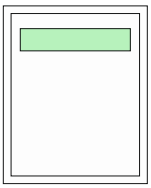
The Cerberus Driver



The Cerberus driver connects to a Cerberus AlgoRex CS1140 series fire detection system. Available for ObSys and Commander.

This document relates to Cerberus driver version 1.0

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

Contents

Compatibility with the Cerberus System

The Cerberus driver allows North to interface with a Cerberus AlgoRex CS1140 series fire detection system.

The driver connects to the AlgoRex panel's RS232 printer interface (Fig. 1). This printer-style output port provides limited monitoring only, no commands can be sent to the panel.

When an event is generated by the fire system the driver stores this in its database, which can then be read using objects.

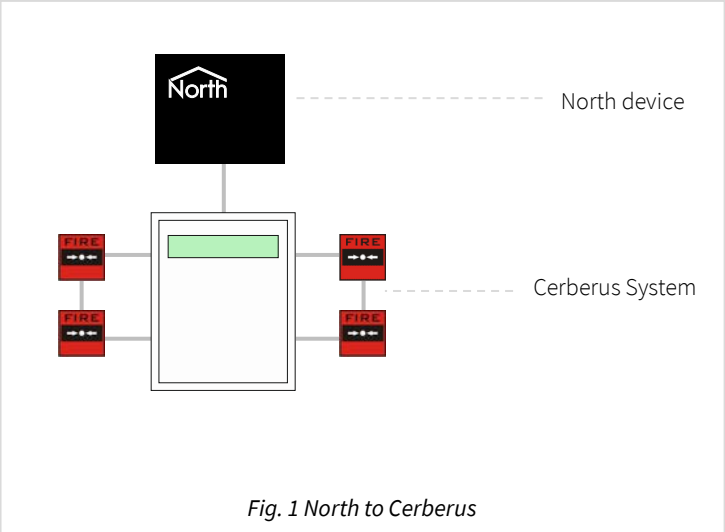


Fig. 1 North to Cerberus

Equipment

Cerberus AlgoRex fire detection panels compatible with the driver include the CS1140 series with CT114x, CI114x, or CC114x station types.

Values

The driver can typically access the following values:

- Zone fire
- Zone fault
- Zone isolated

The connected fire panel can send alarms to the Cerberus driver.

Prerequisites

The CS1140 series panel requires an RS232 module (E3I020) to provide the printer interface. The driver decodes the printer-style output sent from the panel. Only recognised events are decoded and made available as objects. All alarms from the configured panel will be routed onwards.

The driver is unable to request the current state of the panel at start-up, therefore the panel should be clear of all events when starting or resetting the driver.

Using AlgoWorks configuration tool, set the printer interface to 9600 baud, no parity, 8 data bits, and 1 stop bit. The character set must be set to 'ISO Latin 1'.

Refer to *Appendix A* for the expected printer output format.

Using the Driver

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

Making the Cable

Using the RS232 cable specification, connect the North Device COM port to the Cerberus printer output connector. Connector types at each end of the cable are shown.

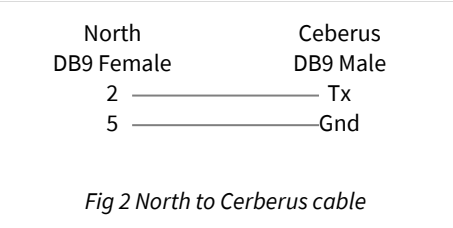


Fig 2 North to Cerberus cable

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

Starting the Interface

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

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

The driver setup object (Mc), labelled **Cerberus 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 **Cerberus Setup** object (Mc). For example, if you started interface 1 with the driver earlier, then the object reference will be 'M1'
- → Set the **RS232 Com Port** (RS.COM) to select which serial port on the North Device is connected to the Cerberus printer output connector

Checking Communications

You can check that the interface is communicating by reading the **Device State** object (DS) A value of 'Yes' indicated the driver has received and decoded a message from the panel in the last 90 seconds.

Alarms

When the Cerberus 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 Cerberus driver places the following information into these fields, with information copied directly from the panel output:

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

Point – label of the point in alarm, e.g. 'Angelou Court/Ground floor kitchen'

Condition – condition of point in alarm, e.g. 'AUTOM. FIRE ALARM'

Priority – see Priority Field section below

Date & Time – is the date and time the alarm was generated by the panel.

