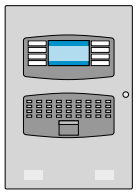
The KentecTaktis Driver



The KentecTaktis driver connects to the Kentec Taktis range of fire detection panels. Available for Commander and ObSys.

This document relates to KentecTaktis driver version 1.0

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

Contents

Compatibility with the Kentec Taktis System

The KentecTaktis driver allows North to interface with a Kentec Electronics Taktis fire detection system.

The driver connects via an IP network to a Kentec Taktis media gateway within one fire control panel (Fig. 1), and can communicate with a network of up to 127 panels.

The Kentec driver is also available, which interfaces with the Kentec Syncro series.

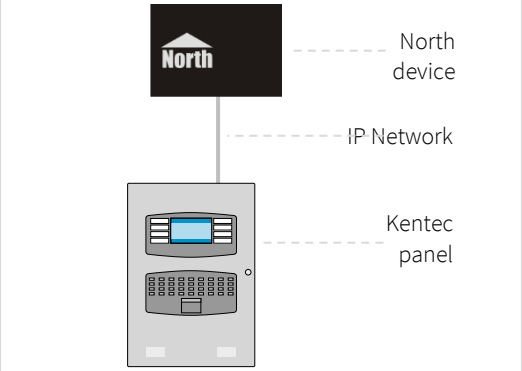


Fig. 1 North to Kentec panel

Equipment

Kentec Electronics fire control panels compatible with the driver include the Taktis range.

Apollo and Hochiki loop devices are supported.

Values

The driver can typically access the following values:

- Reset panel
- Sounders
- Evacuate
- Time
- System state
- Panel state
- Loop state
- Loop device state
- Sub-address state
- Zone state
- Analogue values

States for fire, pre-alarm, fault, and isolation conditions are available.

Fire control panels can send alarms to the KentecTaktis driver.

Prerequisites

The connected Kentec panel must have the optional media gateway communications board fitted, with firmware S794_V01.106 or later.

From the panel's Engineer Options menu, navigate to Edit Configuration, Panel Modules, Configure Media Gateway then set:

- MCE Setting – enabled (off = no), port 100
- LAN Settings – set a fixed IP address, or reservation within the network DHCP server.

If you are connecting to the media gateway via a firewall, then the driver will require outbound access on TCP port 100.

Driver Operation

Events from the panel

The driver connects to a Kentec Taktis fire control panel, and listens for change-of-state events. These events are processed by the driver to maintain a database of active alarm states in the fire system.

On starting the interface, the driver synchronises its database with the Kentec system by requesting the current active alarms. You can also force a re-synchronisation at any time by using the Resync Interface object (RST).

The driver monitors communication to the panel. If communications are lost, then the fault is reported. Once regained, the driver re-synchronises its database with the panel and operation resumes.

Alarms

When an event is received from the Kentec panel, the driver sends this as a North-format alarm to the device's alarm processing.

The driver converts an event's UTC time-stamp to local time, ensure the North device's UTC & Daylight Savings object is configured for your time zone.

Reading from the Kentec System

On reading an object from the Kentec System, the driver typically responds with the state from its database.

The panel may not send isolation events for sub-devices or, when a zone is isolated, for devices. So when reading a loop device or sub-device object that includes the isolation state, and the database has no active events for this object, the driver will request its isolation state from the panel.

Commands to the Kentec System

Commands can be sent to a Kentec panel. These can be to: silence or reset active events on the system; or isolate a zone, loop device or sub-device.

Connection Monitoring

To check the connection with the panel, the driver requests data periodically from the panel and monitors data received. If the driver detects the panel is not responding, it will report a communications lost alarm and attempt to re-establish the connection.

The driver maintains a Comms Online (DS) object, reporting when the driver has established a connection to the panel.

Using the Driver

On ObSys and Commander, the KentecTaktis driver is pre-installed. On all of these North devices, you can use the driver to create an interface to Kentec. Once started, you will need to set up the driver before it can communicate with the Kentec system.

Starting the Interface

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

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

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

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

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

→ Set **IP Address** (IA) to the IP address of the Kentec media gateway.

