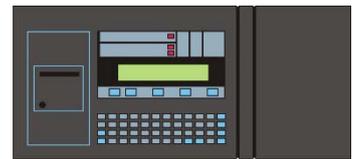# North

The Gent Driver

The Gent driver connects to the range of Gent by Honeywell's Vigilon fire detection panels supporting the Open Protocol Specification. Available for Commander and ObSys.

This document relates to Gent driver version 1.4

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

Contents

Compatibility with the Gent System

The Gent driver allows North to interface with Gent by Honeywell's Vigilon fire detection system.

The driver connects to a Gent fire control panel (Fig. 1), and can communicate with a network of up to 32 panels.

Fig. 1 North to Gent panel
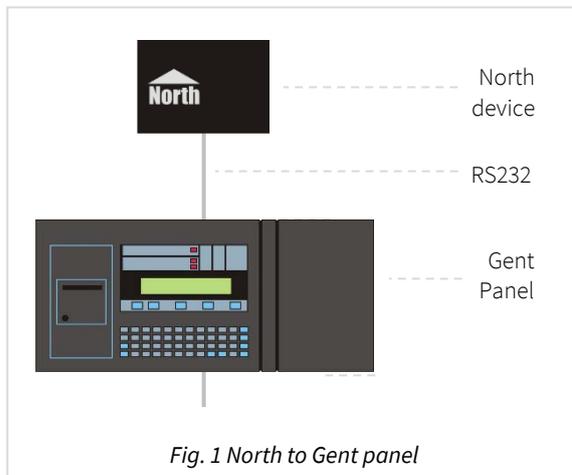
Equipment

Gent fire control panels supporting the Open Protocol Specification, compatible with the driver include:

- Vigilon Compact Panel (EN)
- Vigilon Compact VA panel (EN)
- Vigilon 4/6 loop panels (EN/BS)
- Vigilon network nodes
- Vigilon 34000 panels
- 3404 Control panel (1-4 loops)
- 2408 Control panel (1-8 loops)
- 3500 Network terminal node

Values

The driver can typically access the following values from a fire control panel:

- Panel state
- Supervisory State
- Loop state
- Sector state
- Loop-device state
- Device-channel state
- Zone state
- Reset panel
- Sounders

States for fire, fault, and isolation are available.

Fire control panels can send alarms to the Gent driver. Long labels are not supported – the maximum label length available from a panel is 32 characters.

On starting, the driver will be unaware of the current fire system status.

Prerequisites

Vigilon 4/6 loop panels require an IO card (VIG-IOC-DOM) fitting in socket P2 of the backplane. On the card, set RS232 port mode to 'universal full-duplex'. The RS232 serial cable should be attached to connector P4 on the terminal card.

Vigilon Compact panels do not require an additional IO card. The RS232 serial cable should be attached to connector PB6.

The Vigilon panel's port must be configured with a baud rate and, on a Vigilon Compact panel, also the mode.

Configure the Vigilon port as follows (requires a level 3 user PIN):

Press **Menu On/Off** button and then select **[Test/Eng], [Usercode]**, select **<etc>** and then select **[Config]**. Momentarily press **<etc>** to select **[Comms]**. Then select **[Card]** and proceed depending on the panel model.

On a Vigilon 4/6 loop panel, enter card '15'. Select **[Baud]**, scroll to '19200' and press **[Enter]**.

On a Vigilon Compact panel, enter card '0', then port '1'. Select **[Mode]** and scroll to 'Universal' and press **[Enter]**. Next, set select **[Baud]** and scroll to '19200' and press **[Enter]**.
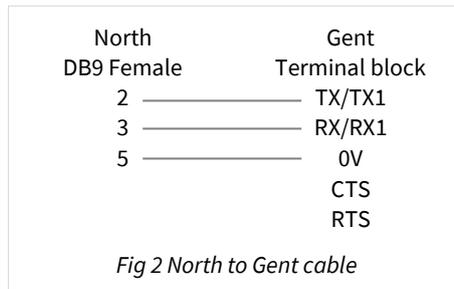
Refer to the Gent Vigilon commissioning manual for further information.