Examples

System	Point	Condition	Priority	Date	Time
Cerberus Fire	Pavilion House / Ground Floor	Fire Alarm	1	01/03/20	14:29:48
Cerberus Fire	Pavilion House / Main Building	Technical Alarm	1	01/03/20	14:55:12
Cerberus Fire	Pavilion House / Upstairs Kitchen	Isolated	2	11/03/20	11:26:26
Cerberus Fire	Pavilion House / E3X100 loop 2	Sounder Circuit Activated	4	11/03/20	11:32:02
Cerberus Fire	Pavilion House / E3X100 loop 2	Sounder Circuit Activated	4	11/03/20	11:36:09
Cerberus Fire	Pavilion House / Lift return control	Control zone Active	4	10/04/20	14:17:35

Priority Field

The following alarm priorities can be sent by the driver:

Type of condition	Priority
Fire, or Alarm	1
Isolation	2
Fault	3
Information	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 Engineer.

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 Cerberus System (S1) contains Zone 1 (Z1) which has a Value 1 (V1). Therefore, the complete object reference is 'S1.Z1.V1'.

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.Z1.V1) – therefore the complete object reference is 'IP.CDIP.S1.Z1.V1'.

Device Top-Level Objects

When an interface is started using the Cerberus 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
Cerberus Setup Set up the Cerberus driver, started on interface *c* (*c* is the interface number)	M*c*	Fixed container: On the Commander platform this will be *[CDM v20\Cerberus v11]* On the ObSys platform this will be *[OSM v20\Cerberus v11]*
Cerberus System Access Cerberus system connected to interface *c* (*c* is the interface number)	S*c*	Variable container: *[Cerberus v11]*

Cerberus Driver Setup

Object Type: *[OSM v20\Cerberus v11]*
Object Type: *[CDM v20\Cerberus v11]*

The Cerberus driver contains the following objects:

Description	Reference	Type
System Label	DL	Obj\Text: 20 chars; Adjustable
RS232 COM Port	RS.COM	Obj\Num: 0…8; Adjustable
Comms OK Indicates the driver has received a message from the panel in the last 90 seconds	DS	Obj\NoYes

Cerberus System

Object Type: *[Cerberus v11]*

A Cerberus System contains the following objects:

Description	Reference	Type
Zone *x* The zone number, x, is in the range 1…39	Z*x*	Fixed Container: *[Cerberus v11\Zone]*

Zone

Object Type: *[Cerberus v11\Zone]*

The Zone contains the following objects:

Description	Reference	Type
Value Zone alarm state	V1	Obj\Enum Values: 0=OK, 15=Fault, 20=Isolation, 22=Fire
Devices in Fault	F15	Obj\NoYes
Devices Isolated	F20	Obj\NoYes
Devices in Fire	F22	Obj\Num
Fire Count	FC	Obj\Num
Isolations Count	IC	Obj\Num
Fault Count	UC	Obj\Num

Appendix A: Printer Output

The driver expects the CS1140 (EP5) english ‘International 1’ message layout.

The driver will only store zone events, but will generate alarms for 'message appears' and 'message disappears' events.

The following format is required for zone events:

- Line 1 position 27 should contain the text: 'FIRE', 'ALARM', ISOLATION', 'FAULT', or 'INFORMATION'
- Line 2 position 3 should contain the character '+', or '-'
- Line 2 position 32 should contain the text 'Zone', with the zone number starting at position 38; or position 33 should contain the text 'ZONE', with the zone number starting at position 37.

The following format is required for alarm events:

- Line 3 and line 4 (customer texts) are used for the Compass alarm object label field
- Line 2 (standard text) is used for the Compass alarm condition field
- Line 1 should contain the month text 'JAN', 'FEB', 'MAR', etc.

Driver Versions

Version	Build Date	Details
1.1	15/11/1999	Added Vx and Fx objects
1.1	28/02/2001	Improved alarm queuing
1.1	21/03/2014	Released for Commander platform

Next Steps…

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

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