Checking Communications

You can check the interface is communicating by reading the **Comms Online** (DS) object. A value of 'yes' indicates the driver has opened a TCP/IP connection to the media gateway and received all active events.

A value of 'no' indicates a connection has not yet been established. Check the IP Address (IA) object, and the media gateway configuration (see *Prerequisites*).

Alarms

When the Kentec 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 KentecTaktis 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 Field section below

Priority – see Priority Field section below

Date & Time – local time from panel.

The Point and Condition fields may be shortened, if the total length of the North-format alarm exceeds 125 characters.

Examples

System	Point	Condition	Priority	Date	Time
Kentec System	Panel 1 Loop 1 Dev 2.0 Zone 5	Isolated Device	2	19/03/18	14:29:48
Kentec System	Panel 1 Loop 1 Dev 2.0 Zone 5	Isolated Device Cleared	2	19/03/18	14:35:12
Kentec System	Panel 12 Loop 1 Dev 12.0 Zone 12	Internal Fault	3	19/03/18	14:26:26
Kentec System	Panel 2 Zone 2	Monitored Output Fault	3	19/03/18	14:26:26
Kentec System	Panel 2 Loop 1 Dev 1.0 Zone 16	Fire	1	10/03/18	13:06:59
Kentec System	Panel 2	Reset	3	10/03/18	13:07:35
Kentec System	Panel 2 Loop 1 Dev 1.0 Zone 16	Fire Cleared	1	10/03/18	13:07:35
Kentec System	Panel 1 Loop 1 Dev 3.14	Input Activated	3	06/02/18	10:12:43
Kentec System	Panel 1 Loop 1 Dev 3.14	Input Activated Cleared	3	06/02/18	10:16:19
Kentec System	Panel 1	Buzzer Silenced	4	06/02/18	10:16:19

Point Field

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

If the panel/loop/device reference is selected, the format can be:

System

Panel *a*

Panel *a* Loop *b*

Panel *a* Loop *b* Dev *c.c* Zone *d*

System Zone *d*

Otherwise, if location text is selected, this field contains:

panel label + device location text

panel label + zone location text

Condition Field

The following alarm conditions can be sent by the driver. When the panel clears an alarm, then 'Cleared' is appended to the field.

Alarms Re-sounding	General Isolation	Network Open/Closed Circuit
Alarms Silenced	Head Fault	OEM Device Mismatch
Alert	Head Missing Fault	Optical & Heat Element Fault
All Sounders Isolated	Heat Element Fault	Optical Element Fault
All Outputs Isolated	I/O Module Not Fitted	Output 1 Closed Circuit
All Plant Outputs Isolated	Incorrect Loop Protocol	Output 1 Open Circuit
All Zones Isolated	Input Activated	Output 2 Closed Circuit
Aux 24V Fuse Fault	Input Closed Circuit	Output 2 Open Circuit
Battery Disconnected	Input Open Circuit	Output Closed
Battery Voltage High	Internal Fault	Output Open
Battery Voltage Low	Isolated Device	Panel Input Isolated
Buzzer Isolated	Isolated Immediate Output	Panel Output Isolated
Buzzer Silenced	Isolated Loop	Power Fail
Board A Missing	Isolated Zone	Pre-Alarm
Board B Missing	Loop Board Missing	Printer Fault
C&E Isolated	Loop Closed Circuit	Printer Isolated
Calibration Error	Loop Not Fitted	PSU Fault
Calibration Failed	Loop Open Circuit	PSU Earth Fault
Cause/Effect Active	Loop Wiring Fault	RAM Fault
Charger Fault	Mains Fail	Reset
Communications Lost	Maintenance Fault	ROM Fault
Communications Regained	MGW Acc 1 Comms Fault	Security
Connection degraded: Update MGW Firmware	MGW Acc 1 Config Fault	Self Test Fail
Day/Night Isolation	MGW Acc 2 Comms Fault	Slave Closed Circuit
Detector Removed	MGW Acc 2 Config Fault	Slave Line 1 Fault
Device Battery Low	MGW Acc 3 Comms Fault	Slave Line 2 Fault
Device Data Fault	MGW Acc 3 Config Fault	Slave Open Circuit
Device External Interference	MGW Acc 4 Comms Fault	Sounder Missing Fault
Device Initialising	MGW Acc 4 Config Fault	Sounder Isolated
Device Isolator Open	MGW IP Comms Fault	System Fault
Device Missing	MGW IP Config Fault	System Initialising
Device Tamper Fault	MGW Fault	Tamper Fault
Double Address	MGW Missing	Test Mode
Earth Fault	MGW Isolated	Unexpected Device
Earth Fault Isolated	Modem Fault	Unexpected I/O Module
Evacuate	Module PSU Fault	Unexpected Loop
Extinguishant Activated	Monitored Output Fault	Unknown Device
Fire	Network Comms Fault	Wrong Device Type
	Network Comms Timeout	

