



Interface specification BACnet aicore™ air + GHM pad

BACnet parameter specification for the Güntner Motor Management aicore™ air in conjunction with the Güntner Hydro Management GHM pad
Applicable for interface modules 5215473 & 5215468

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

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1 Introduction

This document describes the BACnet Communication of the Güntner Motor Management aicore™ air in conjunction with the Güntner Hydro Management GHM pad. Communication of the Güntner controllers takes place via a gateway from Modbus RTU to BACnet IP or BACnet MS/TP.

The aicore™ air and GHM pad are 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: 5215473
- BACnet MS/TP: 5215468
- Installation kits (depending on the size of the aicore™ air housing):
 - aicore™ air: 5215477 (200) / 5215478 (300) / 5215479 (400)
 - aicore™ air ec: 5215517 (200) / 5215449 (300) / 5215557 (400)

For connection to a BACnet network, specialist knowledge is required.

The following additional documents are available:

- EDE file: "aicore air+GHMpad_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 aicore™ air- & GHM pad parameters are available on the BACnet page via the object property "Present Value" (85).

2 Settings

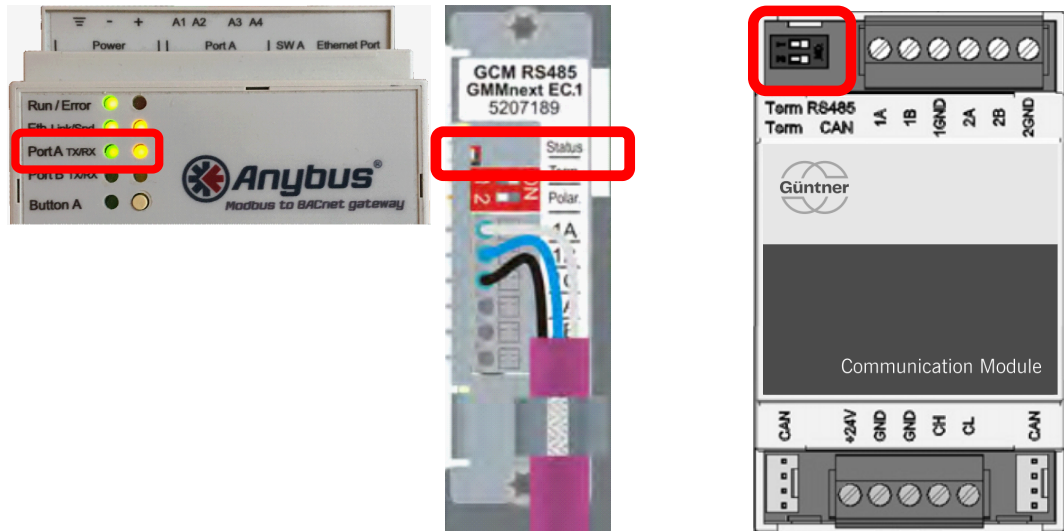
2.1 aicore™ air + GHM pad

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

Modbus parameters	aicore™ air, see aicore™ air manual	GHM pad, see GHM pad Manual
Modbus address	1	2
Baud rate	19200	19200
Framing	8,N,1	8,N,1
Data format	16 bit	---

2.2 Gateway

The green and orange LED indicators "Port A TX/RX" on the gateway flash green/orange and signal an established Modbus connection.



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.

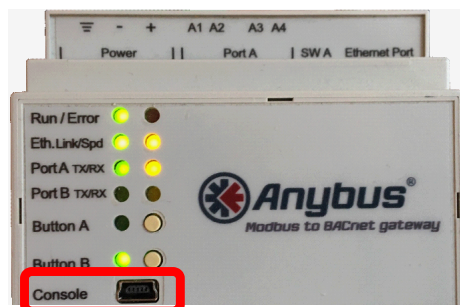
BACnet parameters on the gateway		
General	Device name	aicore™ air + GHM pad
	Device instance	915003
BACnet IP	IP address	192,168.0.20
	Subnet mask	255,255.0.0
	UDP port	47808
BACnet MS/TP	Baud rate	Auto
	Max. masters	127
	Max. info frames	1
	MAC address	0

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

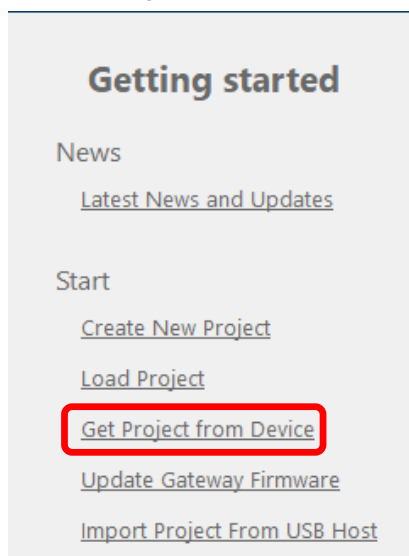
<https://www.intesis.com/products/intesis-maps>

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":



