



Interface specification BACnet GMMnext

BACnet parameter specification for the Güntner Motor Management GMMnext
Applicable for interface modules 5215467 & 5215466

[guntner.com/uk](https://www.guntner.com/uk)

Contents

1	Introduction.....	3
2	GMMnext data points.....	4
3	Settings.....	11

1 Introduction

This document describes the BACnet communication of the Güntner Motor Management GMMnext. Communication of the Güntner controller takes place via a gateway from Modbus RTU to BACnet IP or BACnet MS/TP.

The GMMnext is available via the gateway as BACnet device.

The corresponding modules are available with the following ERP numbers and each consist of the configured gateway and an installation kit:

- BACnet IP: 5215467
- BACnet MS/TP: 5215466
- Installation kits (depending on the size of the GMM housing):
 - GMMnext EC: 5215474 (200) / 5215475 (300) / 5215476 (400)
 - GMMnext Rail: 5215516 (200) / 5215448 (300) / 5215555 (400)

Connecting the system to a BACnet network requires .

The following additional documents are available:

- EDE file: "GMMnextEC_BACnet.zip"
- The PICS document for the Intesis gateway can be downloaded here:
<https://www.bacnetinternational.net/btl/index.php?m=199>
→ "pics_intesisbox_bacnet_server_rev_14_.pdf"

The following data point list refers to the Güntner Modbus specification which contains more detailed information regarding the parameters.

The GMMnext parameters are available on the BACnet page via the object property "Present Value" (85).

2 GMMnext data points

BACnet objects			Güntner Modbus GMMnext specification			
Object type	Object instance	Object name	Modbus data address	Modbus data type	Access size	Designator
Device	915003	GMMnext	-	-	-	-
Binary input	1	Diagnosis: Fan warning active	256	Discrete input	Bit	Diagnose: Ventilatorwarnung aktiv
Binary input	2	Diagnosis: Fan alarm active	257	Discrete input	Bit	Diagnose: Ventilationalarm aktiv
Binary input	3	Diagnosis: Fans alarm active	258	Discrete input	Bit	Diagnosis: Fans alarm active (group message)
Binary input	4	Diagnosis: Sensor alarm active	259	Discrete input	Bit	Diagnosis: Sensor alarm active
Binary input	5	Diagnosis: Control alarm message (Prio 1): Signal level	260	Discrete input	Bit	Diagnosis: control alarm message (Prio 1): Signal level
Binary input	6	Diagnosis: Control operating message: Signal level	261	Discrete input	Bit	Diagnosis: control operating message: Signal level
Binary input	7	Diagnosis: Control warning message (Prio 2): Signal level	262	Discrete input	Bit	Diagnose: Regelung Warnmeldung (Prio 2): Signalpegel
Binary input	8	Inverse run: Inverse operation active	263	Discrete input	Bit	Inversbetrieb: Inversbetrieb aktiv
Binary input	9	Manual mode: Manual mode active	265	Discrete input	Bit	Handbetrieb: Handbetrieb aktiv
Binary input	10	Night setback: Night setback active	267	Discrete input	Bit	Nachtbegrenzung: Nachtbegrenzung aktiv
Binary input	11	Subcooler: Subcooler active	269	Discrete input	Bit	Unterkühler: Unterkühler aktiv
Binary input	12	Control cycle 1: Release active	7171	Discrete input	Bit	Regelkreis 1 : Freigabe aktiv
Binary input	13	Control cycle 2: Release active	7172	Discrete input	Bit	Regelkreis 2 : Freigabe aktiv
Binary input	14	Maintenance run fan group 1: Maintenance run active	7186	Discrete input	Bit	Wartungslauf Ventilatorgruppe 1: Wartungslauf aktiv
Binary input	15	Maintenance run fan group 2: Maintenance run active	7187	Discrete input	Bit	Wartungslauf Ventilatorgruppe 2: Wartungslauf aktiv
Binary input	16	Control cycle 1 setpoint displacement: Setpoint displacement active	7190	Discrete input	Bit	Regelkreis 1 Sollwertschiebung: Sollwertschiebung aktiv

