

PRODUCT SUPPORT

DualCom Pro Fire

Updated September 11, 2026



Professionally monitored fire alarm signalling, with unrivalled management tools. When a fire occurs and the premises are empty, it will not be reported unless someone nearby sees it or hears the alarm. A Fire System with professional signalling reports any faults or alarms to an ARC (Alarm Receiving Centre), providing 24/7 365 peace of mind for business owners or site managers.

Our market-leading signalling solution uses Radio and LAN paths to signal a fire alarm. For Radio variants, each SIM operates on an independent network from the other for total resilience. The entire DualCom Pro Fire range is compatible with [CSL Live](https://www.csl-group.com/resources/csl-live/) (<https://www.csl-group.com/resources/csl-live/>) and the [My Base App](https://www.csl-group.com/resources/my-base-app-2-0/) (<https://www.csl-group.com/resources/my-base-app-2-0/>). All our fire variants are independently tested and certified to the prestigious EN54 standard for Fire Systems.

GradeShift Pro Fire Radio/Radio uses two active 4G WorldSIMs, on two separate radio modules, one as the primary and one as the secondary path. A third standby SIM acts as a backup to the primary SIM on the primary path. GradeShift Pro Fire LAN/Radio uses LAN connectivity for its primary path and a 4G WorldSIM as its secondary path. A standby WorldSIM is also supplied for this variant. DigiAir Pro Fire Radio is supplied with one active and one standby SIM as a backup to safeguard your system.

Latest information

<https://www.csl-group.com/support/dualcom-pro-fire/>

Overview

Introduction

Fire alarm signalling systems must meet stringent safety and compliance standards. Our devices offer resilient, monitored connectivity to keep fire alarms active and compliant with regulations, even during network disruptions.

DualCom Pro has been certified as an EN54-21 compliant component.

Country-specific guidelines for Fire Installations should also be followed. For example:

- BS5839-1:2025 in the United Kingdom
- SBF 110:8 in Sweden

CSL provide 4 options for integrating with Fire Panels:

- Input Pins & Output Relays
- Manufacturer Protocols
- Printer Interface Communications
- ESPA 4.4.4

In most territories, including the UK, Netherlands, Belgium and Sweden, to be compliant with the local regulations, Pins & Output Relays must be used. Manufacturer Protocols and Printer Interface Communications can be used to provide supplementary information for the ARC, Installer and Emergency Services.

Input Pins & Output Relays

The [Quick Guide](https://www.csl-group.com/support/dualcom-pro-fire/?tab=quick-guide) (<https://www.csl-group.com/support/dualcom-pro-fire/?tab=quick-guide>) provides guidance on how to configure and connect up a DualCom Pro to be compliant with EN54-21.

This solution works with all known fire panels that comply with EN54-21. CSL has validated it with many of the main manufacturers' panel ranges, including, but not exclusively:

- Advanced
- Bosch
- C-Tec
- Carrier
- Honeywell

- Inim
- Johnson Controls
- Kentec
- Labor Strauss
- Protec
- Siemens
- Vanderbilt

In some territories, emergency services will not attend sites on notification of a fire alarm unless a confirmed fire signal is also received.

Where three or more distinct notification events are required, CSL provide a pin profile “PinLearn EOL Pins 1-12”.

Note that only pins 1 and 2 are monitored for tamper and short circuits in DualCom Pro 2 and DigiAir Pro 3. If other pins need monitoring, please call **Tech Support**.

Other territories may have a policy of only responding to specific fire alarms, such as a heat detector or sprinkler.

In these cases, this can be achieved by installing a panel where CSL DualCom Pro provides **Manufacturer Protocols** support or **Printer Interface Communications** to provide supplementary information to the ARC.

Manufacturer Protocols

With Serial protocol implementations for fire panels, the panel sends alarm and restore events to the DualCom Pro, which is then responsible for transmitting these to the ARC.

The DualCom Pro will additionally generate events if communication is interrupted on one or both of the communication interfaces or if the connection to the panel is lost.