- 3 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

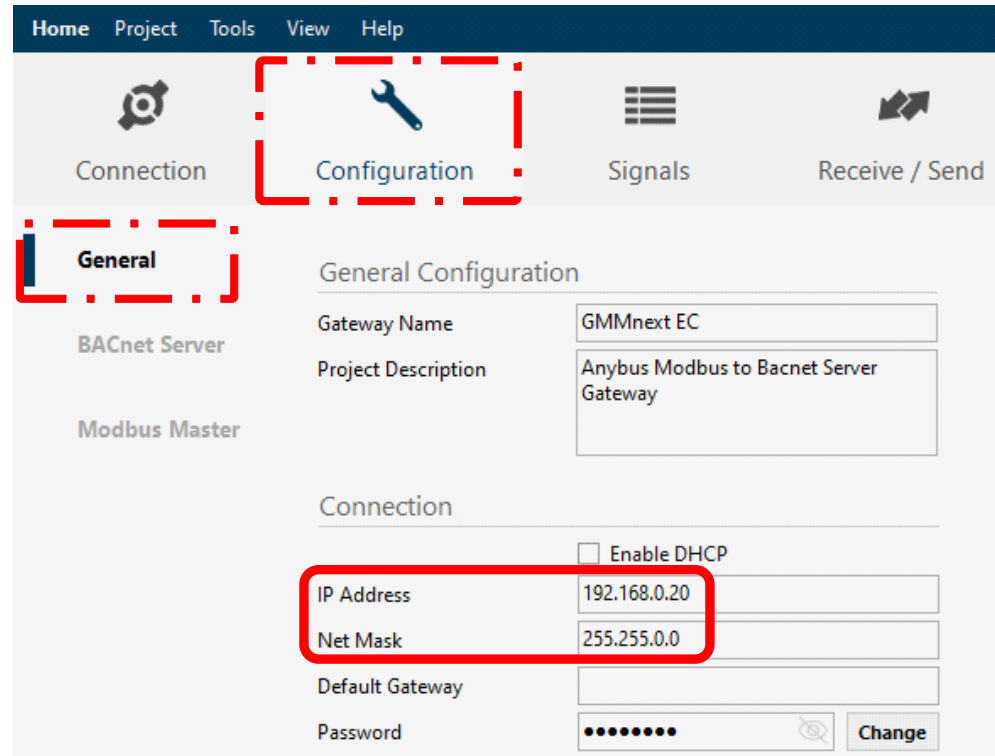
Refresh Import Project

- 4 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

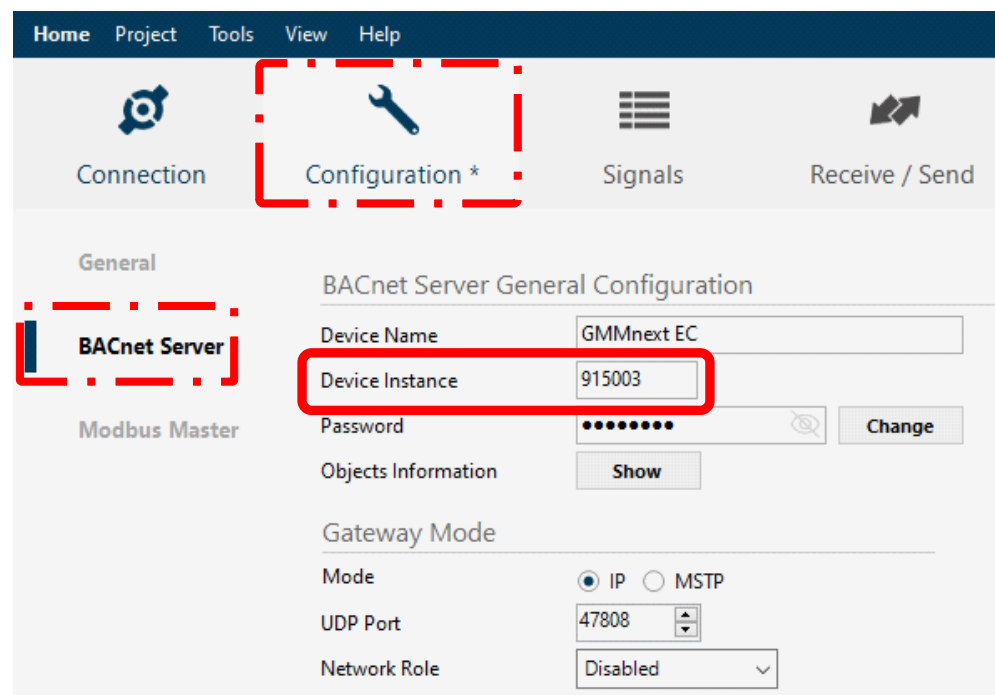
IP Address 192.168.0.20

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

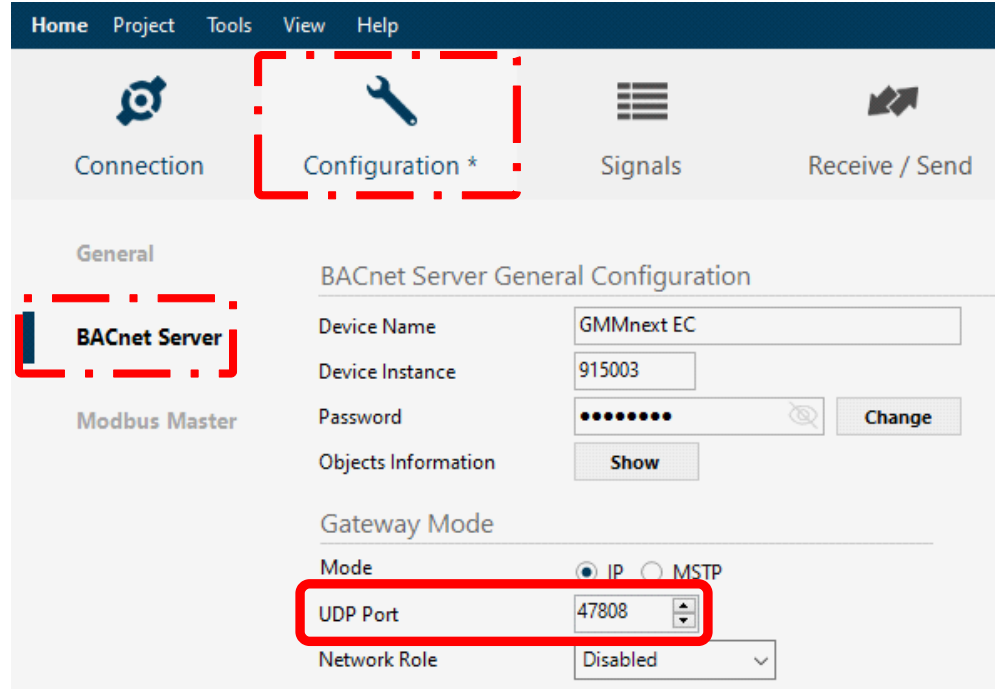
Gateway Mode

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](#)