Binary input	17	Control cycle 2 setpoint displacement: Setpoint displacement active	7191	Discrete input	Bit	Regelkreis 2 Sollwertschiebung: Sollwertschiebung aktiv
Binary input	18	Control cycle 1 threshold: Threshold active	7195	Discrete input	Bit	Control cycle 1 Threshold value: Threshold value active
Binary input	19	Control cycle 2 threshold: Threshold active	7196	Discrete input	Bit	Control cycle 2 Threshold value: Threshold value active
Binary input	20	Fan 1 : Alarm active	7200	Discrete input	Bit	Fan 1: Alarm active
Binary input	21	Fan 2 : Alarm active	7201	Discrete input	Bit	Ventilator 2: Alarm aktiv
Binary input	22	Fan 3 : Alarm active	7202	Discrete input	Bit	Ventilator 3: Alarm aktiv
Binary input	23	Fan 4 : Alarm active	7203	Discrete input	Bit	Ventilator 4: Alarm aktiv
Binary input	24	Fan 5 : Alarm active	7204	Discrete input	Bit	Ventilator 5: Alarm aktiv
Binary input	25	Fan 6 : Alarm active	7205	Discrete input	Bit	Ventilator 6: Alarm aktiv
Binary input	26	Fan 7 : Alarm active	7206	Discrete input	Bit	Ventilator 7: Alarm aktiv
Binary input	27	Fan 8 : Alarm active	7207	Discrete input	Bit	Ventilator 8: Alarm aktiv
Binary input	28	Fan 9 : Alarm active	7208	Discrete input	Bit	Ventilator 9: Alarm aktiv
Binary input	29	Fan 10 : Alarm active	7209	Discrete input	Bit	Ventilator 10: Alarm aktiv
Binary input	30	Fan 11 : Alarm active	7210	Discrete input	Bit	Ventilator 11: Alarm aktiv
Binary input	31	Fan 12 : Alarm active	7211	Discrete input	Bit	Ventilator 12: Alarm aktiv
Binary input	32	Fan 13 : Alarm active	7212	Discrete input	Bit	Fan 13: Alarm active
Binary input	33	Fan 14 : Alarm active	7213	Discrete input	Bit	Fan 14: Alarm active
Binary input	34	Fan 15 : Alarm active	7214	Discrete input	Bit	Fan 15: Alarm active
Binary input	35	Fan 16 : Alarm active	7215	Discrete input	Bit	Fan 16: Alarm active
Binary input	36	Fan 17 : Alarm active	7216	Discrete input	Bit	Ventilator 17: Alarm aktiv
Binary input	37	Fan 18 : Alarm active	7217	Discrete input	Bit	Ventilator 18: Alarm aktiv
Binary input	38	Fan 19 : Alarm active	7218	Discrete input	Bit	Ventilator 19: Alarm aktiv
Binary input	39	Fan 20 : Alarm active	7219	Discrete input	Bit	Fan 20: Alarm active

Binary input	40	Fan 1 : Warning active	7232	Discrete input	Bit	Fan 1: Warning active
Binary input	41	Fan 2 : Warning active	7233	Discrete input	Bit	Ventilator 2: Warnung aktiv
Binary input	42	Fan 3 : Warning active	7234	Discrete input	Bit	Ventilator 3: Warnung aktiv
Binary input	43	Fan 4 : Warning active	7235	Discrete input	Bit	Ventilator 4: Warnung aktiv
Binary input	44	Fan 5 : Warning active	7236	Discrete input	Bit	Ventilator 5: Warnung aktiv
Binary input	45	Fan 6 : Warning active	7237	Discrete input	Bit	Ventilator 6: Warnung aktiv
Binary input	46	Fan 7 : Warning active	7238	Discrete input	Bit	Ventilator 7: Warnung aktiv
Binary input	47	Fan 8 : Warning active	7239	Discrete input	Bit	Ventilator 8: Warnung aktiv
Binary input	48	Fan 9 : Warning active	7240	Discrete input	Bit	Fan 9: Warning active
Binary input	49	Fan 10 : Warning active	7241	Discrete input	Bit	Fan 10: Warning active
Binary input	50	Fan 11 : Warning active	7242	Discrete input	Bit	Ventilator 11: Warnung aktiv
Binary input	51	Fan 12 : Warning active	7243	Discrete input	Bit	Ventilator 12: Warnung aktiv
Binary input	52	Fan 13 : Warning active	7244	Discrete input	Bit	Ventilator 13: Warnung aktiv
Binary input	53	Fan 14 : Warning active	7245	Discrete input	Bit	Ventilator 14: Warnung aktiv
Binary input	54	Fan 15 : Warning active	7246	Discrete input	Bit	Fan 15: Warning active
Binary input	55	Fan 16 : Warning active	7247	Discrete input	Bit	Fan 16: Warning active
Binary input	56	Fan 17 : Warning active	7248	Discrete input	Bit	Fan 17: Warning active
Binary input	57	Fan 18 : Warning active	7249	Discrete input	Bit	Ventilator 18: Warnung aktiv
Binary input	58	Fan 19 : Warning active	7250	Discrete input	Bit	Ventilator 19: Warnung aktiv
Binary input	59	Fan 20 : Warning active	7251	Discrete input	Bit	Ventilator 20: Warnung aktiv
Binary input	60	Analogue input 1: Alarm active	8175	Discrete input	Bit	Analogeingang 1: Alarm
Binary input	61	Analogue input 2: Alarm active	8176	Discrete input	Bit	Analogeingang 2: Alarm
Binary input	62	Analogue input 3: Alarm active	8177	Discrete input	Bit	Analogeingang 3: Alarm

