

RUT301 BACnet

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The information in this page is updated in accordance with firmware version [RUT301_R_00.07.07.2](#).

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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 RUT301 devices.

Note: BACnet is additional software that can be installed from the **System** → [Package Manager](#) page.

General Configuration

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Field	Value	Description
Enable	off on; default: off	Enables BACnet router function.
Enable BBMD	off on; default: off	Enables BACnet broadcast management function.
BBMD interface	network interface; default: eth0	Specifies interface for BBMD function. IP address of this interface should be reachable from WAN.
Allow Remote Access	off on; default: off	Creates port forward firewall rule to make application port in LAN reachable from selected BBMD interface.
Force gateway	off on; default: off	Adds configured gateway IP address and port to BBMD packages sent.
Gateway address	ip4; default: none	Gateway IP address.
Gateway port	integer [1..65535]; default: none	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 [0..127]; default: 13	Router MSTP MAC address.
MSTP MAC max	integer [1..127]; default: 127	Maximum client address in the MSTP network.
Baud rate	300 600 1200 2400 4800 9600 19200 38400 57600 115200 230400; default: 38400	Serial data transmission rate (in bits per second).
Parity	Even Odd Mark Space None; default: None	<p>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.</p> <ul style="list-style-type: none">• 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: 8	Number of data bits for each character.
Stop bits	1 2; default: 1	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..