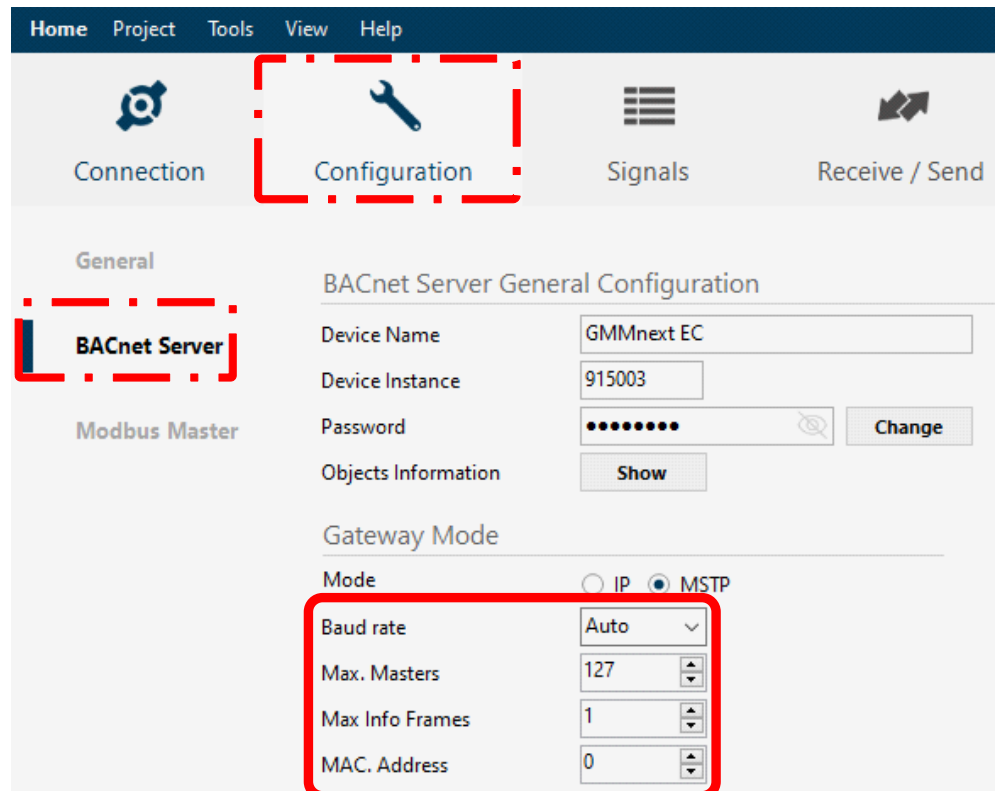
Gateway Mode

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

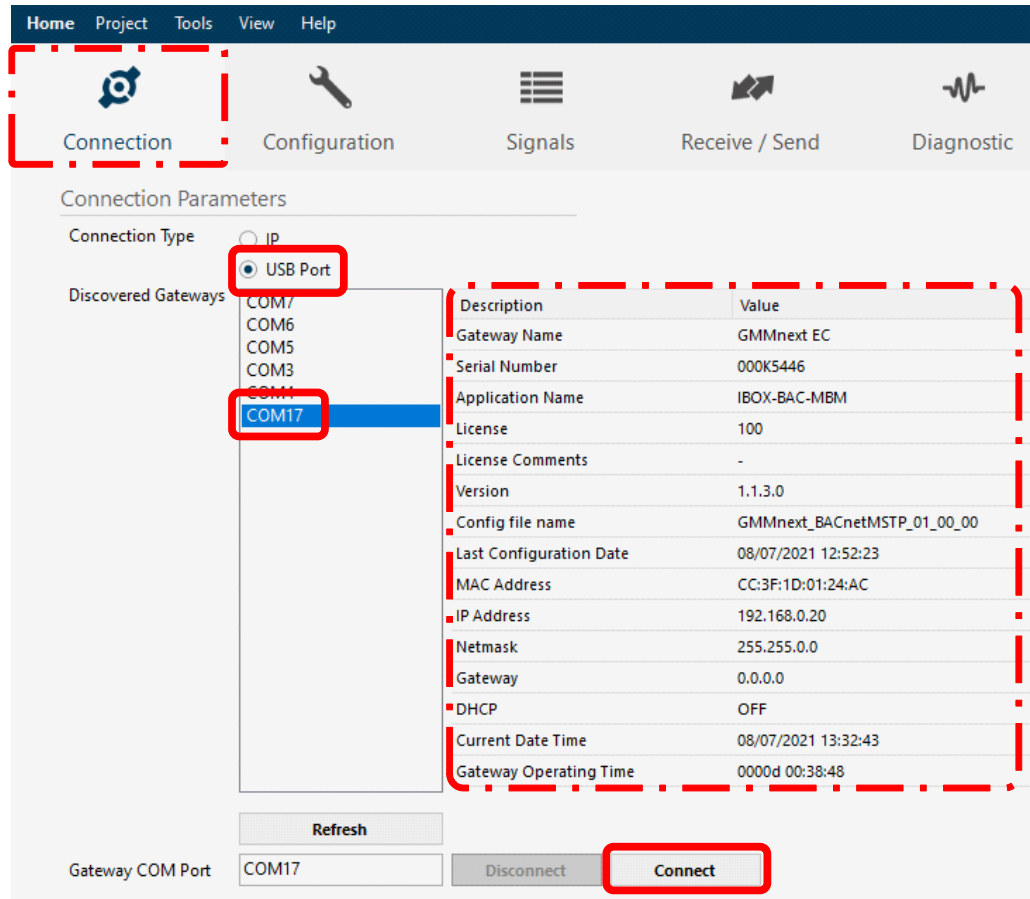
Baud rate: Auto

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.



Home Project Tools View Help

Connection Configuration Signals Receive / Send Diagnostic

Connection Parameters

Connection Type ☐ IP ☒ USB Port

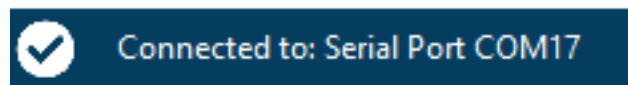
Discovered Gateways

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

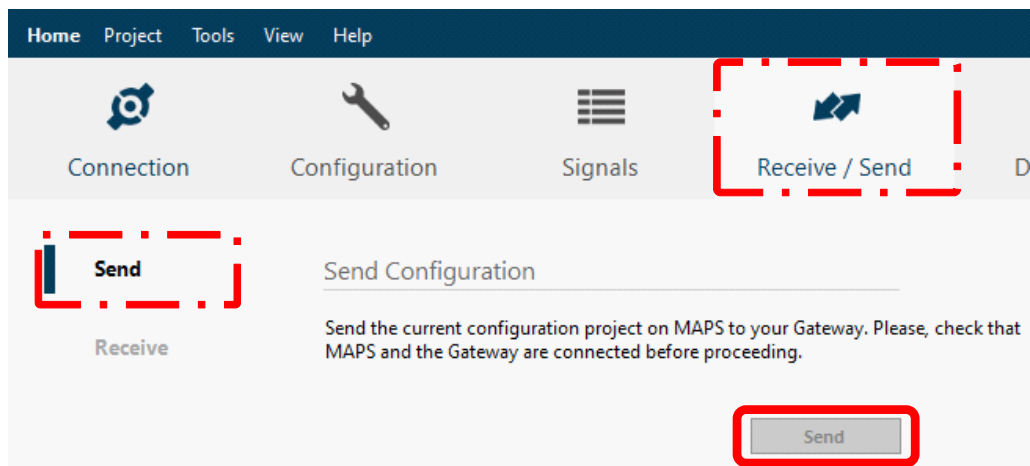
Refresh

Gateway COM Port COM17 Disconnect **Connect**

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.



3 Data points of the aicore™ air + GHM pad

BACnet objects				Güntner Modbus aicore air specification / Güntner Modbus GHMpad specification			
Con- troller	Object type	Object instance	Object name	Modbus data ad- dress	Mod- bus da- ta type	Access size	Designator
aicore air	Device	915003	aicore air + GHMpad	-	-	-	-
aicore air	Binary input	1	Diagnosis: Fan warn- ing active	256	Discrete input	Bit	Diagnose: Ventilatorwar- nung aktiv
aicore air	Binary input	2	Diagnosis: Fan alarm active	257	Discrete input	Bit	Diagnose: Ventila- toralarm aktiv
aicore air	Binary input	3	Diagnosis: Fans alarm active	258	Discrete input	Bit	Diagnose: Ventilatore- nalarm aktiv (Sam- melmeldung)
aicore air	Binary input	4	Diagnosis: Sensor alarm active	259	Discrete input	Bit	Diagnose: Sensoralarm aktiv