Binary input	63	Analogue input 4: Alarm active	8178	Discrete input	Bit	Analogeingang 4: Alarm
Binary input	64	Analog input 5: Alarm active	8179	Discrete input	Bit	Analog input 5: Alarm
Binary value	0	Manual mode: Manual mode on	265	Coil	Bit	Handbetrieb: Handbetrieb ein
Binary value	1	Manual mode: Inverse operation	266	Coil	Bit	Handbetrieb: Inversbetrieb
Binary value	2	Night setback: Night setback on	268	Coil	Bit	Nachtbegrenzung: Nachtbegrenzung ein
Binary value	3	Control cycle 1 setpoint displacement: Setpoint displacement on	8133	Coil	Bit	Control cycle 1 Setpoint displacement: Setpoint displacement on
Binary value	4	Control cycle 2 setpoint displacement: Setpoint displacement on	8134	Coil	Bit	Control cycle 2 Setpoint displacement: Setpoint displacement on
Multi-state value	0	Standard protocol: System of units	1	Holding register	Word	Standard protocol: System of units
Multi-state value	1	Standard protocol: Modbus data format	2	Holding register	Word	Standard protocol: Modbus data format
Multi-state value	2	Control: Operating mode	305	Holding register	Word	Regelung: Betriebsart
Multi-state value	3	Control cycle 1: Setpoint count	3826	Holding register	Word	Regelkreis 1: Anzahl Sollwerte
Multi-state value	4	Control cycle 2: Setpoint count	3827	Holding register	Word	Regelkreis 2: Anzahl Sollwerte
Multi-state input	0	Control cycle 1: Refrigerant	3910	Holding register	Word	Regelkreis 1: Kältemittel
Multi-state input	1	Control cycle 2: Refrigerant	3911	Holding register	Word	Regelkreis 2: Kältemittel
Multi-state input	2	Control cycle 1: Fluid dimension	4001	Input register	Word	Regelkreis 1: Dimension des Mediums
Multi-state input	3	Control cycle 2: Fluid dimension	4002	Input register	Word	Regelkreis 2: Dimension des Mediums
Analog value	0	Inverse run: Control value	4097	Holding register	Word	Inversbetrieb: Stellwert
Analog value	1	Manual mode: Fans control value	4099	Holding register	Word	Handbetrieb: Ventilatorenstellwert
Analog value	2	Night setback: Maximum control value	4100	Holding register	Word	Nachtbegrenzung: Maximum Stellwert

Analog value	3	Subcooler: Control value	4101	Holding register	Word	Unterkühler: Stellwert
Analog value	4	Control cycle 1 master external: Control value master external bus	7762	Holding register	Word	Control cycle 1 master control value: Control value master external bus
Analog value	5	Control cycle 2 master external: Control value master external bus	7763	Holding register	Word	Control cycle 2 master control value: Control value master external bus
Analog value	6	Control cycle 1 setpoint 1: Pressure	7802	Holding register	Word	Control cycle 1 setpoint 1: Pressure
Analog value	7	Control cycle 2 setpoint 1: Pressure	7803	Holding register	Word	Control cycle 2 setpoint 1: Pressure
Analog value	8	Control cycle 1 setpoint 1: Temperature	7812	Holding register	Word	Regelkreis 1 Sollwert 1: Temperatur
Analog value	9	Control cycle 2 setpoint 1: Temperature	7813	Holding register	Word	Regelkreis 2 Sollwert 1: Temperatur
Analog value	10	Control cycle 1 setpoint 2: Pressure	7822	Holding register	Word	Regelkreis 1 Sollwert 2: Druck
Analog value	11	Control cycle 2 setpoint 2: Pressure	7823	Holding register	Word	Regelkreis 2 Sollwert 2: Druck
Analog value	12	Control cycle 1 setpoint 2: Temperature	7832	Holding register	Word	Regelkreis 1 Sollwert 2: Temperatur
Analog value	13	Control cycle 2 setpoint 2: Temperature	7833	Holding register	Word	Regelkreis 2 Sollwert 2: Temperatur
Analog input	0	Fans: Number of Fans	276	Holding register	Word	Ventilatoren: Anzahl Ventilatoren
Analog input	1	Fan 1 : Operating hours	3969	Input register	Word	Ventilator 1: Betriebsstunden
Analog input	2	Fan 2 : Operating hours	3970	Input register	Word	Ventilator 2: Betriebsstunden
Analog input	3	Fan 3 : Operating hours	3971	Input register	Word	Ventilator 3: Betriebsstunden
Analog input	4	Fan 4 : Operating hours	3972	Input register	Word	Ventilator 4: Betriebsstunden
Analog input	5	Fan 5 : Operating hours	3973	Input register	Word	Fan 5: Operating hours
Analog input	6	Fan 6 : Operating hours	3974	Input register	Word	Fan 6: Operating hours
Analog input	7	Fan 7 : Operating hours	3975	Input register	Word	Fan 7: Operating hours
Analog input	8	Fan 8 : Operating hours	3976	Input register	Word	Ventilator 8: Betriebsstunden
Analog input	9	Fan 9 : Operating hours	3977	Input register	Word	Ventilator 9: Betriebsstunden
Analog input	10	Fan 10 : Operating hours	3978	Input register	Word	Ventilator 10: Betriebsstunden