Using the Driver

On ObSys, the Gent driver is pre-installed. On Commander, the Gent driver is available to download in the file 'Bank7 Gent.cdm'. On both these North devices, you can use the driver to create an interface to Gent. Once started, you will need to set up the driver before it can communicate with the Gent system.

Making the Cable

Using the RS232 cable specification (Fig. 2), connect the North device COM port to the Gent Vigilon panel – port P4 on a Vigilon 4/6 loop panel, or PB6 on a Vigilon Compact panel. Connector types at each end of the cable are shown:

```
        North                   Gent
     DB9 Female             Terminal block
         2 ———————————————— TX/TX1
         3 ———————————————— RX/RX1
         5 ———————————————— 0V
                                CTS
                                RTS
```

Fig 2 North to Gent cable

The maximum RS232 cable length is 15m and should be as short as possible.

Cables are available from North, order code CABLE/GENT/TERM.

Starting the Interface

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

→ **Start Engineering** your North device using ObSys

→ Navigate to **Configuration, Interfaces,** and set an unused **Interface** to 'Gent' to start the particular interface

→ Navigate to the top-level of your North device and re-scan it

The driver setup object (M*c*), labelled **Gent 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 **Gent Setup** object (M*c*). For example, if you started interface 1 with the driver earlier, then the object reference will be 'M1'

→ Set **RS232 Com Port** (RS.COM) to select the serial port number on the North device the panel is connected to.

Checking Communications

Gent Setup contains a **Comms Online** (DS) object. A value of 'Yes' indicates the driver is receiving data from the Gent system.

Alarms

When the Gent system reports an event to the driver, the driver sends a North-format alarm to the device's alarm processing.

Format

North-format alarms contain six text fields. The Gent driver places the following information into these fields:

System – copied from System Label object (DL) within driver setup

Point – see Point Field section below

Condition – see Condition and Priority Field section below

Priority – see Condition and Priority Field section below

Date & Time – when the condition was detected by the fire panel

Examples

System	Point	Condition	Priority	Date	Time
Gent Fire	Panel 1 Loop 1 Dev 3	Fire	1	19/03/14	14:29:48
Gent Fire	Panel 2 Loop 8	Fault	3	19/03/14	14:35:12
Gent Fire	Panel 12	Fire Reset	1	19/03/14	14:38:26
Gent Fire	Panel 2 Supervisory 5	On	4	19/03/14	14:42:34

Point Field

Selected by the **Alarm Point Field** object (AT) within driver setup.

If 'PLD reference' option is selected, Point field can be:

Panel w

Panel w Card x

Panel w Loop x

Panel w Loop x Dev y

Panel w Loop x Dev y Chan s

Panel w Loop x Dev y Zone z

Panel w Loop x Dev y Chan s Zone z

Panel w Supervisory u

If 'PLD+Sector' option is selected, Point field can additionally include:

Panel w Loop x Sector t

Panel w Loop x Dev y Sector t

Panel w Loop x Dev y Chan s Sector t

Panel w Loop x Dev y Sector t Zone z

Panel w Loop x Dev y Chan s Sector t Zone z

If 'Detector label' option is selected, Point Field contains:

Device location from panel

Condition and Priority Field

The following alarm conditions can be sent by the driver:

Condition	Priority
Fire	1
Fire reset	1
Fault	3
Isolate	3
System Fault	3

Condition	Priority
Faults clear	3
DeIsolate	3
Alarms Silenced	3
Alarms Sounding	3

For a supervisory event, the driver sends the following:

Condition	Priority
On	4
Off	4

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 Gent System (S1) contains Panel 1 (P1), which contains Loop 2 (L3), which has Device 35 (D35), which contains a value (V). Therefore, the complete object reference will be 'S1.P1.L3.D35.V'.

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.P1.L3.D35.V) – therefore the complete object reference is 'IP.CDIP.S1.P1.L3.D35.V'.