Priority Field

The priority number depends on the event type from the panel:

1 – fire and evacuate events

2 – pre-alarm, security, isolation, and technical events

3 – alert, fault, test, and cause & effect events

4 – status events

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 Kentec System (S1) contains Panel 1 (P1), which contains Loop 2 (L2), which has Device 22 (D22), which contains an alarm state (C). Therefore, the complete object reference will be 'S1.P1.L2.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.P1.L2.D22.C) – therefore the complete object reference is 'IP.CDIP.S1.P1.L2.D22.C'.

Device Top-Level Objects

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

Kentec Driver Setup

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

The KentecTaktis driver contains the following objects:

Description	Reference	Type
System Label Label displayed when scanning the system	DL	Obj\Text: 20 Chars; Adjustable
IP Address IP address of the Kentec media gateway	IA	Obj\IP; Adjustable
Comms Online Indicates whether communication is established with the MGW	DS	Obj\NoYes
Alarm Point Field Selects source of the alarm message point field	AT	Obj\ENum: 0…1; Adjustable Values: 0=Panel/Loop/Device reference, 1=Location text from panel
Event Storage Available 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…800
Resync Interface Clears the internal database and re-establishes communication with the Kentec system	RST	Obj\NoYes; Adjustable
MGW Update Required Indicates the media gateway firmware needs updating to support commands required by driver (see *Prerequisites*)	A.UFW	Obj\NoYes
Filter Events Stop the driver listening for particular event types or panels. This provides more event storage for other event types	FE	Fixed Container: On the Commander platform this will be *[CDM v20\KentecTaktis v10\Filter]* On the ObSys platforms this will be *[OSM v20\KentecTaktis v10\Filter]*

Kentec Driver Filter Events

Object Type: *[OSM v20\KentecTaktis v10\Filter]*
Object Type: *[CDM v20\KentecTaktis v10\Filter]*

Each event from the Kentec system must be remembered by the driver. On a large system with more than 800 active events at any one time, use this object to select which event types are ignored by the driver – isolation, fault, etc.

If more event storage is required, use multiple interface connections to the system, with each KentecTaktis driver configured to store events for a particular range of panels.

Description	Reference	Type
Ignore Isolation events Enable to ignore isolation events from the system. This provides more event storage for other event conditions	I.C1	Obj\NoYes; Adjustable
Ignore Fault events Enable to ignore fault events from the system	I.C2	Obj\NoYes; Adjustable
Ignore Pre-Alarm events Enable to ignore pre-alarm events from the system	I.C3	Obj\NoYes; Adjustable
Ignore Fire events Enable to ignore fire events from the system	I.C4	Obj\NoYes; Adjustable
Store events from panel (start) Lowest address of network interface panel to store events from	PS	Obj\Num: 0…127; Adjustable
Store events from panel (end) Highest address of network interface panel to store events from	PE	Obj\Num: 1…127; Adjustable

Kentec System

Object Type: *[KentecTaktis v10]*

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

The Kentec network will contain one or more panels.

Description	Reference	Type
Zone & System Summary	P	Fixed container: *[KentecTaktis v10\System]*
Panel *Panel* is the label of panel *x*. *x* can be in the range 1…127	P*x*	Fixed container: *[KentecTaktis v10\Panel]*

Zone and Summary Information

Object Type: *[KentecTaktis v10\System]*

The Kentec Zone and System Summary object contains the zones and network-wide status for the Kentec system.