These events can provide much richer detail to the ARC compared to pins, as to the nature of the fault, its location and which sensor has generated the event, along with any other relevant information.

For example, on a site using ‘pins only’, the ARC will receive:

- [NUA8001|AChannel 1 Alarm]
- [NUR8001|AChannel 1 Restore]

And from a site using the manufacturer’s protocol:

- [Nti11:13:02/da03-31-25/ri001^Fire Zone 01 ^/FT0007|ACall Point ID:002895]
- [Nti11:13:52/da03-31-25/ri001^Ground Floor End ^/FT0003|ACall Point Ground Floor Lobby ID:002931]
- [Nti12:36:15/da03-31-25/FH|AFire Alarm Reset]

The Manufacturer Protocols currently supported by DualCom Pro include:

- [Honeywell Gent](https://www.csl-group.com/panel-guides/honeywell/honeywell-gent-rs232/) (https://www.csl-group.com/panel-guides/honeywell/honeywell-gent-rs232/)
- [Inim Previdia \(using CSL's protocol\)](https://www.csl-group.com/panel-guides/inim/inim-previdia-via-rs232/) (https://www.csl-group.com/panel-guides/inim/inim-previdia-via-rs232/)
- [Kentec](https://www.csl-group.com/panel-guides/kentec/kentec-syncro-and-solo-series/) (https://www.csl-group.com/panel-guides/kentec/kentec-syncro-and-solo-series/)
- [Carrier EMS Smartcell](https://www.csl-group.com/panel-guides/carrier/ems-smartcell/) (https://www.csl-group.com/panel-guides/carrier/ems-smartcell/)
- [Advanced BMS Protocol](https://www.csl-group.com/panel-guides/advanced/advanced-hertek-penta-rs232-connection/) (https://www.csl-group.com/panel-guides/advanced/advanced-hertek-penta-rs232-connection/)

Printer Interface Communication

The DualCom Pro is also capable of listening to the printer port output of fire panels and will generate events based on this.

It should be noted that some panels using printer interface communications do not send **restore events**.

These will be sent when the Engineer goes to site and resets the panel.

The DualCom Pro will additionally generate events if communication is interrupted on one or both of the communication interfaces.

These events can provide much richer detail to the ARC compared to pins, as to the nature of the fault, its location and which sensor has generated the event, along with any other relevant information.

For example, on a site using 'pins only' the ARC will receive:

- [NUA8001|AChannel 1 Alarm]
- [NUR8001|AChannel 1 Restore]

And from a site using the manufacturer's protocol:

- [Nri0003/FA2048|AFIRE ALARM-CALL POINT 64-GROUND FLOOR OFFICE AREAS-GRND FLR STAF]

Please note, the text on the printer interface communications is typically in the **local language** of the Installer, and CSL only supports some languages.

- [Advanced MX Pro](https://www.csl-group.com/panel-guides/advanced/advanced-mx-pro-45-rs232/) (https://www.csl-group.com/panel-guides/advanced/advanced-mx-pro-45-rs232/)
- Labor Strauss BC600
- Labor Strauss BC216
- [Carrier Aritech 2X-F Series](https://www.csl-group.com/panel-guides/carrier/aritech-2x-series-rs232/) (https://www.csl-group.com/panel-guides/carrier/aritech-2x-series-rs232/)
- [Honeywell Notifier](https://www.csl-group.com/panel-guides/honeywell/honeywell-notifier-rs232/) (https://www.csl-group.com/panel-guides/honeywell/honeywell-notifier-rs232/)
- [Inim Smartloop](https://www.csl-group.com/panel-guides/inim/inim-smartloop-via-rs232/) (https://www.csl-group.com/panel-guides/inim/inim-smartloop-via-rs232/)

