201C is a router with one MS/TP channel. The LIP-ME202C is a router with 2 MS/TP channels. The LIP-ME204 is a router with 4 MS/TP channels. All routers provide a BACnet/IP, BACnet/SC and BACnet MS/TP packet capture interface for the Wireshark protocol analyzer.

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

- BACnet Building Controller (B-BC)
- BACnet Router (B-RTR)
- BACnet Broadcast Management Device (B-BBMD)

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

Data Sharing – ReadProperty-B (DS-RP-B)  
Data Sharing – WriteProperty-B (DS-WP-B)  
Data Sharing – ReadPropertyMultiple-B (DS-RPM-B)  
Data Sharing – WritePropertyMultiple-B (DS-WPM-B)  
Data Sharing – COVP-B (DS-COVP-B)  
Device Management – DynamicDeviceBinding-A (DM-DDB-A)  
Device Management – DynamicDeviceBinding-B (DM-DDB-B)  
Device Management – DynamicObjectBinding-B (DM-DOB-B)  
Device Management – TimeSynchronization-A (DM-TS-A)  
Device Management – TimeSynchronization-B (DM-TS-B)  
Device Management – UTCTimeSynchronization-A (DM-UTC-A)  
Device Management – UTCTimeSynchronization-B (DM-UTC-B)  
Device Management – Automatic Time Synchronization-A (DM-ATS-A)  
Device Management – DeviceCommunicationControl-B (DM-DCC-B)  
Device Management – ReinitializeDevice-B (DM-RD-B)  
Device Management – Backup and Restore (DM-BR-B)  
Device Management – List Manipulation-B (DM-LM-B)  
Device Management – Restart A (DM-R-A)  
Device Management – Restart B (DM-R-B)  
Device Management – Slave Proxy-B (DM-SP-B)  
Network Management – Connection Establishment-A (NM-CE-A)  
Network Management – Router Configuration-B (NM-RC-B)  
Network Management – BBMD Configuration-B (NM-BBMD-C-B)  
Network Management – Foreign Device Registration-A (NM-FDR-A)

### Segmentation Capability:

Segmented requests supported, window size: 4  
Segmented responses supported, window size: 4

**Standard Object Types Supported:**

For all the objects below the following applies if not stated otherwise:

- 1) Does not support the CreateObject and DeleteObject service
- 2) Properties Object\_Name, Description support up to 64 characters
- 3) Includes the required properties as specified for the object class
- 4) All commandable objects support the Priority\_Array and Relinquish\_Default with 16 freely usable priorities
- 5) No additional writeable properties exist
- 6) No proprietary properties exist
- 7) No range restrictions exist

**Device Object**

*List of optional properties supported:*

Location, Description, Max\_Segments\_Accepted, APDU\_Segment\_Timeout, Max\_Master<sup>1</sup>, Max\_Info\_Frames<sup>1</sup>, Active\_COV\_Subscriptions, Configuration\_Files, Last\_Restore\_Time, Backup\_Failure\_Timeout, Local\_Time, Local\_Date, UTC\_Offset, Daylight\_Savings\_Status, Time\_Synchronization\_Recipients, UTC\_Time\_Synchronization\_Recipients, Time\_Synchronization\_Interval, Align\_Intervals, Interval\_Offset, Serial\_Number, Backup\_Preparation\_Time, Restore\_Preparation\_Time, Restore\_Completion\_Time, Backup\_And\_Restore\_State, Slave\_Proxy\_Enable<sup>1</sup>, Manual\_Slave\_Address\_Binding<sup>1</sup>, Auto\_Slave\_Discovery<sup>1</sup>, Slave\_Address\_Binding<sup>1</sup>

**File Object**

*List of optional properties supported:*

Description

*Object limit:* 1 File object. This object is used for configuration backup and restore.

**Data Link Layer Options:**

- BACnet IP, (Annex J)
- BACnet IP, (Annex J), Foreign Device
- BACnet IP, (Annex J), BACnet Broadcast Management Device (BBMD)
- MS/TP master (Clause 9), baud rate(s): 9600, 19200, 38400, 57600, 76800, 115200
- MS/TP master (Clause 9) supports extended length BACnet frames
- BACnet Secure Connect (Annex AB)
  - BACnet Secure Connect Node: direct connections supported
  - BACnet Secure Connect Hub Function
  - Generates private keys internally, and provides matching certificate signing requests
  - DNS hostname resolution supported

**Device Address Binding:**

Static device address binding is supported.

**Networking Options:**

- Router, Clause 6 – MS/TP to BACnet/SC and/or BACnet/IP
- Annex H, BACnet Tunneling Router over IP

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<sup>1</sup> If device is operated with BACnet MS/TP enabled.

**Character Sets Supported:**

The device is configurable for one of the following character sets at a time. It does not support them simultaneously.

- |   |   |  |
|---|---|--|
| <input checked="" type="checkbox"/> ANSI X3.4/UTF-8   | <input type="checkbox"/> IBM™/Microsoft™ DBCS | <input checked="" type="checkbox"/> ISO 8859-1 |
| <input checked="" type="checkbox"/> ISO 10646 (UCS-2) | <input type="checkbox"/> ISO 10646 (UCS-4)    | <input type="checkbox"/> JIS C 6226            |

**Additional Information and Contact:**

Further Information, a detailed User Manual and firmware updates can be obtained from our website <http://www.loytec.com>.

For information and technical support please contact us at the following address:

*LOYTEC electronics GmbH.  
Blumengasse 35  
A-1170 Vienna  
Austria / Europe*

*email: [support@loytec.com](mailto:support@loytec.com)  
web: <http://www.loytec.com>  
tel: +43/1/40208050  
fax: +43/1/402080599*