aicore air	Binary input	5	Diagnosis: Control alarm message (Prio 1): Signal level	260	Discrete input	Bit	Diagnosis: Control alarm message (Prio 1): Signal level
aicore air	Binary input	6	Diagnosis: Control op- erating message: Sig- nal level	261	Discrete input	Bit	Diagnose: Regelung Betriebsmeldung: Sig- nalpegel
aicore air	Binary input	7	Diagnosis: Control warning message (Prio 2): Signal level	262	Discrete input	Bit	Diagnose: Regelung Warnmeldung (Prio 2): Signalpegel
aicore air	Binary input	8	Inverse run: Inverse operation active	263	Discrete input	Bit	Inversbetrieb: Inversbe- trieb aktiv
aicore air	Binary input	9	Manual mode: Manu- al mode active	265	Discrete input	Bit	Handbetrieb: Handbe- trieb aktiv
aicore air	Binary input	10	Night setback: Night setback active	267	Discrete input	Bit	Nachtbegrenzung: Nachtbegrenzung aktiv
aicore air	Binary input	11	Subcooler: Subcooler active	269	Discrete input	Bit	Unterkühler: Unterküh- ler aktiv
aicore air	Binary input	12	Control cycle 1: Re- lease active	7171	Discrete input	Bit	Regelkreis 1 : Freigabe aktiv
aicore air	Binary input	13	Control cycle 2: Re- lease active	7172	Discrete input	Bit	Regelkreis 2 : Freigabe aktiv
aicore air	Binary input	14	Maintenance run fan group 1: Maintenance run active	7186	Discrete input	Bit	Wartungslauf Ventilator- gruppe 1: Wartungslauf aktiv
aicore air	Binary input	15	Maintenance run fan group 2: Maintenance run active	7187	Discrete input	Bit	Maintenance run fan group 2: Maintenance run active

