

# FIRELINK-APIC INSTALLATION INSTRUCTIONS

## Introduction

The FIRElink range of Aspirating Smoke Detectors (ASD) have many interfacing options ranging from conventional, (using the built in Alarm and Fault relays), to addressable. An Addressable Protocol Interface Card (APIC) has been manufactured that greatly simplifies the amount of wiring required when connecting to a Hochiki addressable loop. This installation instruction explains how this card should be installed and configured.

## Installation

Fixings are supplied with the APIC. These are marked FIRElink 25/100 and FIRElink 400/CM. Use only the supplied fixings to ensure secure fitting.

### Fitting the APIC to FIRElink-25 or FIRElink-100

Undock the detector from the docking station and remove the front cover (refer to User Manual for further details).

The APIC is fitted to the main board inside the detector (see Fig 1). Locate the APIC over the 4 threaded mounting posts with the DIL switches face up and at the top of the unit and the ribbon cable at the bottom (see Fig 2).

Using the supplied screws and acrylic washers secure the APIC to the 4 threaded posts. DO NOT over tighten the screws.

Once the APIC is secured the ribbon plug can be plugged into the rectangular connector on the main board (see Fig 2). Finally connect the loop wiring to the terminals on the main PCB as outlined below under "Loop Connections (on main PCB)" on page 4.

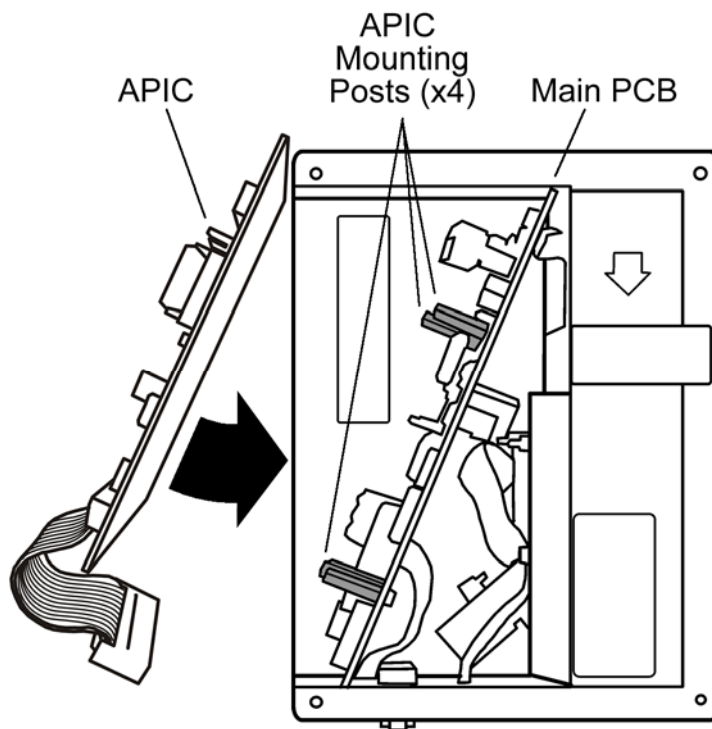


Fig 1 – FIRElink-25 (cover removed)

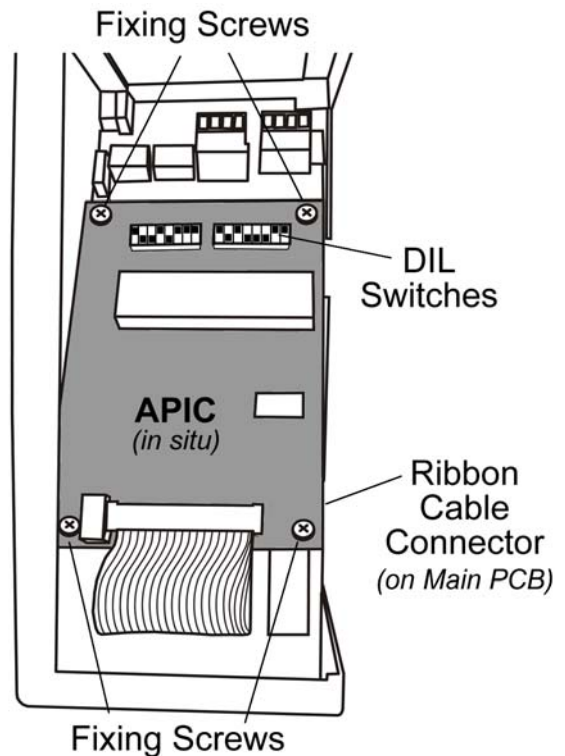


Fig 2 – FIRElink-25 (from side)

### Fitting the APIC to FIRElink-400 or FIRElink-CM

Remove the front cover of the unit (refer to User Manual for further details).

