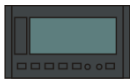
The Giacomini Driver



The Giacomini driver interfaces to Giacomini's GIACOKLIMA system. It connects to a KM203 network controller, which in turn connects to up to 32 K483 Thermostats and 32 KPM20 controllers. Available for Commander and ObSys.

This document relates to Giacomini driver version 1.0

Please read the *Commander Manual* or *ObSys Manual* alongside this document, available from *www.northbt.com*

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Compatibility with the Giacomini System

The Giacomini driver allows North to interface with a Giacomini GIACOKLIMA system.

The driver connects, via an RS485 serial connection, to a KM203 network controller, which connects to a network of up to 32 KPM20 controllers or K483 thermostats.

Each KPM20 controller can also have up to 8 K483 thermostat on its secondary bus.

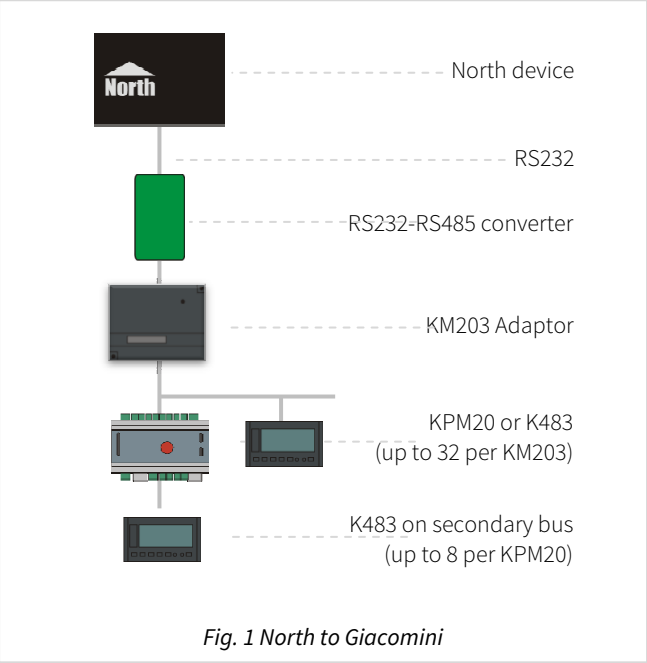

Fig. 1 North to Giacomini

Equipment

The Giacomini driver is compatible with the KM203 Network Controller.

Values

The KM203 controller has the following value available:

- External Temperature

Each KPM20 controller has the following values available:

- Flow/Return Temperatures

Each K483 thermostat has the following values:

- On/off status
- Room temperature
- Operating mode
- Temperature Setpoint
- Winter/summer, heat/cool

All addressing must be correct within the Giacomini system. The RS232-RS485 converter needs to be set to work at 19200 baud, 10 data-bits

Using the Driver

On ObSys, the Giacomini driver is pre-installed. On Commander, the driver is available to download in the file 'Bank3 Giacomini.cdm'. On all of these North devices, you can use the driver to create an interface to a Giacomini. Once started, you will need to set up the driver before it can communicate with the Giacomini system.

Making the Cable

Connect the North device COM port to an RS232 to RS485 adapter.

Using the RS485 cable specification (Fig. 2), connect the RS485 adapter to the KM203 network.

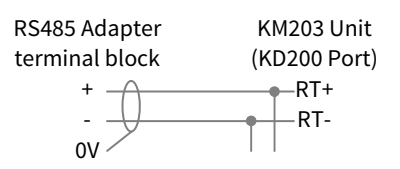

Fig. 2 RS485 adapter to KM203 cable

RS485 adapters are available from North, order code MISC/RS232/485.

Starting the Interface

To start an interface using the Giacomini driver, follow these steps:

- → **Start Engineering** your North device using ObSys
- → Navigate to **Configuration, Interfaces,** and set a unused **Interface** to 'Giacomini' to start the particular interface
- → Navigate to the top-level of your North device, then rescan it

The driver setup object (Mc), labelled **Giacomini Setup**, should now be available. If this object is not available, check an interface licence is available and the driver is installed.

Setting up the Driver

To set up the driver, follow these steps:

- → Navigate to the **Giacomini Setup** object (Mc). For example, if you started interface 1 with the driver earlier, then the object reference will be 'M1'
- → Set the **COM Port** object (RS.COM) to select which serial port number on the North device the Giacomini system in connected.

Object Specifications

Once an interface is started, one or more extra objects become available within the top-level object of the device. As with all North objects, each of these extra objects may contain sub-objects, (and each of these may contain sub-objects, and so on) - the whole object structure being a multi-layer hierarchy. It is possible to navigate around the objects using the ObSys Engineering Software.

Each object is specified below, along with its sub-objects.

Example Object Reference

An example of a reference to an object in the same device: the Giacomini System (S1) contains a KPM20 address zero (A0), with a K483 at address 1 (O2304) which contains a Fan Speed (R6.B14). Therefore, the complete object reference is 'S1.A0.O2304.R6.B14'.

An example of a reference to an object in a different device: the IP network object (IP) contains Default Commander object (CDIP), which contains the object above (S1.A0.O2304.R6.B14) – therefore the complete object reference is 'IP.CDIP. S1.A0.O2304.R6.B14'.

Device Top-Level Objects

When an interface is started using the Giacomini driver, the objects below become available within the top-level object of the device. For example, if interface 1 is started, then the object references 'M1' and 'S1' become available.