Device Top-Level Objects

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

Description	Reference	Type
Gent Setup Set up the Gent driver, started on interface *c* (*c* is the interface number)	M*c*	Fixed Container: On the Commander platform this will be *[CDM v20\Gent v14]* On the ObSys platforms this will be *[OSM v20\Gent v14]*
Gent System Access Gent system connected to interface *c* (*c* is the interface number)	S*c*	Variable Container: *[Gent v14]*

Gent Driver Setup

Object Type: *[OSM v20\Gent v14]*
Object Type: *[CDM v20\Gent v14]*

The Gent driver contains the following objects:

Description	Reference	Type
RS232 COM Port	RS.COM	Obj\Num: 1…8; Adjustable
Baud Rate	RS.BR	Obj\Num; Adjustable Values: 1200, 4800, 9600, 19200
System Label Label displayed when scanning the system and within alarms	DL	Obj\Text: 20 Chars; Adjustable
Comms Online Indicates whether communications has been established with the panel	DS	Obj\NoYes
Alarm Point Field Selects source of the alarm message point field	AT	Obj\Enum: 0…3; Adjustable Values: 0=PLD reference, 1=Detector label (if available), 2=PLD+Sector reference

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Gent System

Object Type: *[Gent v14]*

The Gent system is a network of Gent fire detection panels. It contains objects to view the status of the whole system (N) and objects to access information from each connected panel (P*x*).

The Gent system will contain one or more panels.

Description	Reference	Type
Network	P	Fixed container: *[Gent v14\Network]*
Panel *x* The panel number, *x*, is a number in the range 0..31	P*x*	Fixed container: *[Gent v14\Panel]*

Gent Network

Object Type: *[Gent v14\Network]*

The Gent Network object contains summary information of active events.

Note that these system counts may lag the true status of the Gent system by up to two minutes (or more on complex networks).

Description	Reference	Type
Total Fires Count of total system fires	FC	Obj\Num
Total Isolations Count of total system disablements	DC	Obj\Num
Total Faults Count of total system faults	LC	Obj\Num
Domain Number Address of the domain (network) the control panels are in	D	Obj\Num: 0..255

Gent Panel

Object Type: *[Gent v14\Panel]*

A Gent panel contains the following objects:

Description	Reference	Type
Reset Only available with panels supporting the Universal 3400 Protocol, and not the Basic 3400 Protocol	R	Obj\NoYes: Adjustable only
Sounder Activate or de-activate sounders	S	Obj\NoYes: Adjustable
Date and Time Set the panel date and time	T	Obj\DateTime: Adjustable only
Panel Value List	V	Obj\Text List of values from the numbers listed below in object Va. E.g. '22|19|12'
Panel Value a The panel value index, a, is in the range 1…6	Va	Obj\ENum Value: 0=OK, 12=System fault, 15=Detector fault, 16=Loop fault, 17=Isolation, 19=Alarms sounding, 22=Fire
System Fault Indicates the presence of a system fault on the panel, its zones, loops, detectors or sectors	F12	Obj\NoYes
Detector Fault Indicates the presence of a detector fault	F15	Obj\NoYes
Loop Fault Indicates the presence of a loop fault	F16	Obj\NoYes
Isolation Indicates the presence of an isolated device or zone	F17	Obj\NoYes
Alarm Sounding Indicates the presence of sounding alarms	F19	Obj\NoYes
Device in Fire Indicates the presence of a fire state on any connected device	F22	Obj\NoYes
Loop x The Loop number, x, is in the range 1..15 (physical loops 1..8, cards 9..15)	Lx	Fixed container: *[Gent v14\Loop]*
Zone y The Zone number, y, is in the range 1..128	Zy	Fixed container: *[Gent v14\Zone]*
Supervisory z The Supervisory number, z, is in the range 1..255	Sz	Fixed container: *[Gent v14\Supv]*

Gent Loop

Object Type: *[Gent v14\Loop]*

A Gent Loop contains the following objects:

Description	Reference	Type
Value List	V	Obj\Text List of values from the numbers listed below in object V*a*. E.g. '22|17'
Value *a* The value index, a, is in the range 1…6	V*a*	Obj\ENum Value: 0=OK, 15=Detector fault, 16=Loop fault, 17=Isolation, 22=Fire
Detector Fault Indicates the presence of a detector fault	F15	Obj\NoYes
Loop Fault Indicates the presence of a loop fault	F16	Obj\NoYes
Isolation Indicates the presence of a disablement	F17	Obj\NoYes
Device in Fire Indicates the presence of devices in a fire state on the connected loop	F22	Obj\NoYes
Device *x* The device number, *x*, is in the range 1..100	D*x*	Fixed container: *[Gent v14\Device]*
Sector *y* The sector number, *y*, is in the range 1..32	S*y*	Fixed container: *[Gent v14\Sector]*

Gent Device

Object Type: *[Gent v14\Device]*

A Gent device contains the following objects.

