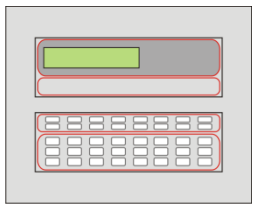
# The KiddeVegaPanel Driver



The KiddeVegaPanel driver connects to a Kidde Fire Protection Vega panel. Available for Commander and ObSys.

This document relates to KiddeVegaPanel driver version 1.0

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

# Contents

# Compatibility with the Kidde System

The KiddeVegaPanel driver allows North to interface with a single Kidde Fire Protection Vega panel (Fig. 1).

An alternative driver is also available. The KiddeVegaNet driver provides support for multiple panels connected to the Kidde GRS/MARS network.

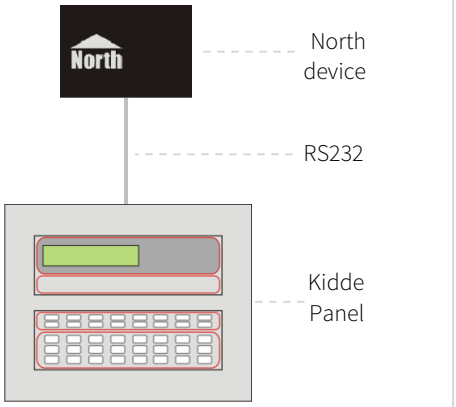



*Fig. 1 North to Kidde Vega panel*

## Equipment

Only the Kidde Vega fire control panel is compatible with the driver.

## Values

The driver can typically access the following values:

- Reset panel
- Sounders
- Panel state
- Loop state
- Loop device state
- Sub-address state
- Zone state
- Motherboard channel state
- Output group state

Fire, pre-alarm, fault, and isolation conditions are available.

Fire control panels can send alarms to the KiddeVegaPanel driver.

## Prerequisites

The Vega panel should be fitted with software version P28181-nnn.

An RS232 to TTL adapter is required.

# Using the Driver

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

## Making the Cable

Using the RS232 cable specification (Fig. 2), connect the North device COM port to the RS232 to TTL adapter. Connector types at each end of the cable are shown.

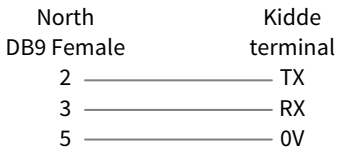



*Fig 2 North to Kidde cable*

The maximum RS232 cable length is 15m.

Cables are available from North, order code CABLE/KIDDEVEGAPANEL.

## Starting the Interface

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

- → **Start Engineering** your North device using ObSys
- → Navigate to **Configuration, Interfaces,** and set an unused **Interface** to 'KiddeVegaPanel' to start the particular interface
- → Navigate to the top-level of your North device and re-scan it

The driver setup object (Mc), labelled **Kidde 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 **Kidde Setup** object (Mc). 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 Kidde panel is connected to.

## Checking Communications

You can check that the interface is communicating by reading the **Comms Online** object (DS). A value of 'Yes' indicates the driver has connected to, and is communicating with the Kidde panel.

# Alarms

When the Kidde 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 KiddeVegaPanel 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** – from North device

## Examples

| System | Point | Condition | Priority | Date | Time |
|---|---|---|---|---|---|
| Kidde System | Panel Loop 1 Dev 3.2 Zone 2 | Fire | 1 | 01/03/13 | 14:29:48 |
| Kidde System | Panel | Alarms Silenced | 3 | 01/03/13 | 14:35:12 |
| Kidde System | Panel Loop 1 Dev 3.2 Zone 2 | Reset | 1 | 01/03/13 | 14:35:20 |
| Kidde System | Panel Loop 2 Dev 16.1 Zone 1 | Isolated | 2 | 11/03/13 | 14:26:26 |
| Kidde System | Panel Loop 2 Dev 16.1 Zone 1 | De-Isolated | 2 | 11/03/13 | 14:32:02 |

## Point Field

The Point field can be:

Panel *a*

Panel *a* Loop *b* Zone *d*

Panel *a* Loop *b* Dev *c.c* + Plant *d*

Panel *a* IO *b*

Panel *a* IO *b* Chan *c*

The panel number, *a*, is only included if the Panel Address (PA) is configured in the Kidde driver setup. 'IO' indicates a panel's motherboard input-output channel.