- [Johnson Controls FireClass](https://www.csl-group.com/panel-guides/fireclass/fireclass-fire-panel/) (https://www.csl-group.com/panel-guides/fireclass/fireclass-fire-panel/)
- [Johnson Controls Tyco MX](https://www.csl-group.com/panel-guides/tyco/tyco-fire-mzmx-rs232-connection/) (https://www.csl-group.com/panel-guides/tyco/tyco-fire-mzmx-rs232-connection/)

ESPA 4.4.4

ESPA 4.4.4 was created in 1984 by the European Selective Paging Manufacturers Association and has since become an industry standard. ESPA 4.4.4 is a serial protocol, originally created for interconnecting paging equipment with phone exchange systems and computers. This protocol is supported by a large number of systems, such as fire alarms, intruder alarms, nurse call systems and DECT cordless telephony.

The protocol is message-oriented and based on short messages being sent over a serial data link.

The DualCom Pro is capable of listening on the RS232 output of fire panels and will generate events based on the text following the second Unit Separator control character (ASCII code 31) in these messages. English, Dutch, German and Danish are currently supported.

Event	English	Danish	Dutch	German
STARTUP	Fire System Startup	Fire System Startup	Fire System Startup	Fire System Startup
ALARM	Fire	BRAND	Brand	Feuer
PREALARM	Prealarm	Prealarm	Vooralm	Alarm
FAULT	Fault	FEJL	Storing	Stoe
TECHNICAL	Technical	Technical	Tech.al	Tech_al
DISABLEMENT	Disablement	Disablement	Uitgesch	Absch

Quick Guide

Introduction

This Quick Guide covers the requirements for a fire installation and is a supplement to GradeShift Pro 2 and DigiAir Pro 3. The guide uses “DualCom Pro Fire” to refer to both product variants.

Mounting

The enclosure requirements for the DualCom Pro Fire are the same as for the Fire Alarm Panel itself, which must meet the requirements of the EN54-21 standard.

The DualCom Pro Fire should be mounted inside the Fire Alarm Panel or inside a separately powered housing that meets the requirements of section 7.3 of the EN54-21 standard.

Input Pins

The default pin profile configured at installation is “PinLearn Fire”. With this, pins 1 and 2 are configured for use with fire alarm panels (EOL mode) and will generate a SIA Tamper Alarm/Restore in response to additional conditions, along with Alarm and Restore with the other pins:

- Open circuit and open circuit restore
- Short circuit and short circuit restore
- Fault

If Confirmed Fire is required, use My Base to configure the DualCom Pro Fire to use pin profile “PinLearn Confirmed Fire”. In this configuration, pins 1 to 3 are configured for EOL Mode. Please contact Tech Support if you require Pin 3 to be monitored for tamper and short circuits.

Please use “PinLearn EOL Pins 1-12” if additional pins are required in EOL mode. In this configuration, all pins on the DualCom Pro Fire will respond to the additional conditions and generate the corresponding events to the Gemini Global Platform.

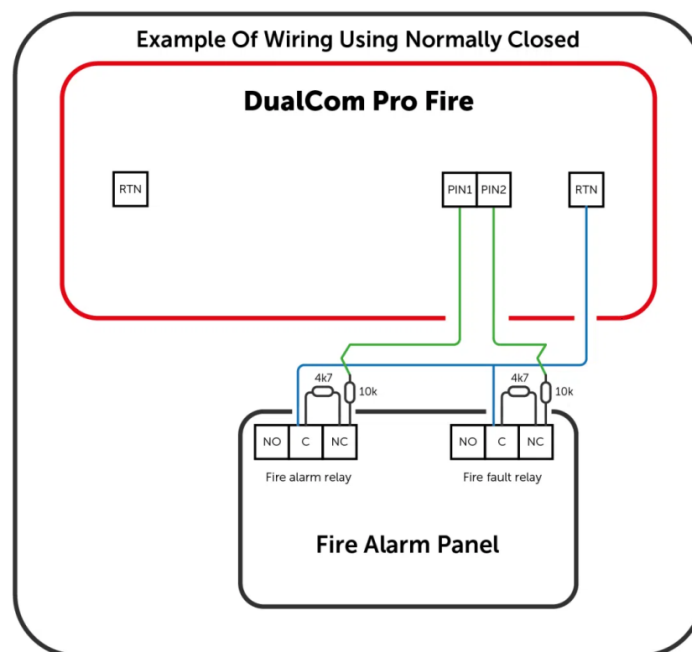
- **Pin 1:** intended for receiving the Fire Alarm/Restore signal from the Fire Alarm Panel.
 - **Pin 2:** intended for receiving the Fault/Restore signal from the Fire Alarm Panel.
 - **Remaining Pins:** used for receiving notifications from any other device (e.g. an Intruder Panel). These pins take a lower priority than pins 1 & 2 when signalling to the Gemini Global Platform.
-

