

Plug-in card module CM08-PGW

SCHNEID plug-in card module CM08-PGW (Protocol GateWay - Bacnet®)

for SCHNEID communication base modules

Order number:	130.15672
Order code:	Steckkartenmodul CM08-PGW



Overview:

The SCHNEID plug-in card module CM08-PGW is only suitable for the SCHNEID communication basic modules of the module control series.

With this module card, the control device can be integrated into a BACNET-MS / TP (RS485) data network with certification. The configuration is done with a software tool. 6000 bits are available for the configuration of BacNet data points.

- The CM08-PGW plug-in card can be set directly on the computer using a USB cable (Virtual Com Port) ICC Configuration Studio (~ 100MB).
- The module has an interface to the controller (host) and one to the terminals (network).
- The plug-in card can directly transfer the data from the control device or record data via gateway (Modbus, Mbus, bacnet, Neasys, DMX-512, Siemens FLN, ...) and output it again.
- The PGW queries the controller via Modbus with 12 pollings of 100 registers each.
- The PGW has an internal database as a buffer. These can be used to route the values to BACNET.
- A maximum of 240 objects can be designated on the BACNET, but all 8000 bytes can be made directly readable.
- Parameter adjustments can be made to the Modbus via Bacnet.
- The module can be protected (password and locked).
- It's easy to set.
- The module is always configured offline and updated via download.

Examples of networking:

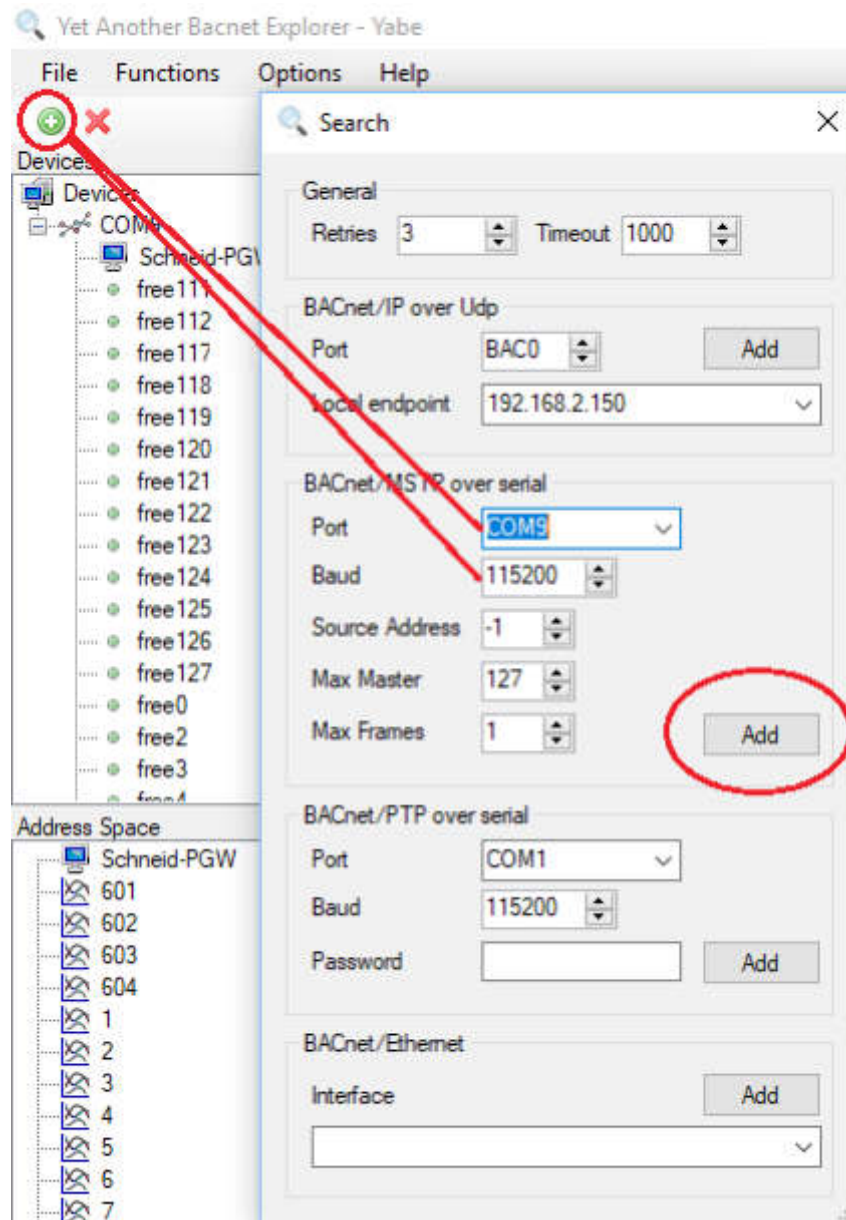
COM-A	possible on module controllers MR08 and MR12
COM-C	only possible on module controller MR12