## Condition and Priority Field

The following alarm conditions can be sent by the driver:

| Condition | Priority |
|---|---|
| Reset | 1 |
| Fire | 1 |
| Fire Cleared | 1 |
| Pre-Alarm | 2 |
| Pre-Alarm Cleared | 2 |
| Isolated | 2 |
| De-Isolated | 2 |
| Fault | 3 |
| Fault Cleared | 3 |
| Supply Fault | 3 |
| Supply Fault Cleared | 3 |
| Loop Fault | 3 |

| Condition | Priority |
|---|---|
| Sounder Fault | 3 |
| Alarms Silenced | 3 |
| Alarms Sounding | 3 |
| T1 started: *X*secs | 3 |
| T2 started: *X*secs | 3 |
| All timers cancelled | 3 |
| Zone timer expired | 3 |
| Communications Lost | 3 |
| Communications Regained | 3 |
| In Access | 4 |
| In Access Cleared | 4 |

The condition 'Reset' is used to indicate cleared latching alarm(s).

# 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 Kidde System (S1) contains Panel (P), which contains Loop 1 (L1), which has Device 22 (D22), which contains an alarm state (C). Therefore, the complete object reference will be 'S1.P.L1.D22.C'.

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.P.L1.D22.C) – therefore the complete object reference is 'IP.CDIP.S1.P.L1.D22.C'.

## Device Top-Level Objects

When an interface is started using the KiddeVegaPanel 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 |
|---|---|---|
| **Kidde Setup**<br>Set up the KiddeVegaPanel driver, started on interface *c* (*c* is the interface number) | M*c* | Fixed Container:<br>On the Commander platform this will be<br>*[CDM v20\KiddeVegaPanel v10]*<br>On the ObSys platforms this will be<br>*[OSM v20\KiddeVegaPanel v10]* |
| **Kidde System**<br>Access Kidde system connected to interface *c* (*c* is the interface number) | S*c* | Variable Container:<br>*[KiddeVegaPanel v10]* |

# Kidde Driver Setup

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

The KiddeVegaPanel driver contains the following objects:

| Description | Reference | Type |
|---|---|---|
| **RS232 COM Port** | RS.COM | Obj\Num: 1…8; Adjustable |
| **System Label**<br>Label displayed when scanning the system and within alarms | DL | Obj\Text: 20 Chars; Adjustable |
| **Comms Online**<br>Indicates whether communication is established with the panel | DS | Obj\NoYes |
| **Panel address**<br>Address of connected panel. Only used by the driver when sending alarm events. | PA | Obj\Num: 0…32; Adjustable |
| **Event storage available**<br>Each event from the system must be remembered by the driver. **If no storage is available for a new event, the driver will not be able to remember it.** | SC | Obj\Num: 0…400 |
| **Reset driver**<br>Clears the internal database and re-establishes communication with the Kidde system. | RST | Obj\NoYes; Adjustable |

# Kidde System

Object Type: *[KiddeVegaPanel v10]*

The Kidde system contains the following objects.

| Description | Reference | Type |
|---|---|---|
| **Panel** | P | Fixed container:<br>*[KiddeVegaPanel v10\Panel]* |

## Compatibility Objects

The Kidde system also contains the following objects for compatibility with the KiddeVegaNet driver.

| Description | Reference | Type |
|---|---|---|
| **Network** | N | Fixed container:<br>*[KiddeVegaPanel v10\Network]* |
| **Panel *a***<br>The pseudo panel number, *a*, is ignored | P*a* | Fixed container:<br>*[KiddeVegaPanel v10\Panel]* |

# Network

Object Type: *[KiddeVegaPanel v10\Network]*

The Network object contains the following objects for compatibility with the KiddeVegaNet driver.

| Description | Reference | Type |
|---|---|---|
| **Set Date & Time**<br>Set the panel's date and time | TIME | Obj\DateTime; Adjustable only |
| **Network**<br>Network initialization state | IM | Obj\ENum: 0, 2; Adjustable<br>Where: 0=Initialised, 2=Restart |