Analog input	11	Fan 11 : Operating hours	3979	Input register	Word	Ventilator 11: Betriebsstunden
Analog input	12	Fan 12 : Operating hours	3980	Input register	Word	Fan 12: Operating hours
Analog input	13	Fan 13 : Operating hours	3981	Input register	Word	Fan 13: Operating hours
Analog input	14	Fan 14 : Operating hours	3982	Input register	Word	Ventilator 14: Betriebsstunden
Analog input	15	Fan 15 : Operating hours	3983	Input register	Word	Ventilator 15: Betriebsstunden
Analog input	16	Fan 16 : Operating hours	3984	Input register	Word	Ventilator 16: Betriebsstunden
Analog input	17	Fan 17 : Operating hours	3985	Input register	Word	Ventilator 17: Betriebsstunden
Analog input	18	Fan 18 : Operating hours	3986	Input register	Word	Ventilator 18: Betriebsstunden
Analog input	19	Fan 19 : Operating hours	3987	Input register	Word	Ventilator 19: Betriebsstunden
Analog input	20	Fan 20 : Operating hours	3988	Input register	Word	Ventilator 20: Betriebsstunden
Analog input	21	Ambient Humidity: Humidity value	4096	Input register	Word	Humidity: Humidity value
Analog input	22	Ambient temperature: Temperature value	4097	Input register	Word	Ambient temperature: Temperature value
Analog input	23	Fans: Air volume	4098	Input register	Word	Fans: Air volume
Analog input	24	Fans: Total power	4099	Input register	Word	Fans: Total power
Analog input	25	Control cycle 1: Current pressure value	7468	Input register	Word	Regelkreis 1: Aktueller Druckwert
Analog input	26	Control cycle 2: Current pressure value	7469	Input register	Word	Regelkreis 2: Aktueller Druckwert
Analog input	27	Control cycle 1: Current pressure setpoint	7478	Input register	Word	Regelkreis 1: Aktueller Drucksollwert
Analog input	28	Control cycle 2: Current pressure setpoint	7479	Input register	Word	Regelkreis 2: Aktueller Drucksollwert
Analog input	29	Control cycle 1: Current temperature value	7488	Input register	Word	Regelkreis 1: Aktueller Temperaturwert
Analog input	30	Control cycle 2: Current temperature value	7489	Input register	Word	Regelkreis 2: Aktueller Temperaturwert
Analog input	31	Control cycle 1: Current temperature setpoint	7498	Input register	Word	Regelkreis 1: Aktueller Temperatursollwert
Analog input	32	Control cycle 2: Current temperature setpoint	7499	Input register	Word	Regelkreis 2: Aktueller Temperatursollwert
Analog input	33	Control cycle 1 fans: Control value	7508	Input register	Word	Regelkreis 1 Ventilatoren: Stellwert

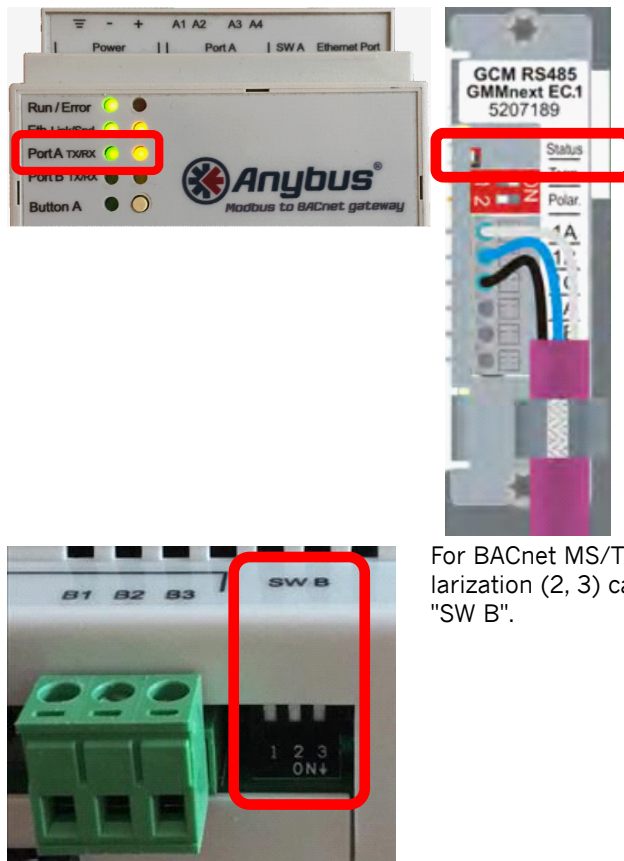
Analog input	34	Control cycle 2 fans: Control value	7509	Input register	Word	Regelkreis 2 Ventilatoren: Stellwert
--------------	----	--	------	----------------	------	--------------------------------------

3 Settings

The following values must be set on the GMMnext controller so that communication with the BACnet gateway can take place.