Input Pin Wiring

Input pins, which are configured in EOL mode, require 10k and 4k7 Ohm resistors to be wired in line as shown below.

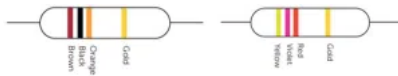
The DualCom Pro Fire uses a normally closed configuration so that a power failure on the Fire Alarm Panel will signal an alarm to the Gemini Global Platform.

- If the circuit is broken, then an open circuit tamper alarm will be generated.
- If it detects 0V, then a short circuit tamper alarm will be generated.
- If the wrong resistor values have been used, then a fault tamper alarm will be generated.



[CLICK HERE TO VIEW ENLARGED DIAGRAM](https://www.csl-group.com/wp-content/uploads/2025/06/Input-Pin-Wiring-Image-High-Res-scaled.png) (https://www.csl-group.com/wp-content/uploads/2025/06/Input-Pin-Wiring-Image-High-Res-scaled.png)

Resistors



These are the colour code markings for the 10k Ohm and 4k7 Ohm resistors respectively.

Self-Learn

If the self-learn functionality (Press Button C for 5 seconds) is invoked when an EOL pin is in Alarm State, then the DualCom Pro Fire will switch to generating a Restore event when a high voltage is detected for that pin going forward and an Alarm event when a low voltage is detected.

Relays

The relays are intended to notify the Fire Alarm Panel of events on the DualCom Pro, Gemini Global Platform or from the ARC. Their configuration is fixed in Fire Mode and cannot be changed via My Base.

When the DualCom Pro is unpowered, NC is connected to C and NO is not connected to C.

When the DualCom Pro is powered and in a quiescent state, Relay 1 has the NO1 connected to C1 and the NC1 is not connected to C1.

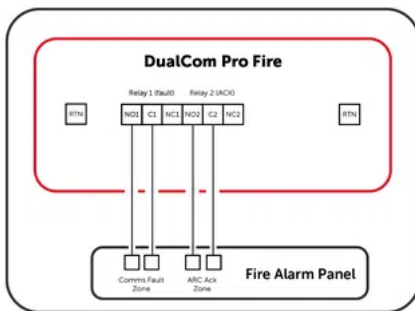
If a fault occurs, then Relay 1 changes such that NO1 is not connected to C1 and NC1 is connected to C1. When the fault is cleared, it will revert.

Fault conditions include:

- If any of the input pins being monitored enter a fault state
- If there are communication path issues (Line Fault)
- If there is an alarm/restore that is sent to the ARC for one of the monitored pins, and a response is not received within the configured timeout
- If there is a power failure

Relay 2 will connect NO2 to C2 and disconnect NC2 from C2 relay for 5 seconds to indicate that the ARC has acknowledged successful receipt of an event.

Relay Wiring



Fault Reporting

To meet the EN54-21 requirements for monitoring on Type 1 Fire systems, this device sends regular polling calls to the Gemini Global Platform on all connected and active transmission paths. The Installer shall ensure that appropriate reporting actions have been agreed with the ARC for all alarm codes, transmission path failure notifications, and polling failure reports from the Gemini Global Platform.

