

The pros and cons of open and closed protocol fire systems

As technologies continue to evolve, the options for fire detection and suppression systems come with increasing variety, offering today's businesses and property owners a welcome, but sometimes confusing, choice.

Underlying the decision of which solution to choose is the concern that the components must work seamlessly with each other to ensure that their ability to rapidly detect, notify and control a fire is not jeopardised.

Introduction

A typical fire system works by having all its components, including detectors, call-points and sounders connected together to form a robust infrastructure that is managed centrally from a control panel.

Each component uses a particular protocol – essentially the language that electronic products use to communicate with each other. There are two types of fire system protocol, each having its advantages and disadvantages:

Open protocol systems – the manufacturers of fire detectors and control panels disclose the full technical details of their communication protocols, enabling other manufacturers to produce compatible components.

Closed protocol systems – a single manufacturer produces detectors, control panels and other devices that all use the same protocol. The company does not disclose its protocol to other manufacturers, and access to the software is restricted to manufacturer-approved installers and engineers.

A key issue is working out which system is going to be the best long-term investment in terms of ease of maintenance, ongoing support and overall cost.

Open protocol systems

Open protocol systems make detectors, interfaces and control equipment interchangeable across a wide range of manufacturers and offer you freedom of choice in terms of both product and installer.

Advantages

- You or your installer are free to choose components which best meet the precise requirements of your fire system design.
- You can elect to use different suppliers according to their specific areas of expertise.
- You can choose to use a company other than the installer to service the system, or to provide upgrades to access new features.

Disadvantages

- If an open protocol component is upgraded, there is a small chance that it may no longer be compatible with every other part of the system.
- Fixing such incompatibility problems may be time-consuming or cause additional expense.

Closed protocol systems

There is no compatibility between the equipment produced by different manufacturers of closed protocol fire systems; with this type of system you choose the same company to supply, maintain and upgrade all the components.

Advantages

- Because the components all come from the same source, they benefit from a unified design approach and work together with no difficulty.
- Component upgrades are tested to ensure they work with the manufacturer's other devices before release, ensuring they will remain compatible with the rest of the fire system.
- It is unlikely that individual components will fail due to tampering, as only manufacturer-approved engineers can work on and maintain the system.

Disadvantages

- There is a complete dependency on one manufacturer for spare parts, and for access to the protocol for servicing, modification and upgrades, all of which may put a premium on ongoing maintenance.
- System upgrades are restricted to the innovations of the chosen manufacturer, removing the freedom to choose from new solutions and to access the wide pool of expertise available in the marketplace.
- Organisations with closed protocol fire systems are a captive market and so may endure poor service, slow response times and uncompetitive ongoing maintenance costs.
- It may be considered to be too disruptive and expensive to rip out and replace the existing system, so organisations might find themselves sticking to their original supplier when they would rather switch to another.

Making the right choice

A key factor in deciding which type of fire system to choose is working out which system is going to be the best long-term investment in terms of ease of maintenance, ongoing support and overall cost.

An open protocol system will give you the freedom to choose precisely the components you want, both now and in the future.

Opting for a solution from a manufacturer of closed protocol systems will give you components that have been designed to work together and will be installed by approved engineers with training bespoke for that system. However, there are a number of questions you need to ask. What, for example, is the manufacturer's upgrade policy – will it maintain backwards compatibility? Is there a commitment to providing new features? Are its solutions likely to cost you more than similar components sourced elsewhere? Crucially, are you prepared to be tied in to one manufacturer not just now, but for the foreseeable future?

Choosing an open protocol system means that you, and your system's installer will have the freedom to select precisely the components you want, both now and in the future, and design a fire system that's right for your needs. You need to know, though, that your installer has expertise in, and experience of, a broad range of solutions,

and will recommend the best equipment for the job. Do they, for example, have industry accreditations to give you peace of mind?

Finally, whether your chosen system is being installed by the manufacturer or by an independent company, you need to investigate what levels of support and maintenance you are likely to get in future so that you can calculate the true cost of ownership for your fire system.

Summary

There are advantages and disadvantages to both open and closed protocol systems. In choosing the right system for your needs, you should consider a range of criteria from component compatibility and maintenance to customer service and ongoing costs. Above all, you need to consider the implications of all these things well into the future.

Chris Lewis Fire & Security designs, installs and maintains a complete range of fire and security systems for residential and commercial customers. The company's experience, dedication to customer satisfaction and innovatively designed solutions are reflected in a host of industry awards, including both Best Security Installer and Best IT Initiative accreditation at the Security Excellence Awards.