# Panel

Object Type: *[KiddeVegaPanel v10\Panel]*

A Kidde panel contains the following objects:

| Description | Reference | Type |
|---|---|---|
| **Commands**<br>Contains objects for resetting, isolating and silencing the panel | A | Fixed container:<br>*[KiddeVegaPanel v10\Actions]* |
| **Panel in access**<br>Indicates user has logged in to panel menu | AC | Obj\NoYes |
| **Panel Alarm State** | C | Obj\Enum: 0…4;<br>Where: 0=Ok, 1=Isolated, 2=Fault, 3=Pre-Alarm, 4=Fire |
| **Panel OK** | C0 | Obj\NoYes |
| **Isolations** | C1 | Obj\NoYes |
| **Faults** | C2 | Obj\NoYes |
| **Pre-Alarm** | C3 | Obj\NoYes |
| **Fire** | C4 | Obj\NoYes |
| **Loop *x***<br>The loop number, *x*, is in the range 1…16. | L*x* | Fixed container:<br>*[KiddeVegaPanel v10\Loop]* |
| **Zone *y***<br>The zone number, *x*, is in the range 1…120 | Z*y* | Fixed container:<br>*[KiddeVegaPanel v10\Zone]* |
| **Motherboard *d***<br>The motherboard IO number, *d*, is in the range 1…16 | MI*d* | Fixed container:<br>*[KiddeVegaPanel v10\MBoard]* |
| **Output Group *e***<br>The output number, *e*, is in the range 1…99 | OG*e*.S | Obj\OffOn; Adjustable |
| **Configuration Enabled** | CONF.E | Obj\NoYes; Adjustable |
| **Configuration mode**<br>Once enabled, use configuration mode to list devices on loop, isolated, in alarm, etc. | CONF | Obj\Stream; Adjustable |

## Compatibility Objects

The Kidde panel also contains the following objects for compatibility with the KiddeVegaNet driver.

| Description | Reference | Type |
|---|---|---|
| **Isolate Panel** | I | Obj\NoYes; Adjustable |
| **Reset Panel** | R | Obj\NoYes; Adjustable only |
| **Sounder** | S | Obj\OffOn; Adjustable |
| **T1 timer accept** | T | Obj\NoYes; Adjustable only |
| **Resend Alarms from Panel** | RA | Obj\NoYes; Adjustable |
| **Panel Value List** | V | Obj\Text<br>List of values from the numbers listed below in object V*a*. E.g. '22\|19\|6' |
| **Panel Value *a***<br>The panel value index, *a*, is in the range 1…11 | V*a* | Obj\ENum<br>Value: 0=OK, 6=Panel in access, 11=Comms fault, 13=Supply fault, 14=Sounder fault, 15=Detector fault, 16=Loop fault, 18=Panel Isolated, 19=Alarms sounding, 20=Devices Isolated, 21=Pre-Alarm, 22=Fire |
| **Panel Fault *b***<br>The fault number, *b*, is in the range 6…22, where: 6=Panel in access, 11=Comms fault, 13=Supply fault, 14=Sounder fault, 15=Detector fault, 16=Loop fault, 18=Panel Isolated, 19=Alarms sounding, 20=Devices | F*b* | Obj\NoYes |

| |
|---|
| Isolated, 21=Pre-Alarm, 22=Fire |

# Commands

Object Type: *[KiddeVegaPanel v10\Actions]*

The Kidde panel commands object contains the following objects:

| Description | Reference | Type |
|---|---|---|
| **Reset Panel**<br>Performs a reset on the panel | R | Obj\NoYes; Adjustable only |
| **Isolate Panel**<br>When the panel is isolated, the driver stops listening to events from the panel. Alarms will still be present on the panel | I | Obj\NoYes; Adjustable |
| **Sounders**<br>Silences or re-sounds sounders | S | Obj\OffOn; Adjustable |
| **T1 timer accept** | T | Obj\NoYes; Adjustable only |
| **Set Date & Time**<br>Set the panel's date and time | TIME | Obj\DateTime; Adjustable only |