BACnet objects				Güntner Modbus aicore air specification / Güntner Modbus GHMpad specification			
Con- troller	Object type	Object instance	Object name	Modbus data ad- dress	Mod- bus da- ta type	Access size	Designator
aicore air	Binary input	16	Control cycle 1 set- point displacement: Setpoint displacement active	7190	Discrete input	Bit	Regelkreis 1 Sollw- ertschiebung: Sollw- ertschiebung aktiv
aicore air	Binary input	17	Control cycle 2 set- point displacement: Setpoint displacement active	7191	Discrete input	Bit	Regelkreis 2 Sollw- ertschiebung: Sollw- ertschiebung aktiv
aicore air	Binary input	18	Control cycle 1 threshold: Threshold active	7195	Discrete input	Bit	Regelkreis 1 Schwellen- wert: Schwellenwert ak- tiv
aicore air	Binary input	19	Control cycle 2 threshold: Threshold active	7196	Discrete input	Bit	Regelkreis 2 Schwellen- wert: Schwellenwert ak- tiv
aicore air	Binary input	20	Fan 1 : Alarm active	7200	Discrete input	Bit	Ventilator 1: Alarm aktiv
aicore air	Binary input	21	Fan 2 : Alarm active	7201	Discrete input	Bit	Ventilator 2: Alarm aktiv
aicore air	Binary input	22	Fan 3 : Alarm active	7202	Discrete input	Bit	Ventilator 3: Alarm aktiv
aicore air	Binary input	23	Fan 4 : Alarm active	7203	Discrete input	Bit	Ventilator 4: Alarm aktiv
aicore air	Binary input	24	Fan 5 : Alarm active	7204	Discrete input	Bit	Fan 5: Alarm active
aicore air	Binary input	25	Fan 6 : Alarm active	7205	Discrete input	Bit	Ventilator 6: Alarm aktiv
aicore air	Binary input	26	Fan 7 : Alarm active	7206	Discrete input	Bit	Ventilator 7: Alarm aktiv
aicore air	Binary input	27	Fan 8 : Alarm active	7207	Discrete input	Bit	Ventilator 8: Alarm aktiv
aicore air	Binary input	28	Fan 9 : Alarm active	7208	Discrete input	Bit	Ventilator 9: Alarm aktiv
aicore air	Binary input	29	Fan 10 : Alarm active	7209	Discrete input	Bit	Ventilator 10: Alarm ak- tiv
aicore air	Binary input	30	Fan 11 : Alarm active	7210	Discrete input	Bit	Ventilator 11: Alarm ak- tiv
aicore air	Binary input	31	Fan 12: Alarm active	7211	Discrete input	Bit	Fan 12: Alarm active
aicore air	Binary input	32	Fan 13 : Alarm active	7212	Discrete input	Bit	Ventilator 13: Alarm ak- tiv
aicore air	Binary input	33	Fan 14 : Alarm active	7213	Discrete input	Bit	Ventilator 14: Alarm ak- tiv

BACnet objects				Güntner Modbus aicore air specification / Güntner Modbus GHMpad specification			
Con- troller	Object type	Object instance	Object name	Modbus data ad- dress	Mod- bus da- ta type	Access size	Designator
aicore air	Binary input	34	Fan 15 : Alarm active	7214	Discrete input	Bit	Ventilator 15: Alarm ak- tiv
aicore air	Binary input	35	Fan 16: Alarm active	7215	Discrete input	Bit	Ventilator 16: Alarm ak- tiv
aicore air	Binary input	36	Fan 17 : Alarm active	7216	Discrete input	Bit	Ventilator 17: Alarm ak- tiv
aicore air	Binary input	37	Fan 18: Alarm active	7217	Discrete input	Bit	Ventilator 18: Alarm ak- tiv
aicore air	Binary input	38	Fan 19 : Alarm active	7218	Discrete input	Bit	Ventilator 19: Alarm ak- tiv
aicore air	Binary input	39	Fan 20 : Alarm active	7219	Discrete input	Bit	Ventilator 20: Alarm ak- tiv
aicore air	Binary input	40	Fan 1 : Warning active	7232	Discrete input	Bit	Ventilator 1: Warnung aktiv
aicore air	Binary input	41	Fan 2 : Warning active	7233	Discrete input	Bit	Ventilator 2: Warnung aktiv
aicore air	Binary input	42	Fan 3 : Warning active	7234	Discrete input	Bit	Ventilator 3: Warnung aktiv
aicore air	Binary input	43	Fan 4 : Warning active	7235	Discrete input	Bit	Ventilator 4: Warnung aktiv
aicore air	Binary input	44	Fan 5 : Warning active	7236	Discrete input	Bit	Ventilator 5: Warnung aktiv
aicore air	Binary input	45	Fan 6 : Warning active	7237	Discrete input	Bit	Ventilator 6: Warnung aktiv
aicore air	Binary input	46	Fan 7: Warning active	7238	Discrete input	Bit	Ventilator 7: Warnung aktiv
aicore air	Binary input	47	Fan 8 : Warning active	7239	Discrete input	Bit	Ventilator 8: Warnung aktiv
aicore air	Binary input	48	Fan 9 : Warning active	7240	Discrete input	Bit	Ventilator 9: Warnung aktiv
aicore air	Binary input	49	Fan 10: Warning ac- tive	7241	Discrete input	Bit	Fan 10: Warning active
aicore air	Binary input	50	Fan 11 : Warning ac- tive	7242	Discrete input	Bit	Fan 11: Warning active
aicore air	Binary input	51	Fan 12 : Warning ac- tive	7243	Discrete input	Bit	Ventilator 12: Warnung aktiv
aicore air	Binary input	52	Fan 13 : Warning ac- tive	7244	Discrete input	Bit	Ventilator 13: Warnung aktiv
aicore air	Binary input	53	Fan 14 : Warning ac- tive	7245	Discrete input	Bit	Ventilator 14: Warnung aktiv
aicore air	Binary input	54	Fan 15 : Warning ac- tive	7246	Discrete input	Bit	Ventilator 15: Warnung aktiv