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Configuration:

Yabe Bacnet Explorer

<https://sourceforge.net/projects/yetanotherbacnetexplorer/>



The module must appear by itself.
Confirm the first dialog with OK.

All data records that are available for each device can be displayed with "Subscribe".
Only those that are current appear in the list.

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The screenshot shows the 'Yet Another Bacnet Explorer' interface. On the left, the 'Devices' tree shows 'Schneid-PGW [8054]' selected. Below it, the 'Address Space' shows a list of objects from 601 to 617. A red circle highlights the 'Subscribe' button next to object 601. A red arrow points from this button to the 'Subscriptions, Periodic Polling, Events/Alarms' table on the right. A blue arrow points from the 'Schneid-PGW [8054]' device to the table.

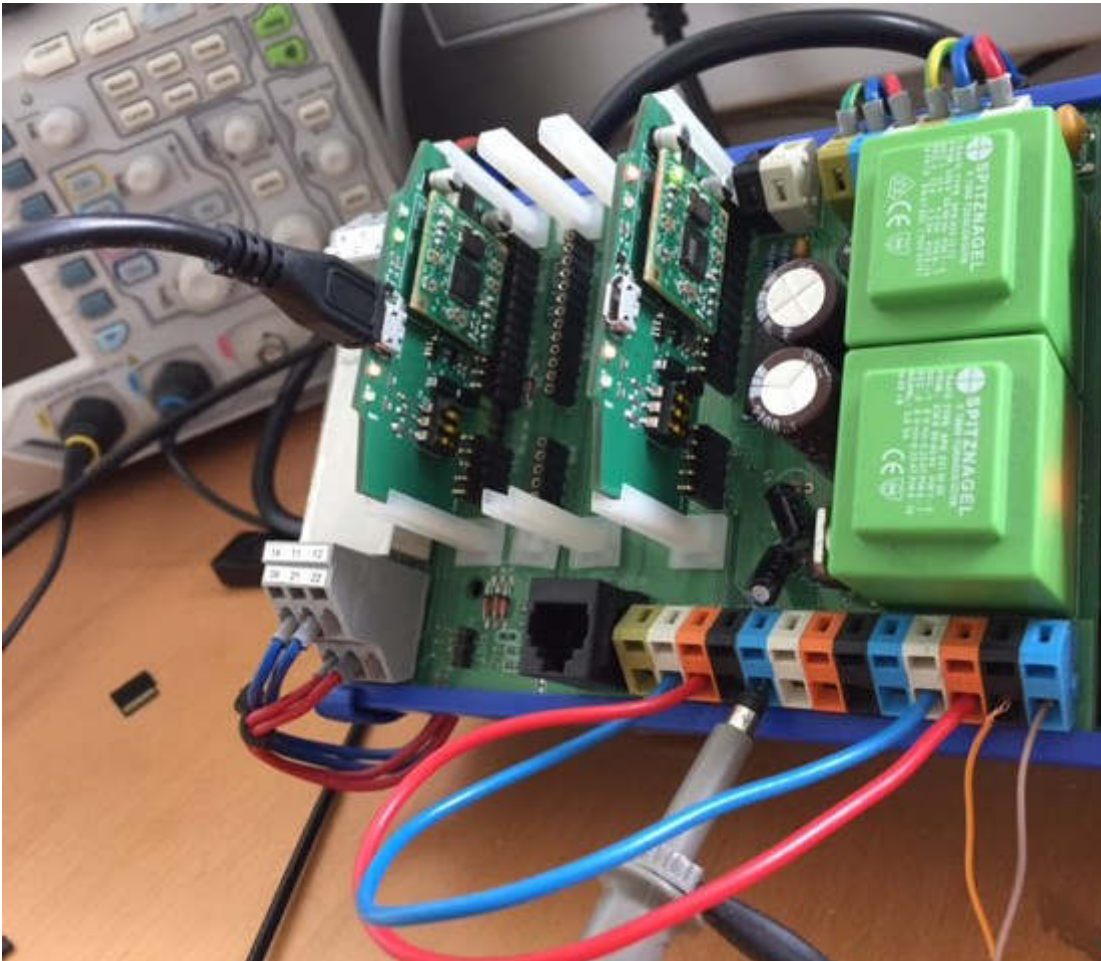
Device	ObjectId	Name	Value	Time	Status
1-8054	OBJECT_ANALOG_INPUT.601	601	0.8	15:28:44	OK
1-8054	OBJECT_ANALOG_INPUT.602	602	43	15:28:45	OK
1-8054	OBJECT_ANALOG_INPUT.603	603	48	15:28:40	OK
1-8054	OBJECT_ANALOG_INPUT.604	604	68.2	15:28:45	OK
1-8054	OBJECT_ANALOG_VALUE.1	1	2	15:28:22	OK
1-8054	OBJECT_ANALOG_VALUE.2	2	2	15:28:22	OK
1-8054	OBJECT_ANALOG_VALUE.3	3	1	15:28:22	OK
1-8054	OBJECT_ANALOG_VALUE.4	4	1	15:28:22	OK
1-8054	OBJECT_ANALOG_VALUE.5	5	1	15:28:22	OK
1-8054	OBJECT_ANALOG_VALUE.6	6	0	15:28:22	OK
1-8054	OBJECT_ANALOG_VALUE.7	7	0	15:28:22	OK
1-8054	OBJECT_ANALOG_VALUE.8	8	0	15:28:22	OK
1-8054	OBJECT_ANALOG_VALUE.9	9	0	15:28:22	OK
1-8054	OBJECT_ANALOG_VALUE.10	10	2	15:28:22	OK
1-8054	OBJECT_ANALOG_VALUE.11	11	2	15:28:22	OK
1-8054	OBJECT_ANALOG_VALUE.12	12	0	15:28:22	OK
1-8054	OBJECT_BINARY_OUTPUT.617	617 Pumpe HKD	0	15:28:22	OK