The APIC is fitted to the main board inside the detector/command module (see Fig 3). Fit three screws through the holes on the APIC as shown in Fig 4 then tighten the screws into the three plastic push fits (see Fig 5). DO NOT over tighten the screws.

Mount the APIC by locating the white push-fit connectors into the three holes on the main PCB. Carefully push the connectors into these holes until they all click into place.

Once the APIC is secured the ribbon plug can be plugged into the rectangular connector to the left of the APIC (see Fig 3). Finally connect the loop wiring to the terminals on the main PCB as outlined below under “Loop Connections (on main PCB)” on page 4.

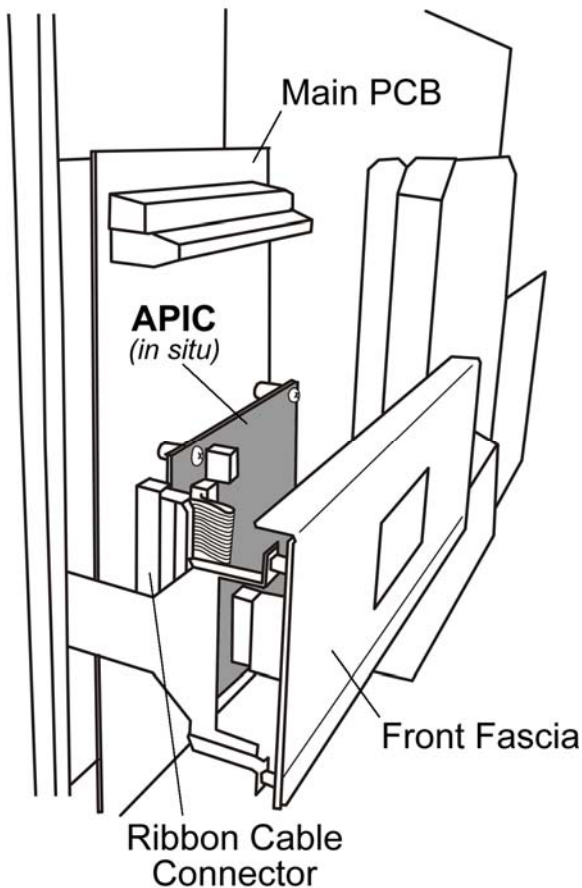


Fig 3 – FIRElink-400 (cover removed)

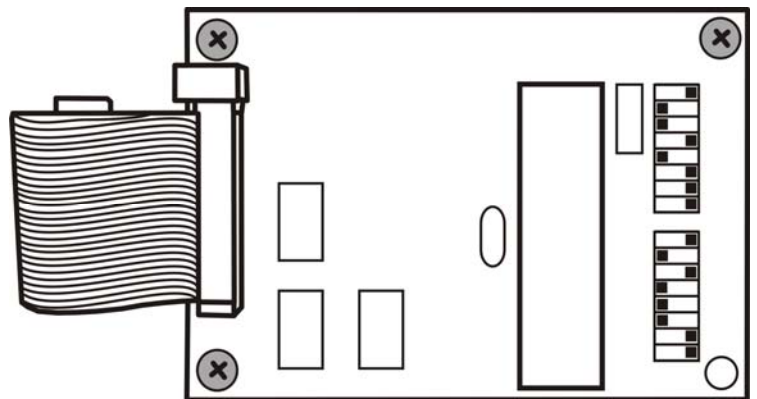


Fig 4 – position of fixing screws

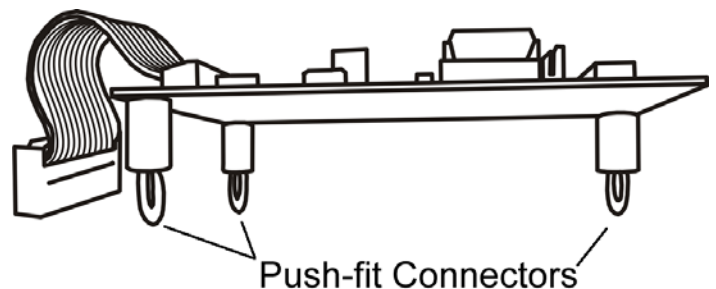


Fig 5 - APIC with push-fit connectors fitted

### Fitting the APIC to FIRElink-400CM

The process is the same as the FIRElink-400/FIRElink-CM except the APIC is fitted to the smaller PCB mounted on the front of the main PCB.

### Single Address and Multi Address Modes

The Hochiki APIC has two distinct modes of operation; single address and multi address. When the interface is set to single address mode the card is set to a single address on the Hochiki loop and the detector status is read from that address. Multi address mode is used when monitoring the status of multiple detectors with consecutive addresses from a single Hochiki APIC. Multi address mode is only used in the Command Module.