Description	Reference	Type
Date & Time Current system local time. The time is transferred in UTC, check the North device and panel are both configured with the correct time zone	TIME	Obj\DateTime; Adjustable
Commands Contains objects for setting the system into evacuate, silencing or enabling sounders and resetting the system.	A	Fixed container: *[KentecTaktis v10\Actions]*
System Alarm State Indicates the most important event present on the system	C	Obj\ENum: 0…4; Where: 0=Ok, 1=Isolated, 2=Fault, 3=Pre-Alarm, 4=Fire
System OK No events are present on the system	C0	Obj\NoYes
Isolations Indicates if an isolation event is present on the system	C1	Obj\NoYes
In Fault Indicates if a fault event is present on the system	C2	Obj\NoYes
In Pre-Alarm Indicates if a pre-alarm, security, or technical alarm is present on the system	C3	Obj\NoYes
In Fire Indicates if a fire event is present on the system	C4	Obj\NoYes
Zone *x* The zone number, x, is in the range 0…2000	Z*x*	Fixed container: *[KentecTaktis v10\Zone]*

Commands

Object Type: *[KentecTaktis v10\Actions]*

The Kentec system commands object contains the following objects:

Description	Reference	Type
Reset Performs a reset of all panels	R	Obj\NoYes; Adjustable only Adjustable: 'Yes' = reset panel
Sounders Silence sounders	S	Obj\OffOn; Adjustable Adjustable: 'Off' = silence panel
Evacuate Sets the system into evacuation mode	E	Obj\NoYes; Adjustable only Adjustable: 'Yes' = evacuate

Zone

Object Type: *[KentecTaktis v10\Zone]*

A Kentec zone contains the following objects:

Description	Reference	Type
Zone Alarm State Indicates the most important event present in the zone	C	Obj\Enum: 0…4; Adjustable Where: 0=Ok, 1=Isolated, 2=Fault, 3=Pre-Alarm, 4=Fire. Adjustable: 0=Deisolate, 1=Isolate
Zone OK	C0	Obj\NoYes
Zone Devices Isolated Indicates if the zone is isolated. Adjust to isolate or de-isolate the whole zone	C1	Obj\NoYes; Adjustable
Zone Devices in Fault Indicates if any device within the zone has a fault event	C2	Obj\NoYes
Zone Devices in Pre-Alarm Indicates if any device within the zone has a pre-alarm, security, or technical alarm event	C3	Obj\NoYes
Zone Devices in Fire Indicates if any device within the zone has a fire event	C4	Obj\NoYes

Kentec Panel

Object Type: *[KentecTaktis v10\Panel]*

A Kentec Taktis panel contains the following objects:

Description	Reference	Type
Panel Label	L	Obj\Text: 32 chars.
Panel Alarm State Indicates the most important event present on the panel	C	Obj\Enum: 0…4; Where: 0=Ok, 1=Isolated, 2=Fault, 3=Pre-Alarm, 4=Fire
Panel OK	C0	Obj\NoYes
Isolations Indicates if an isolation event is present on the panel. If a zone is isolated, then this value may not reflect the true isolation state of attached devices.	C1	Obj\NoYes
Faults Indicates if a fault event is present on the panel or attached device	C2	Obj\NoYes
Pre-Alarm Indicates if a pre-alarm, security, or technical alarm is present on the panel or attached device	C3	Obj\NoYes
Fire Indicates if a fire event is present on the panel or attached device	C4	Obj\NoYes
Loop *x* The loop number, x, is in the range 1…16.	L*x*	Fixed container: *[KentecTaktis v10\Loop]*

