

Fireye enjoys a worldwide reputation as a technical pioneer and leading manufacturer of flame safeguard, combustion efficiency and burner controls for a wide range of industrial and commercial applications.



**The first  
name in flame  
monitoring and  
combustion control**



Fireye efficiency  
products offer  
our customers  
substantial benefits  
including fuel  
savings, emissions  
reduction and  
enhanced  
operational  
capabilities.



*Fireye's Customer Service Team is available to meet all of our customer's unique needs. Our dedicated group has over 60 years of combined experience servicing our vast customer network. Fireye routinely ships over 95% of our customer orders on time and we are ready to expedite products for emergency situations. We are proud of our passion for customer service and are committed to maintaining our high service levels.*

## Fireye, the first name in flame monitoring and combustion controls

Accurate, reliable flame monitoring is critical for burner safety and Fireye has been delivering the industry's best and most dependable flame safeguard controls for more than 70 years.

Fireye enjoys a worldwide reputation as a technical pioneer and leading manufacturer of flame safeguards and burner controls for a wide range of industrial and commercial applications.

Our products are sold through a global network of technically knowledgeable distributors and representatives, each with trained specialists in combustion systems and boiler safety. We offer unmatched product quality, technical excellence, and customer support. Why buy Fireye? The answers are simple: reliable products, technical excellence, industry experience and ongoing support.

## Specialized products tailored to key markets

Fireye products include a variety of flame scanners, amplifiers, burner accessories, and microprocessor-based control systems.

Applications for Fireye products range from single-burner boilers and furnaces used in schools, hospitals, and small commercial properties to the largest multi-burner boilers used in electric power stations, pulp and paper mills, petrochemical refineries, and food processing plants.

Our efficiency products offer our customers substantial benefits including fuel savings, emissions reduction and enhanced operational capabilities.

Fireye's flame detection capabilities are the best in the industry. Our flame scanners cover the full spectrum from ultraviolet to infrared, to flame rectification. These devices range from simple on-off protection to highly sophisticated advanced flame signature profiling. Fireye provides the widest range of specialized flame scanners in the world, designed precisely to meet applications across multiple business segments. Whether that application requires high flame sensitivity, high flame differentiation, high safety integrity, explosion proofing or worldwide agency approvals, Fireye has the exact product to fit the need.

## A long, proud record of industry firsts

Fireye was founded in the late 1930s as part of the Electronics Corporation of America. Since then, the company's success has expanded through a series of product innovations and technical breakthroughs. The Fireye pedigree of industry firsts is one of the richest in the marketplace.

- First electronic flame safeguard control, a photoelectric device that detects the presence of an oil flame in less than a second
- First infrared scanners to monitor both gas and oil flames
- First multi-burner scanner able to discriminate signals from adjacent burners
- First totally solid-state programming controller
- First multilingual autodiagnos-tics program with communication capability
- First multi-burner microproces-sor flame scanner capable of reporting data in three dimen-sions for improved flame discrimination
- First optical combustion efficiency system to measure and calculate accurate oxygen levels by "looking" into the flame
- First optical flame scanner to measure flame temperature and flame quality optically



Commercial



Industrial



Utility

Fireye offers the widest variety of scanner types - from ultraviolet to infrared, photo cell to flame rectification - in single-burner and multi-burner models for any boiler size and any fuel.



*Fireye's Technical Support Staff is ready to answer any unique field application questions that may arise. On site field commissioning and service are available directly from Fireye, if needed. We continue to strive for excellence in providing customer solutions for all possible applications.*

## Single-burner product solutions for every system

In the commercial and small industrial marketplace, combustion flame safety is mandatory.

Schools, hospitals, apartment buildings, and office complexes all rely on flame scanners to monitor their boilers and heating plants.

Fireye flame scanners, amplifiers, and controls are built to assure the highest level of scanning accuracy and flame protection with any fuel source - gases, coal, biofuels, or any grade of fuel oil.

Each fuel presents its own unique flame defined by such characteristics as color and heat intensity.