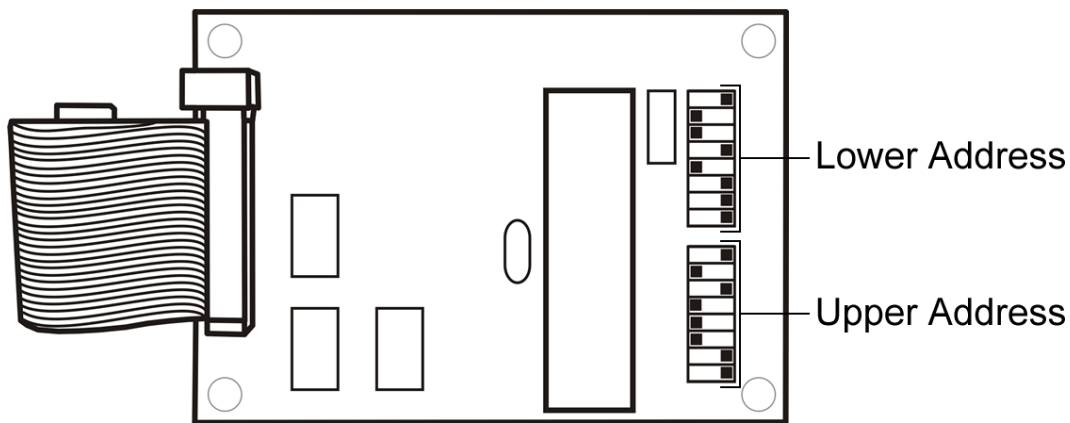


Fig 6 - DIL Switch locations

Two DIL switches on the Hochiki APIC card (see Fig 6) enable the unit to either respond as a single Hochiki address, as it does in an ASD, or a range of addresses, which is the way it is set up in the Command Module.

To set up the Hochiki APIC card in a detector, which only requires a single address (single address mode), set both switches to the required Hochiki address. This sets the card to single address mode. When the Hochiki card is mounted in a Command Module (multi-address mode) the Lower Address Switch is set to the first loop address and Upper Address Switch is set to the last loop address. As an example if you have ASD's 121 to 123 monitored by the Command Module then Lower Address switch is set to 121 and Upper Address Switch is set to 123.

Note that there is no address translation between the detector address on the SenseNET network loop and the Hochiki loop address; they are the same (for example, if the SenseNET address of the unit is 11-13 then they will appear at address 11-13 on the Hochiki ESP loop).

### Interface Technical Details

The card reports the ASD as an ALG-E Optical Sensor. The card returns the following status which is interpreted by the fire panel:

Status
Normal
Fault
Pre-Alarm
Fire

### IMPORTANT

For the Fire and Pre-Alarm levels to be interpreted correctly the sensitivity settings MUST be set correctly in the panel.

Fire Alarm Sensitivity 3% /m

Pre-Alarm Sensitivity 2.5% /m (if the panel supports this configuration)

### OR

Pre-Alarm Sensitivity 85% of Fire Alarm Sensitivity (if the panel supports this configuration)

Note that some panels automatically set the Pre-Alarm Level.

### NOTE: THE SENSITIVITY SHOULD BE SET THE SAME FOR DAY AND NIGHT

### Remote Reset of ASD from the Fire Panel

If remote resetting of the detector or Command Module is required from the host fire panel then the Remote Reset function must be enabled and the corresponding Remote Reset input must be selected for the ASD.

The Remote Reset function can be found under the **Function Settings > Alarm Actions** tab of the Remote Control Software or under the **Setup Menu > Alarm Actions** option of the FIRElink400/FIRElink-CM onboard display (refer to relevant User Manual for further details).

The Remote Reset input setting is determined by the model within which the APIC is installed. The following table details the required setting for each model:-

Model	Remote Reset Input
FIRElink-25	1
FIRElink-100	1
FIRElink-400	4
FIRElink-400CM	4
FIRElink-CM	4

Please note that the FIRElink range of ASD will only require remote resetting when programmed for Latching Alarms (refer to relevant User Manual for further details).

### Loop Connections (on main PCB)

Loop in +	BUSH 1
Loop in -	BUSL 1
Loop out +	BUSH 2
Loop out -	BUSL 2

### Specification

Order code	FIRElink-APIC	
Supply voltage	Loop voltage (low)	17 – 31Vdc
	Loop pulse voltage	7 - 9Vdc
Current consumption (loop)	Quiescent	90uA Max
	Loop current (Device Response)	22mA +- 20%
Zero point value range	61	
Fire test value range	190	
Operating temperature range	-10°C - +50°C	
Storage temperature range	-30°C - +60°C ( <80% RH at 60°C)	
Relative humidity	95% RH at 40°C	
Dimensions	L=100mm x W=70mm x D=25mm (PCB assembly)	
Weight	65g	



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