Panel Guides

Honeywell Gent – RS232

[\(https://www.csl-group.com/panel-guides/honeywell/honeywell-gent-rs232/\)](https://www.csl-group.com/panel-guides/honeywell/honeywell-gent-rs232/)

Inim Previdla – RS232

[\(https://www.csl-group.com/panel-guides/inim/inim-previdla-via-rs232/\)](https://www.csl-group.com/panel-guides/inim/inim-previdla-via-rs232/)

Kentec Syncro and Solo Series – RS232

[\(https://www.csl-group.com/panel-guides/kentec/kentec-syncro-and-solo-series/\)](https://www.csl-group.com/panel-guides/kentec/kentec-syncro-and-solo-series/)

EMS SmartCell

[\(https://www.csl-group.com/panel-guides/carrier/ems-smartcell/\)](https://www.csl-group.com/panel-guides/carrier/ems-smartcell/)

Advanced Hertek Penta – RS232

[\(https://www.csl-group.com/panel-guides/advanced/advanced-hertek-penta-rs232-connection/\)](https://www.csl-group.com/panel-guides/advanced/advanced-hertek-penta-rs232-connection/)

Advanced MX Pro 4/5 – RS232

[\(https://www.csl-group.com/panel-guides/advanced/advanced-mx-pro-45-rs232/\)](https://www.csl-group.com/panel-guides/advanced/advanced-mx-pro-45-rs232/)

Aritech 2X Series – RS232

[\(https://www.csl-group.com/panel-guides/carrier/aritech-2x-series-rs232/\)](https://www.csl-group.com/panel-guides/carrier/aritech-2x-series-rs232/)

Honeywell Notifier – RS232

[\(https://www.csl-group.com/panel-guides/honeywell/honeywell-notifier-rs232/\)](https://www.csl-group.com/panel-guides/honeywell/honeywell-notifier-rs232/)

Inim Smartloop – RS232

[\(https://www.csl-group.com/panel-guides/inim/inim-smartloop-via-rs232/\)](https://www.csl-group.com/panel-guides/inim/inim-smartloop-via-rs232/)

FireClass Fire Panel – RS232

[\(https://www.csl-group.com/panel-guides/fireclass/fireclass-fire-panel/\)](https://www.csl-group.com/panel-guides/fireclass/fireclass-fire-panel/)

Tyco MZX/MX – RS232

[\(https://www.csl-group.com/panel-guides/tyco/tyco-fire-mzmx-rs232-connection/\)](https://www.csl-group.com/panel-guides/tyco/tyco-fire-mzmx-rs232-connection/)

Useful Information

[Customer IT Survey Form](https://www.csl-group.com/customer-it-survey-form/) (https://www.csl-group.com/customer-it-survey-form/)

[CSL Remote Manager](https://www.csl-group.com/support/csl-remote-manager/) (https://www.csl-group.com/support/csl-remote-manager/)

[Alarm Signalling Standards](https://www.csl-group.com/alarm-signalling-standards/) (https://www.csl-group.com/alarm-signalling-standards/)

[One-Time Access](https://mybase.csl-group.com/new-install) (https://mybase.csl-group.com/new-install)

Customer IT Survey Form

The [Customer IT Survey Form](https://www.csl-group.com/customer-it-survey-form/) (https://www.csl-group.com/customer-it-survey-form/) may be required when ordering LAN + Radio or LAN only devices.

The DualCom Pro will require an IP address to be allocated to it by the customer's network administrator.

CSL Remote Manager

More information about the CSL Remote Manager is [available here](https://www.csl-group.com/support/csl-remote-manager/). (https://www.csl-group.com/support/csl-remote-manager/)

Alarm Signalling Standards

Significant changes have been made to alarm signalling standards and terminology. Grades 2, 3 and 4 now have Single Path (SP) and/or Dual Path (DP) equivalents. The reporting times for catastrophic failures have also changed. Our Alarm Signalling Range operates to these standards and in some cases exceeds them.

Visit [this page](https://www.csl-group.com/alarm-signalling-standards/) (https://www.csl-group.com/alarm-signalling-standards/) to see how the old and new standards apply to current CSL products.