# Loop

Object Type: *[KiddeVegaPanel v10\Loop]*

A Kidde panel loop contains the following objects:

| Description | Reference | Type |
|---|---|---|
| **Loop Alarm State** | C | Obj\Enum: 0…4;<br>Where: 0=Ok, 1=Isolated, 2=Fault, 3=Pre-Alarm, 4=Fire |
| **Loop OK** | C0 | Obj\NoYes |
| **Isolations** | C1 | Obj\NoYes |
| **Faults** | C2 | Obj\NoYes |
| **Pre-Alarm** | C3 | Obj\NoYes |
| **Fire** | C4 | Obj\NoYes |
| **Device *x***<br>The device address, *x,* is in the range 1 to 127 | D*x* | Fixed container:<br>*[KiddeVegaPanel v10\Device]* |

## Compatibility Objects

A Kidde loop also contains the following objects for compatibility with the KiddeVegaNet driver.

| Description | Reference | Type |
|---|---|---|
| **Value List** | V | Obj\Text<br>List of values from the numbers listed below in object V*a*. E.g. '22' |
| **Value *a***<br>The panel value index, *a*, is in the range 1…11 | V*a* | Obj\ENum<br>Value: 0=OK, 15=Detector fault, 16=Loop fault, 20=Devices Isolated, 21=Pre-Alarm, 22=Fire |
| **Panel Fault *b***<br>The fault number, *b*, is in the range 15…22, where: 15=Detector fault, 16=Loop fault, 20=Devices Isolated, 21=Pre-Alarm, 22=Fire | F*b* | Obj\NoYes |

# Device

Object Type: *[KiddeVegaPanel v10\Device]*

A Kidde loop device contains the following objects. Refer to documentation on a specific device for information on sub-address usage.

| Description | Reference | Type |
|---|---|---|
| **Device Alarm State** | C | Obj\Enum: 0…4;<br>Where: 0=Ok, 1=Isolated, 2=Fault, 3=Pre-Alarm, 4=Fire |
| **Device OK** | C0 | Obj\NoYes |
| **Device Isolated**<br>Indicates whether this device is isolated | C1 | Obj\NoYes |
| **Device in Fault** | C2 | Obj\NoYes |
| **Device in Pre-Alarm** | C3 | Obj\NoYes |
| **Device in Fire** | C4 | Obj\NoYes |
| **Isolate Devices**<br>Replaced by object C1 above. | I | Obj\NoYes; Adjustable |
| **Address *x***<br>The sub address number, x, is in the range 1…16 | S*x* | Fixed Container:<br>*[KiddeVegaPanel v10\SubDev]* |

## Compatibility Objects

A Kidde loop device also contains the following objects for compatibility with the KiddeVegaNet driver.

| Description | Reference | Type |
|---|---|---|
| **Value List** | V | Obj\Text<br>List of values from the numbers listed below in object V*a*. E.g. '22' |
| **Value *a***<br>The panel value index, *a*, is in the range 1…11 | V*a* | Obj\ENum<br>Value: 0=OK, 15=Detector fault, 20=Devices Isolated, 21=Pre-Alarm, 22=Fire |
| **Panel Fault *b***<br>The fault number, *b*, is in the range 15…22, where: 15=Detector fault, 20=Devices Isolated, 21=Pre-Alarm, 22=Fire | F*b* | Obj\NoYes |
| **Address *x***<br>The sub address number, x, is in the range 1…16 | A*x* | Fixed Container:<br>*[KiddeVegaPanel v10\SubDev]* |

# Sub Address

Object Type: *[KiddeVegaPanel v10\SubDev]*

A Kidde sub-address device contains the following objects.

| Description | Reference | Type |
|---|---|---|
| **Alarm State** | C | Obj\Enum: 0…4;<br>Where: 0=Ok, 1=Isolated, 2=Fault, 3=Pre-Alarm, 4=Fire |
| **OK** | C0 | Obj\NoYes |
| **Isolated**<br>Indicates whether this device is isolated. Can be written to in order to isolate or de-isolate the device | C1 | Obj\NoYes; Adjustable |
| **Fault** | C2 | Obj\NoYes |
| **Pre-Alarm** | C3 | Obj\NoYes |
| **Fire** | C4 | Obj\NoYes |

## Compatibility Objects

A Kidde sub-address device also contains the following objects for compatibility with the KiddeVegaNet driver.