Modbus parameters	GMMnext see GMMnext manual
Modbus address	1
Baud rate	19200
Framing	8,N,1
Data format	16 bit

The green and orange LED indicators "Port A TX/RX" on the gateway flash green/orange and signal an established Modbus connection. The green status LED on the controller's Modbus module also flashes:



For BACnet MS/TP, the terminating resistor (1) and polarization (2, 3) can be activated via the DIP switches "SW B".

The following values are standard settings for the gateway and can be changed if necessary.

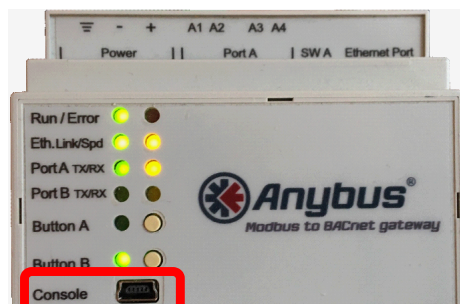
BACnet parameters on the gateway		
General	Device name	GMMnext
	Device instance	915003
BACnet IP	IP address	192.168.0.20
	Subnet mask	255.255.0.0
	UDP port	47808
BACnet MS/TP	Baud rate	Auto
	Max. masters	127
	Max. info frames	1
	MAC address	0

These parameters can be changed via the "Intesis MAPS" configuration tool.

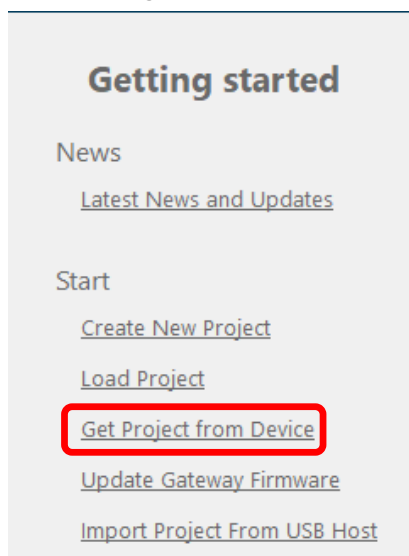
<https://www.intesis.com/products/intesis-maps>

Changing the parameters:

- 1 Establish a USB connection between a PC and the gateway



- 2 Run the program "Intesis MAPS" and select "Get Project from Device":



- Under "Select Discovery Mode", select "USB" and then the COM port for the USB connection. The correct COM port is the one where gateway information can be read out on the right-hand side. Now press the "Import Project" button.

Discovered Devices

Select Discovery Mode

☐ IP

☒ USB

COM7

COM6

COM5

COM3

COM11

COM17

Description	Value
Gateway Name	GMMnext EC
Serial Number	000K5446
Application Name	IBOX-BAC-MBM
License	100
License Comments	-
Version	1.1.3.0
Config file name	GMMnext_BACnetMSTP_01_00_00
Last Configuration Date	07/07/2021 15:01:59
MAC Address	CC:3F:1D:01:24:AC
IP Address	192.168.0.20
Netmask	255.255.0.0
Gateway	0.0.0.0
DHCP	OFF
Current Date Time	08/07/2021 12:30:52
Gateway Operating Time	0000d 03:38:10