Loop

Object Type: *[KentecTaktis v10\Loop]*

A Kentec panel loop contains the following objects

Description	Reference	Type
Loop Alarm State Indicates the most important event present in the loop	C	Obj\Enum: 0…4 Where: 0=Ok, 1=Isolated, 2=Fault, 3=Pre-Alarm, 4=Fire
Loop OK	C0	Obj\NoYes
Loop Devices Isolated Indicates if any device within the loop is isolated. If a zone is isolated, then this value may not reflect the true isolation state of attached devices.	C1	Obj\NoYes
Loop Devices in Fault Indicates if the loop, or any device within the loop, has a fault event	C2	Obj\NoYes
Loop Devices in Pre-Alarm Indicates if any device within the loop has a pre-alarm, security, or technical alarm event	C3	Obj\NoYes
Loop Devices in Fire Indicates if any device within the loop has a fire event	C4	Obj\NoYes
Device *x* The device address, *x,* is in the range 0…254. Hochiki devices are in the range 0…126, with addressable bases using device+127. Apollo devices in the range 0…125, with addressable bases using device+126.	D*x*	Fixed container: *[KentecTaktis v10\Device]*

Device

Object Type: *[KentecTaktis v10\Device]*

The Kentec loop device contains the following objects:

Description	Reference	Type
Device Alarm State Indicates the most important event present in the device. Adjust to isolate or de-isolate the device.	C	Obj\Enum: 0…4; Adjustable Where: 0=Ok, 1=Isolated, 2=Fault, 3=Pre-Alarm, 4=Fire. Adjustable: 0=Deisolate, 1=Isolate
Device OK	C0	Obj\NoYes
Device Isolated Indicates if the device is isolated. Adjust to isolate or de-isolate the device.	C1	Obj\NoYes; Adjustable
Device in Fault Indicates if the device, or a sub-address, has a fault event	C2	Obj\NoYes
Device in Pre-Alarm Indicates if the device, or a sub-address, has a pre-alarm, security, or technical alarm event	C3	Obj\NoYes
Device in Fire Indicates if the device has a fire event	C4	Obj\NoYes
Sub-address *x* The sub-address number, x, is in the range 1…16	S*x*	Fixed Container: *[KentecTaktis v10\SubAddr]*
Analogue Data	A	Fixed Container: *[KentecTaktis v10\Analog]*
Device Alarm State (excluding isolation) Indicates the most important event present in the device, excluding isolation. Use this object when a faster response time is required. The isolation state can be obtained by reading object C1.	Q	Obj\Enum: 0…4 Where: 0=Ok, 2=Fault, 3=Pre-Alarm, 4=Fire.

Sub-address

Object Type: *[KentecTaktis v10\SubAddr]*

A Kentec sub-address contains the following objects:

Description	Reference	Type
Alarm State Indicates the most important event present in the device's sub-address. Adjust to isolate or de-isolate.	C	Obj\Enum: 0…4; Adjustable Where: 0=Ok, 1=Isolated, 2=Fault, 3=Pre-Alarm, 4=Fire. Adjustable: 0=Deisolate, 1=Isolate
Sub-address OK	C0	Obj\NoYes
Sub-address Isolated Indicates if the sub-address is isolated. Adjust to isolate or de-isolate.	C1	Obj\NoYes; Adjustable
Sub-address in Fault Indicates if the sub-address has a fault event	C2	Obj\NoYes
Sub-address in Pre-Alarm Indicates if the sub-address has a pre-alarm, security, or technical alarm event	C3	Obj\NoYes
Sub-address in Fire Indicates if the device has a fire event	C4	Obj\NoYes
Analogue Data	A	Fixed Container: *[KentecTaktis v10\Analog]*
Alarm State (excluding isolation) Indicates the most important event present in the device's sub-address, excluding isolation. Use this object when a faster response time is required. The isolation state can be obtained by reading object C1.	Q	Obj\Enum: 0…4 Where: 0=Ok, 2=Fault, 3=Pre-Alarm, 4=Fire.

Analogue Data

Object Type: *[KentecTaktis v10\Analog]*

A Kentec device's analogue data contains the following objects:

Description	Reference	Type
Device Type	E1	Obj\Num
Analogue Value	E2	Obj\Num
Zero Point	E3	Obj\Num
Fire Point	E4	Obj\Num
Zone Reports the zone number the device belongs to	E5	Obj\Num

Driver Versions

Version	Build Date	Details
1.0	27/08/2021	Driver released. Tested with Taktis firmware EN-00.12.R105 and Media Gateway v01.109.

Next Steps…

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

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