

Information Paper

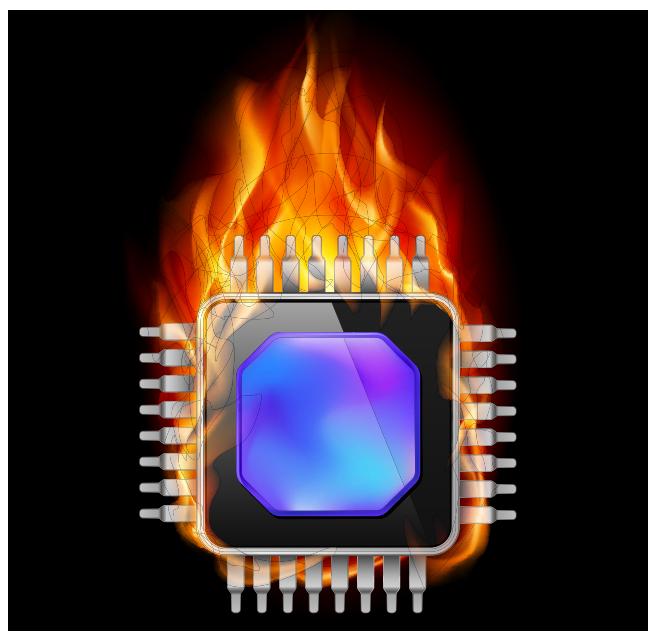
New requirements for fire detection and alarm network systems

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Different types of fire detection and fire alarm systems are available on the market and the selection of the appropriate system will depend on a number of factors including:

- building size
- complexity of the action(s) to be taken due to a fire event within a building
- reliability
- cost of the system and its installation.

This Information Paper will enable specifiers and fire detection and alarm systems designers to choose the most appropriate hard-wired network systems for installation in buildings, while maintaining compliance with the European Construction Products Regulation (the CPR)^[1] and the British Code of Practice, BS 5839-1^[2]. In addition, it will highlight the new requirements for network systems which have been developed and incorporated within an LPS standard.



Network microprocessor

Background

The development of fire detection and alarm system (FDAS) components has been driven by new technology, the growth in microprocessor power at low prices, new legislative requirements and user specifications.

Figure 1 on page 2 illustrates the components of a fire detection and alarm system which consists of a processor unit, usually considered to be the heart of the fire detection and alarm system, which processes incoming and outgoing signals. It receives signals from detection and activation functions such as smoke and heat detectors and activation of manual call points. After analysis of the incoming signals, the status of the system is indicated via the user interface and the appropriate outputs are initiated such as the activation of sounders/beacons, signals

to the alarm receiving centre, or signals to activate protection devices such as extinguishing systems.

The fire detection and alarm system is usually powered by a power supply consisting of a primary source (mains) and secondary source (batteries).

The processing unit and user interface are normally referred to as the control and indicating (CIE) equipment or commonly known as a fire panel.

Earlier types of fire detection and alarm systems are known as conventional systems. An example of a conventional system is illustrated in Figure 2. In terms of input and output devices, in