Isolation events from the Gent system do not include a device number, so these are only reported at loop or panel level.

Description	Reference	Type
Value List	V	Obj\Text List of values from the numbers listed below in object V*a*. E.g. '22|15'
Value *a* The value index, a, is in the range 1…6	V*a*	Obj\ENum Value: 0=OK, 15=Detector fault, 22=Fire
Detector Fault Indicates the presence of a detector fault	F15	Obj\NoYes
Devices in Fire Indicates the presence of Fire condition	F22	Obj\NoYes
Isolate Device	I	Obj\NoYes: Adjustable only
Change Label	L	Obj\Text: 32 chars; Adjustable only
Channel *x* The channel number, *x*, is in the range 1..7	C*x*	Fixed container: *[Gent v14\Chan]*

Gent Channel

Object Type: *[Gent v14\Chan]*

A Gent Channel is a sub-device, and contains the following objects:

Description	Reference	Type
Value List	V	Obj\Text List of values from the numbers listed below in object V*a*. E.g. '15'
Value *a* The value index, a, is in the range 1…6	V*a*	Obj\ENum Value: 0=OK, 15=Detector fault, 22=Fire
Detector Fault Indicates the presence of a detector fault on the sector's detectors	F15	Obj\NoYes
Device in Fire Indicates the presence of Fire condition(s) in the sector	F22	Obj\NoYes

Gent Sector

Object Type: *[Gent v14\Sector]*

A Gent Sector contains the following objects:

Description	Reference	Type
Value List	V	Obj\Text List of values from the numbers listed below in object V*a*. E.g. '22|17'
Value *a* The value index, a, is in the range 1…6	V*a*	Obj\ENum Value: 0=OK, 15=Detector fault, 17=Isolation, 22=Fire
Detector Fault Indicates the presence of a detector fault within the sector	F15	Obj\NoYes
Isolation Indicates the presence of a disablement within the sector	F17	Obj\NoYes
Device in Fire Indicates the presence of fire condition within the sector	F22	Obj\NoYes

Gent Zone

Object Type: *[Gent v14\Zone]*

A Gent zone contains the following objects:

Description	Reference	Type
Value List	V	Obj\Text List of values from the numbers listed below in object V*a*. E.g. '22|17'
Value *a* The value index, a, is in the range 1…6	V*a*	Obj\ENum Value: 0=OK, 15=Detector fault, 17=Isolation, 22=Fire
Detector Fault Indicates the presence of a detector fault within the zone	F15	Obj\NoYes
Isolation Indicates the presence of a disablement within the zone	F17	Obj\NoYes
Device in Fire Indicates the presence of a fire condition within the zone	F22	Obj\NoYes
Isolate Zone	I	Obj\NoYes; Adjustable only

Gent Supervisory

Object Type: *[Gent v14\Supv]*

A Gent Supervisory is a general purpose, non-fire event typically used for monitoring other equipment, or performing non-fire actions on the fire system. The following object is available:

Description	Reference	Type
State	S	Obj\OffOn

Driver Versions

Version	Build Date	Details
1.2	7/3/2000	Implement sector bit array, Channel fields, re-worked supervisory elements
1.2	18/4/2000	Added driver alarm buffer
1.3	18/6/2003	Protocol change - warning state changed to isolation
1.4	18/6/2003	Driver updated with protocol changes, added write commands
1.4	27/2/2009	Fixed problem clearing an event. Increased database size.
1.4	4/6/2013	Fixed problem with with .V objects not returning system fault
1.4	4/10/2023	Modified isolation objects (I) to return '' (blank) rather than '0' when reading. Improving operation in Essential Data. Default baud rate 19200

Next Steps…

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

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