BACnet objects				Güntner Modbus aicore air specification / Güntner Modbus GHMpad specification			
Con- troller	Object type	Object instance	Object name	Modbus data ad- dress	Mod- bus da- ta type	Access size	Designator
aicore air	Binary input	55	Fan 16: Warning ac- tive	7247	Discrete input	Bit	Ventilator 16: Warnung aktiv
aicore air	Binary input	56	Fan 17: Warning ac- tive	7248	Discrete input	Bit	Ventilator 17: Warnung aktiv
aicore air	Binary input	57	Fan 18 : Warning ac- tive	7249	Discrete input	Bit	Ventilator 18: Warnung aktiv
aicore air	Binary input	58	Fan 19 : Warning ac- tive	7250	Discrete input	Bit	Ventilator 19: Warnung aktiv
aicore air	Binary input	59	Fan 20 : Warning ac- tive	7251	Discrete input	Bit	Ventilator 20: Warnung aktiv
aicore air	Binary input	60	Analogue input 1: Alarm active	8175	Discrete input	Bit	Analogeingang 1: Alarm
aicore air	Binary input	61	Analogue input 2: Alarm active	8176	Discrete input	Bit	Analogeingang 2: Alarm
aicore air	Binary input	62	Analogue input 3: Alarm active	8177	Discrete input	Bit	Analogeingang 3: Alarm
aicore air	Binary input	63	Analogue input 4: Alarm active	8178	Discrete input	Bit	Analogeingang 4: Alarm
aicore air	Binary input	64	Analogue input 5: Alarm active	8179	Discrete input	Bit	Analogeingang 5: Alarm
aicore air	Binary value	0	Manual mode: Manu- al mode on	265	Coil	Bit	Handbetrieb: Handbe- trieb ein
aicore air	Binary value	1	Manual mode: Inverse operation	266	Coil	Bit	Handbetrieb: Inversbe- trieb
aicore air	Binary value	2	Night setback: Night setback on	268	Coil	Bit	Nachtbegrenzung: Nachtbegrenzung ein
aicore air	Binary value	3	Control cycle 1 set- point displacement: Setpoint displacement on	8133	Coil	Bit	Regelkreis 1 Sollw- ertschiebung: Sollw- ertschiebung ein
aicore air	Binary value	4	Control cycle 2 set- point displacement: Setpoint displacement on	8134	Coil	Bit	Regelkreis 2 Sollw- ertschiebung: Sollw- ertschiebung ein
aicore air	Multi- state value	0	Standard protocol: System of units	1	Holding register	Word	Standard-Protokoll: Ein- heitensystem
aicore air	Multi- state value	1	Standard protocol: Modbus data format	2	Holding register	Word	Standard-Protokoll: Modbus data format
aicore air	Multi- state value	2	Control: Operating mode	305	Holding register	Word	Regelung: Betriebsart