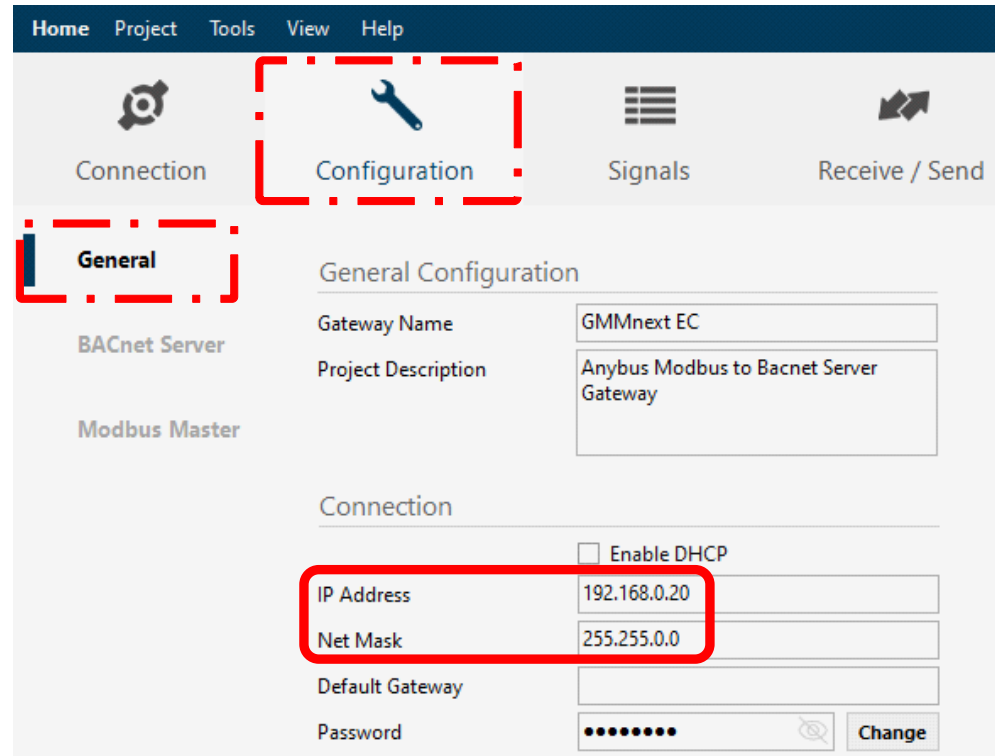
Refresh Import Project

- Once the project import is complete, the following message must be acknowledged and the project saved locally on the PC:

Project has been successfully downloaded.
Please, select the folder to save it.

OK

- 5 The configuration can then be changed via the "Configuration" tab.
 a) General parameters under the "General" menu:
 → IP address and subnet mask



Home Project Tools View Help

Connection **Configuration** Signals Receive / Send

General

BACnet Server

Modbus Master

General Configuration

Gateway Name GMMnext EC

Project Description Anybus Modbus to Bacnet Server Gateway

Connection

☐ Enable DHCP

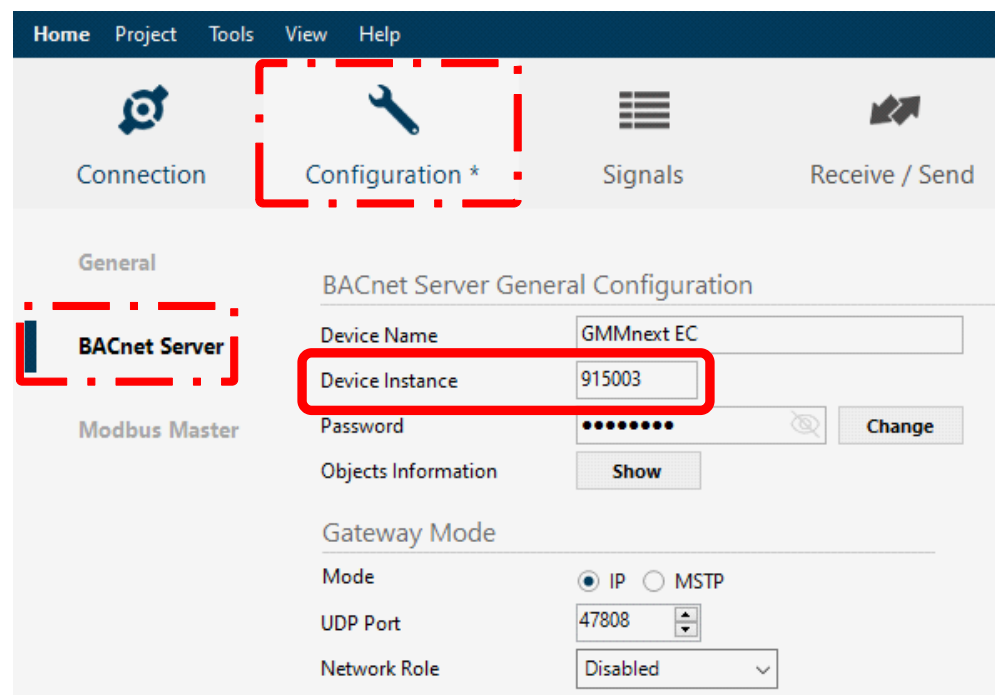
IP Address 192.168.0.20

Net Mask 255.255.0.0

Default Gateway

Password

- b) BACnet connection settings under the "BACnet Server" menu:
 → Device instance



