## **RUT906 BACnet**

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The information in this page is updated in accordance with firmware version **RUT9M\_R\_00.07.09**.

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#### **Summary**

**BACnet** is a communication protocol for building automation and control (BAC) networks that use the ASHRAE, ANSI, and ISO 16484-5 standards protocol.

This manual page provides an overview of the BACnet functionality in RUT906 devices.

**Note:** BACnet is additional software that can be installed from the **System**  $\rightarrow$  **Package Manager** page.

### **General Configuration**



Field	Value	Description
Enable	off   on; default: <b>off</b>	Enables BACnet router function.
Enable BBMD	off   on; default: <b>off</b>	Enables BACnet broadcast management function.
BBMD interface	$\begin{array}{c} \text{network interface; default:} \\ \textbf{eth0} \end{array}$	Specifies interface for BBMD function. IP address of this interface should be reachable from WAN.
Allow Remote Access	off   on; default: <b>off</b>	Creates port forward firewall rule to make application port in LAN reachable from selected BBMD interface.
Force gateway	off   on; default: <b>off</b>	Adds configured gateway IP address and port to BBMD packages sent.
Gateway address	ip4; default: <b>none</b>	Gateway IP address.
Gateway port	integer [165535]; default: <b>none</b>	Gateway port number.

# **BIP Configuration**

Communications in BACnet over IP (BIP) rely upon the protocol rules of IP and Ethernet.



Field Value Description

BIP port integer [1..65535]; default: 47808 BIP UDP port.

# **MSTP Configuration**

**MSTP** is most commonly used to connect field devices to controllers / routers / control applications. The physical layer uses RS485 which allows up to 31 devices to be installed on a single network.



Field	Value	Description
MSTP MAC	integer [0127]; default: <b>13</b>	Router MSTP MAC address.
MSTP MAC max	integer [1127]; default: <b>127</b>	Maximum client address in the MSTP network.
Baud rate	300   600   1200   2400   4800   9600   19200   38400   57600   115200   230400; default: <b>38400</b>	Serial data transmission rate (in bits per second).
Parity	Even   Odd   Mark   Space   None; default: <b>None</b>	In serial transmission, parity is a method of detecting errors. An extra data bit is sent with each data character, arranged so that the number of 1 bits in each character, including the parity bit, is always odd or always even. If a byte is received with the wrong number of 1s, then it must have been corrupted. However, an even number of errors can pass the parity check.  • None (N) - no parity method is used.  • Odd (O) - the parity bit is set so that the number of "logical ones (1s)" has to be odd.  • Even (E) - the parity bit is set so that the number of "logical ones (1s)" has to be even.  • Space (S) - the parity bit will always be a binary 0.  • Mark (M) - the parity bit will always be a binary 1.
Data bits	5   6   7   8; default: <b>8</b>	Number of data bits for each character.
Stop bits	1   2; default: <b>1</b>	Stop bits sent at the end of every character allow the receiving signal hardware to detect the end of a character and to resynchronise with the character stream. Electronic devices usually use one stop bit. Two stop bits are required if slow electromechanical devices are used