In the address space; where the objects appear; parameters (Present Value) can also be written back to the controller.

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Settings in the ICC studio:

Experiment setup with 2 PGWs (COM-A and COM-C) on the MR08 controller
Baud rate 19200 addr. 1 (A + C)



- The settings are made offline with the ICC Studio.
- **! Important !** always save before downloading.
- If the module is connected via USB and in the online program, the settings are saved on the PC with upload and must be edited offline.
- Any number of modules can be described with download.
- In "Network - BACNET - NODE" the MAC address may only appear once (0-127).
- Max. 240 BACNET objects are assigned, the rest are transferred as Default BACNET mapping, so can only be displayed by the remote site if the instance ID is known (data point list).
- Objects that are entered in the list can be found by broadcast (including designation / unit / and multiplier).

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Example AT from the MR08 controller on the BACNET side:

	Ar	Available Items
Analog Value - 6	Object Name	601 Aussenfühler
Analog Value - 7	Instance	601
Analog Value - 8	Database Address	1200
Analog Value - 9	Data Type	16-Bit Signed
Analog Value - 10	Multiplier	0.1
Analog Value - 11	Units	No Units
Analog Value - 12	Unit Value	
Analog Input - 601 Aussenfühler	Default COV Increment	0
Analog Input - 602		
Analog Input - 603		

- Object Name: Must be unique in the node, can be text, or just numbers.
- Instance: Must be unique in the node, is practically a data point ID.
- Database address: The reference where the value is stored in the module (host setting).
- Data Type: 2-byte signed as specified via Modbus (tool data has 32-bit 4-byte, for example).
- Multiplier: 0.1 will be transmit on the Modbus for twelve and a half degrees 125.
- Unit: unit in this case Celsius.
- Default COV Increment: Specifies the change in the value at which it should be resent, 0 means with each change, 10 would mean that the change should only be resent when there is a 1K change.