Home Project Tools View Help

Connection **Configuration *** Signals Receive / Send

General

BACnet Server

Modbus Master

BACnet Server General Configuration

Device Name GMMnext EC

Device Instance 915003

Password

Objects Information

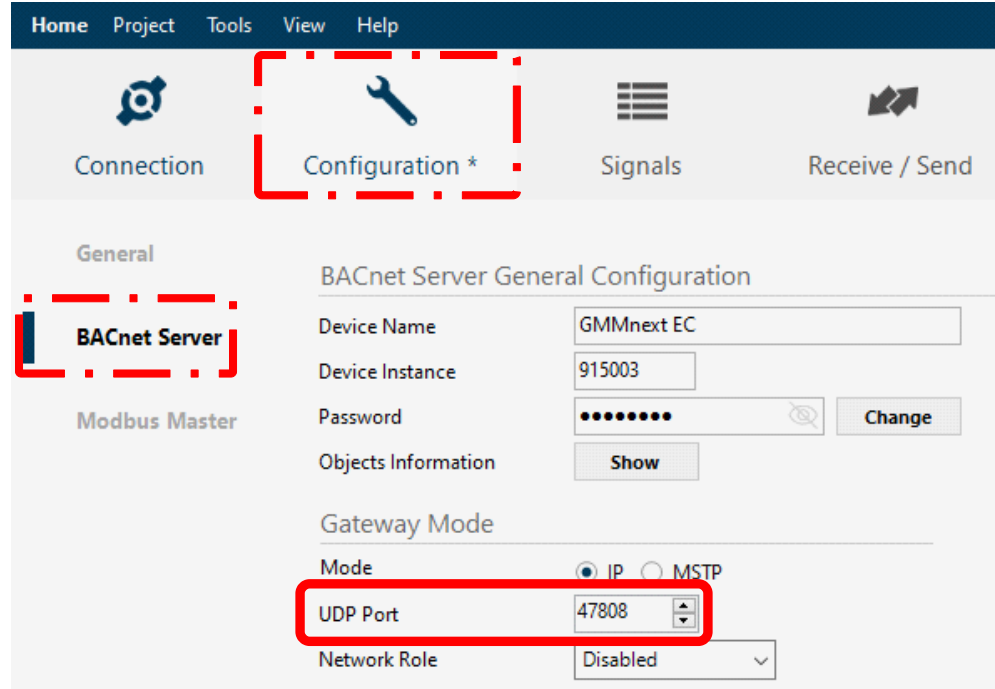
Gateway Mode

Mode ☒ IP ☐ MSTP

UDP Port 47808

Network Role Disabled

- c) With BACnet IP:
→ UDP port



Home Project Tools View Help

Connection **Configuration *** Signals Receive / Send

General

BACnet Server

Modbus Master

BACnet Server General Configuration

Device Name: GMMnext EC

Device Instance: 915003

Password: [Change](#)

Objects Information: [Show](#)

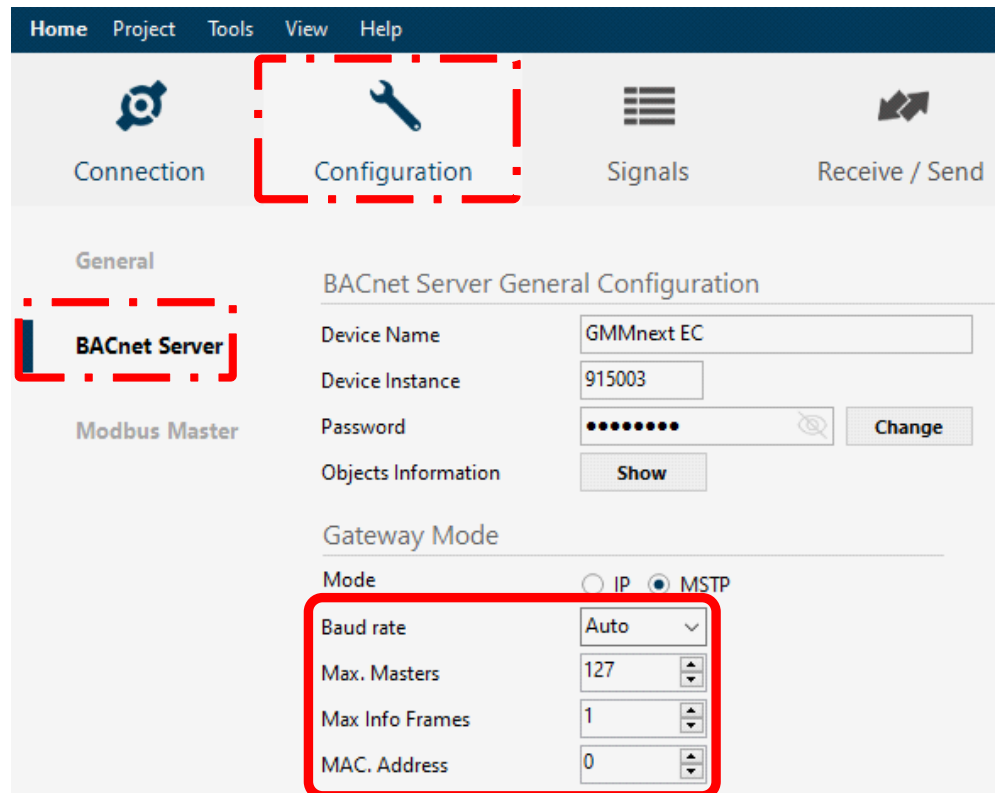
Gateway Mode

Mode: ☒ IP ☐ MSTP

UDP Port: 47808

Network Role: Disabled

- d) With BACnet MS/TP:
→ Baud rate, max. masters, max. info frames, MAC address



Home Project Tools View Help

Connection **Configuration** Signals Receive / Send

General

BACnet Server

Modbus Master

BACnet Server General Configuration

Device Name: GMMnext EC

Device Instance: 915003

Password: [Change](#)