BACnet objects				Güntner Modbus aicore air specification / Güntner Modbus GHMpad specification			
Con- troller	Object type	Object instance	Object name	Modbus data ad- dress	Mod- bus da- ta type	Access size	Designator
aicore air	Multi- state value	3	Control cycle 1: Set- point count	3826	Holding register	Word	Regelkreis 1: Anzahl Sollwerte
aicore air	Multi- state value	4	Control cycle 2: Set- point count	3827	Holding register	Word	Regelkreis 2: Anzahl Sollwerte
aicore air	Multi- state input	0	Control cycle 1: Re- frigerant	3910	Holding register	Word	Regelkreis 1: Kältemittel
aicore air	Multi- state input	1	Control cycle 2: Re- frigerant	3911	Holding register	Word	Regelkreis 2: Kältemittel
aicore air	Multi- state input	2	Control cycle 1: Fluid dimension	4001	Input register	Word	Regelkreis 1: Dimension des Mediums
aicore air	Multi- state input	3	Control cycle 2: Fluid dimension	4002	Input register	Word	Regelkreis 2: Dimension des Mediums
aicore air	Analog value	0	Inverse run: Control value	4097	Holding register	Word	Inverse operation: Con- trol value
aicore air	Analog value	1	Manual mode: Fans control value	4099	Holding register	Word	Handbetrieb: Ventila- torenstellwert
aicore air	Analog value	2	Night setback: Maxi- mum control value	4100	Holding register	Word	Nachtbegrenzung: Maxi- mum Stellwert
aicore air	Analog value	3	Subcooler: Control value	4101	Holding register	Word	Unterkühler: Stellwert
aicore air	Analog value	4	Control cycle 1 mas- ter external: Control value master external bus	7762	Holding register	Word	Regelkreis 1 Mas- ter-Stellwert: Stellwert Master extern Bus
aicore air	Analog value	5	Control cycle 2 mas- ter external: Control value master external bus	7763	Holding register	Word	Regelkreis 2 Mas- ter-Stellwert: Stellwert Master extern Bus
aicore air	Ana- logue value	6	Control cycle 1 set- point 1: Pressure	7802	Holding register	Word	Regelkreis 1 Sollwert 1: Druck
aicore air	Analog value	7	Control cycle 2 set- point 1: Pressure	7803	Holding register	Word	Regelkreis 2 Sollwert 1: Druck
aicore air	Analog value	8	Control cycle 1 set- point 1: Temperature	7812	Holding register	Word	Control cycle 1 setpoint 1: Temperature
aicore air	Ana- logue value	9	Control cycle 2 set- point 1: Temperature	7813	Holding register	Word	Control cycle 2 setpoint 1: Temperature

BACnet objects				Güntner Modbus aicore air specification / Güntner Modbus GHMpad specification			
Con- troller	Object type	Object instance	Object name	Modbus data ad- dress	Mod- bus da- ta type	Access size	Designator
aicore air	Analog value	10	Control cycle 1 set- point 2: Pressure	7822	Holding register	Word	Control cycle 1 setpoint 2: Pressure
aicore air	Analog value	11	Control cycle 2 set- point 2: Pressure	7823	Holding register	Word	Regelkreis 2 Sollwert 2: Druck
aicore air	Analog value	12	Control cycle 1 set- point 2: Temperature	7832	Holding register	Word	Regelkreis 1 Sollwert 2: Temperatur
aicore air	Analog value	13	Control cycle 2 set- point 2: Temperature	7833	Holding register	Word	Regelkreis 2 Sollwert 2: Temperatur
aicore air	Analog input	0	Fans: Number of Fans	276	Holding register	Word	Ventilatoren: Anzahl Ventilatoren
aicore air	Analog input	1	Fan 1 : Operating hours	3969	Input register	Word	Ventilator 1: Betrieb- sstunden
aicore air	Analog input	2	Fan 2 : Operating hours	3970	Input register	Word	Ventilator 2: Betrieb- sstunden
aicore air	Analog input	3	Fan 3 : Operating hours	3971	Input register	Word	Ventilator 3: Betrieb- sstunden
aicore air	Ana- logue input	4	Fan 4: Operating hours	3972	Input register	Word	Fan 4: Operating hours
aicore air	Analog input	5	Fan 5 : Operating hours	3973	Input register	Word	Fan 5: Operating hours
aicore air	Analog input	6	Fan 6 : Operating hours	3974	Input register	Word	Ventilator 6: Betrieb- sstunden
aicore air	Analog input	7	Fan 7 : Operating hours	3975	Input register	Word	Ventilator 7: Betrieb- sstunden
aicore air	Analog input	8	Fan 8 : Operating hours	3976	Input register	Word	Ventilator 8: Betrieb- sstunden
aicore air	Analog input	9	Fan 9 : Operating hours	3977	Input register	Word	Ventilator 9: Betrieb- sstunden
aicore air	Analog input	10	Fan 10 : Operating hours	3978	Input register	Word	Ventilator 10: Betrieb- sstunden
aicore air	Analog input	11	Fan 11 : Operating hours	3979	Input register	Word	Ventilator 11: Betrieb- sstunden
aicore air	Ana- logue input	12	Fan 12: Operating hours	3980	Input register	Word	Fan 12: Operating hours
aicore air	Analog input	13	Fan 13 : Operating hours	3981	Input register	Word	Ventilator 13: Betrieb- sstunden
aicore air	Analog input	14	Fan 14 : Operating hours	3982	Input register	Word	Ventilator 14: Betrieb- sstunden
aicore air	Analog input	15	Fan 15 : Operating hours	3983	Input register	Word	Ventilator 15: Betrieb- sstunden