| Description | Reference | Type |
|---|---|---|
| **Isolate** | I | Obj\NoYes; Adjustable |
| **Value List** | V | Obj\Text<br>List of values from the numbers listed below in object V*a*. E.g. '22' |
| **Value *a***<br>The panel value index, *a*, is in the range 1…11 | V*a* | Obj\ENum<br>Value: 0=OK, 15=Detector fault, 20=Devices Isolated, 21=Pre-Alarm, 22=Fire |
| **Panel Fault *b***<br>The fault number, *b*, is in the range 15…22, where: 15=Detector fault, 20=Devices Isolated, 21=Pre-Alarm, 22=Fire | F*b* | Obj\NoYes |

# Zone

Object Type: *[KiddeVegaPanel v10\Zone]*

A Kidde zone contains the following objects:

| Description | Reference | Type |
|---|---|---|
| **Zone Alarm State** | C | Obj\Enum: 0…4;<br>Where: 0=Ok, 1=Isolated, 2=Fault, 3=Pre-Alarm, 4=Fire |
| **Zone OK** | C0 | Obj\NoYes |
| **Zone Devices Isolated**<br>Indicates whether any devices in this zone are isolated. Can be written to in order to isolate or de-isolate the devices in a zone | C1 | Obj\NoYes; Adjustable |
| **Zone Devices in Fault** | C2 | Obj\NoYes |
| **Zone Devices in Pre-Alarm** | C3 | Obj\NoYes |
| **Zone Devices in Fire** | C4 | Obj\NoYes |

## Compatibility Objects

A Kidde zone also contains the following objects for compatibility with the KiddeVegaNet driver.

| Description | Reference | Type |
|---|---|---|
| **Isolate** | I | Obj\NoYes; Adjustable |
| **Value List** | V | Obj\Text<br>List of values from the numbers listed below in object V*a*. E.g. '22' |
| **Value *a***<br>The panel value index, a, is in the range 1…11 | V*a* | Obj\ENum<br>Value: 0=OK, 15=Detector fault, 16=Loop fault, 20=Devices Isolated, 21=Pre-Alarm, 22=Fire |
| **Panel Fault *b***<br>The fault number, *b*, is in the range 15…22, where: 15=Detector fault, 16=Loop fault, 20=Devices Isolated, 21=Pre-Alarm, 22=Fire | F*b* | Obj\NoYes |

# Motherboard

Object Type: *[KiddeVegaPanel v10\MBoard]*

A Kidde motherboard contains the following objects:

| Description | Reference | Type |
|---|---|---|
| **Channel *c***<br>The channel number, *c*, is in the range 1 to 16 | C*c* | Fixed Container:<br>*[KiddeVegaPanel v10\MBoard\Chan]* |

# Motherboard Channel

Object Type: *[KiddeVegaPanel v10\MBoard\Chan]*

A Kidde motherboard channel contains the following objects:

| Description | Reference | Type |
|---|---|---|
| **Channel State** | C | Obj\Enum: 0…4;<br>Where: 0=Ok, 1=Isolated, 2=Fault, 4=Alarm |
| **Channel OK** | C0 | Obj\NoYes |
| **Channel Isolated** | C1 | Obj\NoYes |
| **Channel in Fault** | C2 | Obj\NoYes |
| **Channel in Alarm** | C4 | Obj\NoYes |

## Compatibility Objects

A Kidde motherboard channel also contains the following objects for compatibility with the KiddeVegaNet driver.

| Description | Reference | Type |
|---|---|---|
| **Value List** | V | Obj\Text<br>List of values from the numbers listed below in object V*a*. E.g. '22' |
| **Value *a***<br>The panel value index, a, is in the range 1…11 | V*a* | Obj\ENum<br>Value: 0=OK, 15=Fault, 20=Isolated, 22=Alarm |
| **Panel Fault *b***<br>The fault number, b, is in the range 15…22, where: 15=Detector fault, 20=Devices Isolated, 22=Fire | F*b* | Obj\NoYes |

# Driver Versions

| Version | Build Date | Details |
|---|---|---|
| 1.0 | 23/7/2013 | Driver released |

## Next Steps…

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

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