Objects Information: [Show](#)

Gateway Mode

Mode: ☐ IP ☒ MSTP

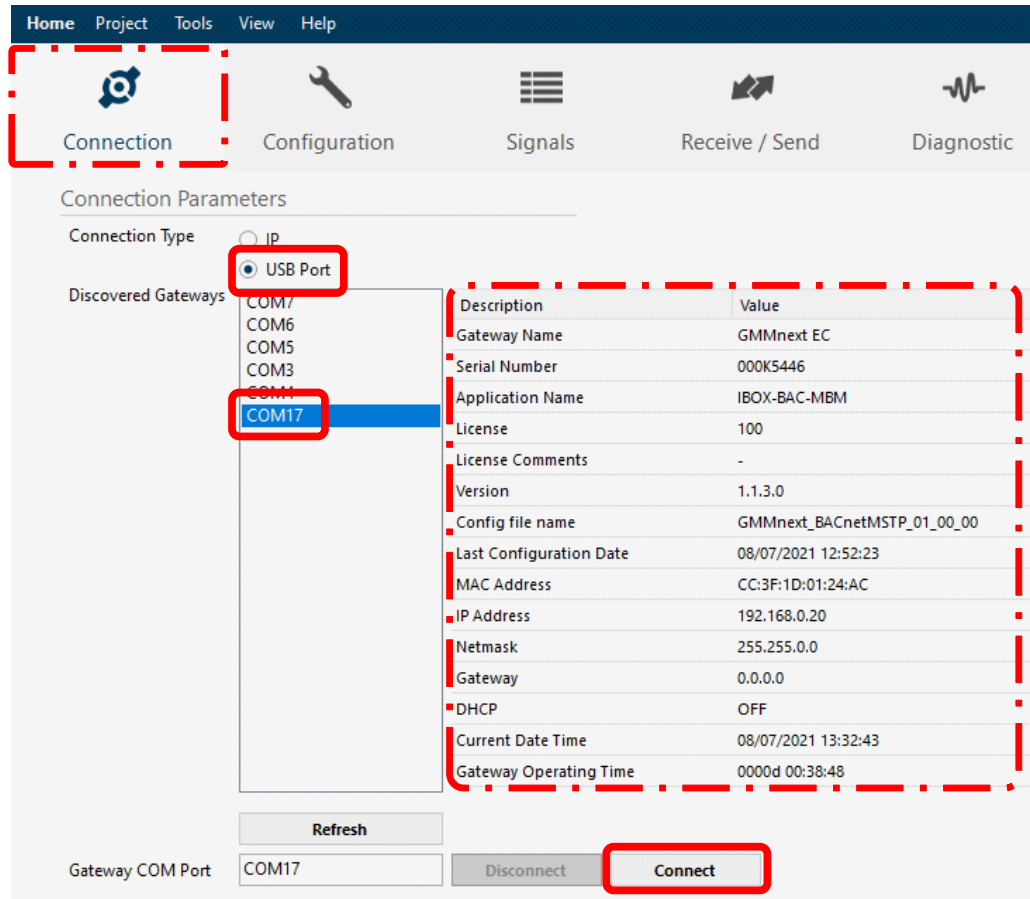
Baud rate: Auto

Max. Masters: 127

Max Info Frames: 1

MAC Address: 0

- 6 In order to load the changed configuration to the gateway again, a connection to the gateway must be established via the "Connection" tab.
Under "Connection Type", select "USB Port" and then the COM port for the USB connection. The correct COM port is the one where gateway information can be read out on the right-hand side.
Now press the "Connect" button.



Connection Parameters

Connection Type: ☐ IP ☒ **USB Port**

Discovered Gateways:

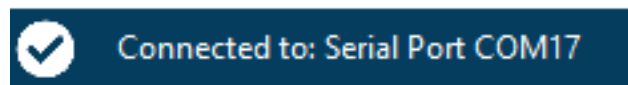
- COM7
- COM6
- COM5
- COM3
- COM11
- COM17**

Description	Value
Gateway Name	GMMnext EC
Serial Number	000K5446
Application Name	IBOX-BAC-MBM
License	100
License Comments	-
Version	1.1.3.0
Config file name	GMMnext_BACnetMSTP_01_00_00
Last Configuration Date	08/07/2021 12:52:23
MAC Address	CC:3F:1D:01:24:AC
IP Address	192.168.0.20
Netmask	255.255.0.0
Gateway	0.0.0.0
DHCP	OFF
Current Date Time	08/07/2021 13:32:43
Gateway Operating Time	0000d 00:38:48

Refresh

Gateway COM Port:

A successful connection will be shown at the bottom of the screen:



- 7 Finally, the changed configuration should be loaded to the gateway.
To do this, open the "Receive/Send" tab and press the "Send" button in the "Send" menu.

