Date: June 30, 2020
Vendor Name: LOYTEC electronics GmbH
Product Name: BACnet Router
Product Model Number: LIP-ME201C, LIP-ME202C, LIP-ME204, LIP-ME204C
Applications Software Version: V7
Firmware Revision: 7.2
BACnet Protocol Revision: 135-2016 (1.15)

Product Description:

This product implements a BACnet MS/TP to BACnet/IP router with BBMD functionality (on the IP side). 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 and BACnet MS/TP packet capture interface for the Wireshark protocol analyzer.

BACnet Standardized Device Profile (Annex L):

This device is a router / BBMD.

BACnet Interoperability Building Blocks Supported (Annex K):

Data Sharing – ReadProperty-B (DS-RP-B)
Data Sharing – ReadPropertyMultiple-B (DS-RPM-B)
Data Sharing – WriteProperty-B (DS-WP-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 – Foreign Device Registration-A (NM-FDR-A)
Network Management – BBMD Configuration-B (NM-BBMDC-B)
Network Management – Router Configuration-B (NM-RC-B)
Network Management – Connection Establishment-A (NM-CE-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[1], Max_Info_Frames[1], 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, Backup_Preparation_Time, Restore_Preparation_Time, Restore_Completion_Time, Backup_And_Restore_State, Slave_Proxy_Enable[1], Manual_Slave_Address_Binding[1], Auto_Slave_Discovery[1], Slave_Address_Binding[1]

File Object

List of optional properties supported:
Description, Record_Count, Profile_Name
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
☐ ISO 8802-3, Ethernet (Clause 7)
☑ MS/TP master (Clause 9), baud rate(s): 9600, 19200, 38400, 76800, 115200
☐ MS/TP slave (Clause 9), baud rate(s): 9600, 19200, 38400, 76800, 115200
☐ Point-To-Point, EIA 232 (Clause 10), baud rate(s):
☐ Point-To-Point, modem, (Clause 10), baud rate(s):
☐ LonTalk, (Clause 11), medium:

Device Address Binding:

Static device address binding is supported.

Networking Options:

☑ Router, Clause 6 – MS/TP to BACnet/IP
☐ Annex H, BACnet Tunneling Router over IP
☑ BACnet/IP Broadcast Management Device (BBMD)
☑ Registrations by Foreign Devices

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[1] 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.

☑ ANSI X3.4/UTF-8   ☐ IBM™/Microsoft™ DBCS   ☑ ISO 8859-1
☑ ISO 10646 (UCS-2)   ☐ ISO 10646 (UCS-4)   ☐ 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.	*email:*	*support@loytec.com*
Blumengasse 35	*web:*	*http://www.loytec.com*
A-1170 Vienna	*tel:*	*+43/1/40208050*
Austria / Europe	*fax:*	*+43/1/402080599*