CSL Live & the My Base App

Please visit the dedicated Support pages for more information about [CSL Live](https://www.csl-group.com/support/csl-live/) (https://www.csl-group.com/support/csl-live/) and the [My Base App](https://www.csl-group.com/support/my-base/) (https://www.csl-group.com/support/my-base/).

Technical Notes

Overview

Learn about the latest technical updates and firmware releases.

17:06:25 DualCom Pro Fire

PinLearn Confirmed Fire

This update enables DualCom Pro devices to monitor pins 1, 2 and 3 in EOL mode.

Traditionally in the UK, Fire panels have connected up pins 1 and 2 in EOL mode for the DualCom Pro for monitoring by the ARC.

BS5839-1 2025 advises that: *"In some areas of the UK, the local fire and rescue service does not attend calls arising from the actuation of a fire detection and fire alarm system unless a fire is confirmed. Details of these policies vary from one fire and rescue service to another".*

We have introduced a new pin profile to allow the Installer to configure the DualCom Pro device to deliver these notifications.

Usage

When installing a DualCom Pro Fire, use My Base to modify the pin profile to Confirmed Fire.

The DualCom Pro will have pins 1 – 3 configured to operate in EOL mode. All other pins will continue to operate in normal mode.

If you also require pin 3 to cause output relay 1 to trigger a fault to the panel if it is tampered with, please contact Tech Support.

20:11:23 All Products

Contact ID Alarm Protocol

The DualCom Pro range supports Intruder Panels using SIA, Fast Format and Contact ID protocols.

When integrating the DualCom Pro range with an Intruder Panel, our recommendation is to use either SIA or Fast Format (6.8.1, 6.16.1 or 6.32.1) protocols.

If Contact ID is to be used to pass events to the ARC, please be aware that it will only use the least significant 4 digits of the ARC account ID. The ARC must supply this prior to installation.

If the ARC does not support this then one of the other signalling formats should be used.

For reference, please see the below breakdown of a Contact ID alarm message constructed from several fixed length message blocks.

These are defined as follows:

18AAAAQXYZGGCCC

Where:

18 – Contact ID type identifier.

AAAA signalling ID – 4-digit account number.

Q – Event type – E (new alarm event), R (new restore event) or P (previously reported alarm).

XYZ – Event number – Defines the type of event that has occurred.

GG – Area number – Set to 00 if no areas defined.

CCC – Zone or User Number – Dependent on the type of event defined by the event number.

This fixed length account number field restricts the required 6-digit account number entered in the intruder panel being presented to the Alarm Receiving Centre. Resulting in events being misinterpreted.

23:08:23 All Products

PinLearn EOL Pins 1-12

Enables DualCom Pro devices to monitor all pins in EOL mode rather than just pins 1 and 2.

Traditionally in the UK, Fire panels have connected up pins 1 and 2 in EOL mode for the DualCom Pro to monitor.

Recent changes in legislation in Scotland have resulted in requests for additional pins to be monitored to allow, for example, Confirmed Fire to be communicated to the ARC. This new pin profile enables the Installer to configure the CSL DualCom Pro device to deliver this.

Usage

When purchasing a DualCom Pro Fire, it will be configured to use a pin profile of PinLearnFire. This and PinLearnFire No-A Block are configured to put pins 1 and 2 in EOL mode.

Pin Profile PinLearn EOL Pins 1-12 is configured to put all 12 pins on a DualCom Pro 2 and all 8 pins on a DigiAir Pro 3 into EOL mode.

This does not affect the monitoring for tamper and short circuit in Fire mode which, by default, is pins 1 and 2. If you require additional pins to be monitored for tamper and short circuit then currently this needs to be configured by Tech Support.

Similarly, output relay 1 will only trigger by default if pins 1 and 2 are triggered with. If an additional pin should trigger output relay 1 then this needs to be configured by Tech Support. Making this change will also result in any additional pins reporting ARC Ack on output relay 2.