Description	Reference	Type
Giacomini Setup Set up the Giacomini driver, started on interface *c* (*c* is the interface number)	M*c*	Fixed Container: On the Commander platform this will be *[CDM v20\Giacomini v10]* On the ObSys platform this will be *[OSM v20\Giacomini v10]*
Giacomini System Access Giacomini system connected to interface *c* (*c* is the interface number)	S*c*	Fixed Container: *[Giacomini v10]*

Giacomini Driver Setup

Object Type: *[OSM v20\ Giacomini v10]*
Object Type: *[CDM v20\ Giacomini v10]*

The Giacomini driver contains the following objects:

Description	Reference	Type
COM Port	RS.COM	Obj\Num; Range: 1…8; Adjustable
Device Label	DL	Obj\Text; Max. 20 chars; Adjustable

Giacomini System

Object Type: *[Giacomini v10]*

Each Giacomini system can contain a network of KPM20 controllers and/or K483 thermostats on the primary bus.

Description	Reference	Type
KM203 Information The KM203 itself holds information, made available within this object	N	Fixed container: *[Giacomini v10\KM203]*
KPM20 *x* The KPM20 address, x, can be in the range 0…31.	C*x*	Fixed Container: *[Giacomini v10\KPM20]*
K483 *y* The K483 address, *y*, can be in the range 1..32 on the primary bus	T*y*	Fixed Container: *[Giacomini v10\K483Pri]*

KM203 Information

Object Type: *[Giacomini v10\KM203]*

The KM203 contains the information listed below.

Description	Reference	Type
External Temperature (°C)	F98	Float: 1 decimal places
FLASH Lock	LK	NoYes; Adjustable
Cool/Heat Mode	B29249.V	ENum; Adjustable; In the range 0..1 where 0=Cool, 1=Heat

KPM20 Controller on Primary Bus

Object Type: *[Giacomini v10\KPM20]*

Each KPM20 controller contains the information listed below.

Description	Reference	Type
Flow Temperature (°C)	F9	Float: 1 decimal places
Return Temperature (°C)	F10	Float: 1 decimal places
Output Percentage (%)	F18	Float: 0..100;
K483 Address *y* The K483 address, *y*, is in the range 0..7 on the secondary bus	T*y*	Fixed container: *[Giacomini v10\KPM20\K483Sec]*

K483 Thermostat on Secondary Bus

Object Type: *[Giacomini v10\KPM20\K483Sec]*

Each K483 thermostat on the secondary bus contains the information:

Description	Reference	Type
Temperature (°C)	F1	Float: 1 decimal
Setpoint (°C)	F3	Float: 1 decimal; Adjustable
Humidity (%)	F22	Float: 1 decimal
Required Mode	R5.D0	ENum: 0..3; Adjustable Values: 0=Night, 1=Standby, 2=Comfort, 3=Off
Force Mode	R5.B3	NoYes; Adjustable
Stand Alone	R5.B4	NoYes; Adjustable
Window State	R5.B5	ENum: 0..1; Adjustable Values: 0=Open, 1=Closed
Occupied	R5.B6	NoYes; Adjustable
Antifreeze Enabled	R5.B7	NoYes; Adjustable
Remote Control Alternate	R5.B8	NoYes; Adjustable
Season	R5.B9	ENum: 0..1; Adjustable Values: 0=Summer, 1=Winter
Season Functions Enabled	R5.B10	NoYes; Adjustable
Condensation Mode Enabled	R5.B11	NoYes; Adjustable
Condensation Alarm	R5.B12	NoYes
Set Override Enable	R5.B13	NoYes; Adjustable
Effective Mode	R6.D0	ENum: 0..3 Values: 0=Night, 1=Standby, 2=Comfort, 3=Off
Timer Mode	R6.B2	NoYes
Alternate Mode	R6.B3	NoYes
Stand Alone	R6.B4	NoYes
Heat/Cool Mode	R6.B5	ENum: 0..1 Values: 0=Heat, 1=Cool
Output State	R6.B6	OffOn
Humidity Mode	R6.B7	ENum: 0..1 Values: 0=Remote, 1=Local
Remote Management Enabled	R6.B8	NoYes
Manual Mode Enabled	R6.B9	NoYes
Output Coil	R6.B10	OffOn
Humidistat	R6.B11	OffOn
Humidistat (t)	R6.B12	OffOn
Manual Fan State Enable	R6.B13	NoYes
Fan Speed	R6.D14	ENum: 0..3 Values: 0=Off, 1=Speed1, 2=Speed2, 3=Speed3

Note: Adjustability information not 100% reliable – awaiting more information…

K483 Thermostat on Primary Bus

Object Type: *[Giacomini v10\KPM20\K483Pri]*

Each K483 thermostat on the primary bus contains the information.

Description	Reference	Type
Temperature	E1	Float: 1 decimal
Setpoint	E3	Float: 1 decimal; Adjustable
Status	Q6.B6	OffOn; Adjustable
Operating Mode	Q6.D0	ENum: 0..3; Adjustable Values: 0=Night, 1=Standby, 2=Comfort, 3=Off

Driver Versions

Version	Build Date	Details
1.0	28/8/2013	Driver released

Next Steps…

If you require help, contact support on 01273 694422 or visit *www.northbt.com/support*

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