Example host side: MR08 actual values from data point 601

Project	Input Register Service Object - VAL700 Settings	
Binary Output - 627	Description	VAL700
Default BACnet Mapping	Destination Address	1
Host	Start Register	601
Modbus RTU Master	Number of Registers	100
Input Register Service Object - VAL700	Database Address	1200
Holding Register Service Object - Par100	Multiplier	1
Holding Register Service Object - Par200	Read Function	4 (Read Input Registers)
Holding Register Service Object - Par300	Data Type	16-Bit Unsigned
Holding Register Service Object - Par400	32-Bit Options	
Holding Register Service Object - Par500	32-Bit Registers	<input type="checkbox"/>
Holding Register Service Object - Par600	Floating Point	<input type="checkbox"/>
Input Register Service Object - VAL800	Big Endian	<input type="checkbox"/>
Input Register Service Object - VAL900	Word-Size Register	<input checked="" type="checkbox"/>
I/O		

Holding registers can also be sent back from the BACNET site.

! Important ! Write Function 6 (since a multiset on the controller is not possible).

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Example MR08 actual values and parameters via Modbus:

The screenshot shows the Schneider Modbus software interface. On the left, a tree view shows the configuration for 'Modbus RTU Master' with various 'Holding Register Service Object' entries. The main window displays the 'Diagnostics Object' configuration for 'Par100'. Below this, an 'Object List' table provides a summary of all configured registers.

Object Type	Description	Destination Address	Start Register	Number of Registers	Start Col	Number of Cols	Start Input	Number of Inputs	Database Address	Multiplier	Read Function
Input Register Service Object	VAL700	1	851	100	N/A	N/A	N/A	N/A	1200	1	4 (Read Input Registers)
Holding Register Service Object	Par100	1	1	100	N/A	N/A	N/A	N/A	0	1	3 (Read Holding Registers)
Holding Register Service Object	Par200	1	101	100	N/A	N/A	N/A	N/A	200	1	3 (Read Holding Registers)
Holding Register Service Object	Par300	1	201	100	N/A	N/A	N/A	N/A	400	1	3 (Read Holding Registers)
Holding Register Service Object	Par400	1	301	100	N/A	N/A	N/A	N/A	600	1	3 (Read Holding Registers)
Holding Register Service Object	Par500	1	401	100	N/A	N/A	N/A	N/A	800	1	3 (Read Holding Registers)
Holding Register Service Object	Par600	1	501	100	N/A	N/A	N/A	N/A	1000	1	3 (Read Holding Registers)
Input Register Service Object	VAL800	1	701	100	N/A	N/A	N/A	N/A	1400	1	4 (Read Input Registers)
Input Register Service Object	VAL900	1	701	100	N/A	N/A	N/A	N/A	1600	1	4 (Read Input Registers)

Settings included in MR08_Modbus_Bacnet.icsproj.

!Important!

Deactivate or delete all I / O settings, otherwise database registers will be overwritten.

!Important!

The following settings must match in DeviceConfiguration -> PicoPort.

The screenshot shows the 'PicoPort - CM08-PGW2 Settings' window. The 'Database Endianness' is set to 'Little Endian', 'Default Network Protocol' is set to 'Automatic', and 'Auto Run' is checked. These three settings are highlighted with a red box.

- Database Little Endian
- Default Network on Automatic
- AutoRUN activ!

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To check whether the values arrive at the Modbus, the database can be displayed via USB:

Address	0	2	4	6	8	10	12	14
0	2	2	1	1	1	0	0	0
16	0	2	2	0	0	0	88	130
32	15	101	50	101	2	0	0	0
48	0	10	30	1	23	-5	0	20
64	40	1	5	3	3	-5	15	30
80	70	100	80	50	99	15	3	1
96	120	0	3	89	2	1	10	50
112	30	101	0	5	0	0	1	100
128	0	8	0	0	0	86	0	0
144	1	1	1	7	0	1	7	0
160	35	43	89	85	05	0	3	0

- The values can also be changed by clicking (they are also sent to the controller).
- If the controller no longer delivers data, values can also be written in and it is updated on the BACNET.

Scope of delivery:

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Technical specifications:

Intrastat Number:	8537.10.91.90
Country of origin	EU/AT
Height, width, depth (in mm)	37x65x8
Weight (in kg)	0,012
Degree of protection	IP-00
Ambient temperature	0°C....+40°C
Operating voltage	5VDC
Power consumption	75mA
Max baud rate	115200 Bit/s
Connection type	Pin headers for base module
Mounting type	Plug-in card module
Operating time	Continuous operation
Degree of pollution	2