BACnet objects				Güntner Modbus aicore air specification / Güntner Modbus GHMpad specification			
Con- troller	Object type	Object instance	Object name	Modbus data ad- dress	Mod- bus da- ta type	Access size	Designator
aicore air	Analog input	16	Fan 16 : Operating hours	3984	Input register	Word	Ventilator 16: Betrieb- sstunden
aicore air	Analog input	17	Fan 17 : Operating hours	3985	Input register	Word	Ventilator 17: Betrieb- sstunden
aicore air	Analog input	18	Fan 18 : Operating hours	3986	Input register	Word	Ventilator 18: Betrieb- sstunden
aicore air	Analog input	19	Fan 19 : Operating hours	3987	Input register	Word	Ventilator 19: Betrieb- sstunden
aicore air	Analog input	20	Fan 20 : Operating hours	3988	Input register	Word	Ventilator 20: Betrieb- sstunden
aicore air	Analog input	21	Ambient Humidity: Humidity value	4096	Input register	Word	Luftfeuchtigkeit: Luft- feuchtigkeitswert
aicore air	Analog input	22	Ambient temperature: Temperature value	4097	Input register	Word	Außentemperatur: Tem- peraturwert
aicore air	Analog input	23	Fans: Air volume	4098	Input register	Word	Ventilatoren: Luftvolu- men
aicore air	Analog input	24	Fans: Total power	4099	Input register	Word	Ventilatoren: Gesamtleistung
aicore air	Analog input	25	Control cycle 1: Cur- rent pressure value	7468	Input register	Word	Regelkreis 1: Aktueller Druckwert
aicore air	Analog input	26	Control cycle 2: Cur- rent pressure value	7469	Input register	Word	Regelkreis 2: Aktueller Druckwert
aicore air	Analog input	27	Control cycle 1: Cur- rent pressure setpoint	7478	Input register	Word	Regelkreis 1: Aktueller Drucksollwert
aicore air	Analog input	28	Control cycle 2: Cur- rent pressure setpoint	7479	Input register	Word	Regelkreis 2: Aktueller Drucksollwert
aicore air	Analog input	29	Control cycle 1: Cur- rent temperature val- ue	7488	Input register	Word	Regelkreis 1: Aktueller Temperaturwert
aicore air	Analog input	30	Control cycle 2: Cur- rent temperature val- ue	7489	Input register	Word	Regelkreis 2: Aktueller Temperaturwert
aicore air	Analog input	31	Control cycle 1: Cur- rent temperature set- point	7498	Input register	Word	Regelkreis 1: Aktueller Temperatursollwert
aicore air	Analog input	32	Control cycle 2: Cur- rent temperature set- point	7499	Input register	Word	Regelkreis 2: Aktueller Temperatursollwert
aicore air	Analog input	33	Control cycle 1 fans: Control value	7508	Input register	Word	Regelkreis 1 Ventila- toren: Stellwert
aicore air	Analog input	34	Control cycle 2 fans: Control value	7509	Input register	Word	Regelkreis 2 Ventila- toren: Stellwert

BACnet objects				Güntner Modbus aicore air specification / Güntner Modbus GHMpad specification			
Con- troller	Object type	Object instance	Object name	Modbus data ad- dress	Mod- bus da- ta type	Access size	Designator
GHM pad	Analog value	14	Non-operating drain	53251	Holding register	Word	Stillstand Entleerung
GHM pad	Analog value	15	Frost protection tem- perature	53252	Holding register	Word	Frostschutztemperatur
GHM pad	Analog value	16	Humidification – am- bient temperature	53253	Holding register	Word	Befeuchtung Außentem- peratur
GHM pad	Analog value	17	Fan control value for starting humidifica- tion	53256	Holding register	Word	Ventilator Stellwert Be- feuchtung Start
GHM pad	Analog value	18	Fan control value for stopping humidifica- tion	53257	Holding register	Word	Ventilator Stellwert Be- feuchtung Stopp
GHM pad	Analog input	35	Water costs	53263	Holding register	Word	Wasserkosten
GHM pad	Analog input	36	Electricity costs	53264	Holding register	Word	Stromkosten
GHM pad	Binary value	5	Efficiency mode	53269	Holding register	Word	Effizienzmodus
GHM pad	Analog value	19	Fan control value for transition to full load mode	53270	Holding register	Word	Ventilator Stellwert Voll- lastmodus Start
GHM pad	Binary value	6	Manual mode GHM- pad	53271	Holding register	Word	Handbetrieb Modus
GHM pad	Analog value	20	Manual mode: Control value for humidifica- tion valve	53272	Holding register	Word	Handbetrieb Befeuch- tungsventil Stellwert
GHM pad	Binary value	7	Manual mode drainage	53273	Holding register	Word	Handbetrieb Entleerung
GHM pad	Analog input	37	Status of digital in- puts	53520	Input register	Word	Zustand der digitalen Eingänge
GHM pad	Analog input	38	Status of digital out- puts	53521	Input register	Word	Zustand der digitalen Ausgänge
GHM pad	Analog input	39	Scaled value AI1	53525	Input register	Word	Skalierter Wert AI1
GHM pad	Analog input	40	Scaled value AI2	53526	Input register	Word	Skalierter Wert AI2
GHM pad	Analog input	41	Scaled value AI4	53528	Input register	Word	Skalierter Wert AI4
GHM pad	Analog input	42	Raw value output AO1	53529	Input register	Word	Rohwert Ausgang AO1
GHM pad	Analog input	43	Calculated water vol- ume	53536	Input register	Word	Berechnete Wasser- menge

BACnet objects				Güntner Modbus aicore air specification / Güntner Modbus GHMpad specification			
Con- troller	Object type	Object instance	Object name	Modbus data ad- dress	Mod- bus da- ta type	Access size	Designator
GHM pad	Analog input	44	Recorded water flow	53537	Input register	Word	Erfasster Wasserdurch- lauf
GHM pad	Analog input	45	Status info 1	53538	Input register	Word	Statusinfo 1
GHM pad	Analog input	46	Status info 2	53539	Input register	Word	Statusinfo 2
GHM pad	Analog input	47	Absolute operating hours	53540	Input register	Word	Absolute Betriebsstun- den
GHM pad	Analog input	48	Relative operating hours	53542	Input register	Word	Relative Betriebsstun- den
GHM pad	Analog input	49	Counter status for wa- ter consumption	53544	Input register	Word	Zählerstand Wasserver- brauch