Fireye scanners are available to suit each specific fuel: ultraviolet and infrared scanners to monitor the bright orange of an oil flame or the cool blue of gas, as well as photo light detection and flame rectification sensors that can physically detect the slightest hint of a white-hot flame barely visible to the naked eye.

## Industry-leading quality and customer service

Reliable quality and unmatched technical service is what sets Fireye apart from the competition.

Our worldwide network of more than 250 authorized distributors and representatives offer customers a level of expertise and technical troubleshooting that can keep their systems operating at peak performance. Fireye products undergo extensive inspection, fault analysis, and design that tests and ensures every key component and subassembly functions properly.

All product development, applied research, and manufacturing is done at the company's facility in Derry, New Hampshire, which is fully certified to current ISO 9001 standards. This commitment to product reliability, manufacturing quality, and ongoing service is what gives Fireye its high degree of customer loyalty. Fireye customers return again and again for new application solutions and upgrades to existing systems.

## Breakthrough products for burner control and efficiency

Single-burner product configurations from Fireye are installed in a wide variety of municipal, commercial, and small industrial applications that demand the highest level of burner safety.

### NEXUS® Combustion Efficiency Systems

provide the most advanced efficiency control techniques available in the market today. The systems combine high performance independent positioning motors that precisely control fuel/air ratio on gas and oil burners. Coupled with extended features like O<sup>2</sup> trim, Variable Speed Drive control, touch screens, communications and water level control, the system provides a total package of benefits that add up to significant energy savings and reduced emissions.

### Burnerlogix® Series

Available for single-burner installations, the Fireye Burnerlogix is a complete burner flame safeguard system that includes a control / amplifier, keypad/display module, and a full library of programmer modules, scanners and remote communications via ModBus to match your specific burner/boiler fuel firing characteristics.



Schools & University



Hospitals



Office Buildings

Reliable quality  
and unmatched  
service from a  
worldwide network  
of more than 250  
distributors and  
representatives  
gives Fireye  
customers a level  
of expertise that  
can keep their  
systems operating  
at peak  
performance.



*Fireye utilizes a vast world-wide distribution network. Our distributors are hand-picked and thoroughly trained in all applicable product lines. On going training programs assure that each distributor is capable of handling the needs of practically any customer.*

## **Fireye Explorer, Flame Analysis Software**

Fireye Explorer software (FEX) allows users to communicate with multiple Insight II or Paragon flame scanners. Everything the user can see from the scanner can be displayed graphically on the software allowing full remote monitoring and programming from the control room. The software offers the user real time graphical flame analysis, an OPC interface to their DCS or BMS and a host of supervisory control and data driven features.

## **Multi-burner solutions for an extra level of safety**

Unlike single-burner scanners designed to sense the existence of flame and provide limited adjustments and shutdown options, Fireye multi-burner systems can discriminate between individual flames fired in the same large combustion chamber. Fireye flame scanners are the perfect complement to any large industrial multi-burner installation because they are fully compatible with virtually all boiler controls and burner systems. Adding Fireye scanners to your installation brings an extra degree of assurance and flame safety.

## **Bringing microprocessor technology to burner safety**

In recent years, burner safety has moved from controls that operate with bulky vacuum tubes to those run by increasingly sophisticated microprocessors - computers on a chip. This allows new features such as LED displays, alarms, software diagnostics, and the ability to communicate the live status of a burner to an operator in another plant or on another continent.

In short, Fireye multi-burner products offer customers more sophistication, more application flexibility to work with other components, and integration into a more complex industrial heating system.

## **Innovative scanners and flame monitors**

Multi-burner product configurations from Fireye are installed throughout the world in industry applications that demand consistent and reliable combustion control.

## **Insight Flame Scanners**

The Fireye Insight II Type 95DSS3 includes two independently adjustable internal flame relays that can be selected to operate from the UV sensor, the IR sensor, or both sensors to detect the presence or absence of a target flame in single or multi-burner applications.

## **Paragon Flame Scanners**

The Fireye Paragon, type 105F1-1 scanner combines flame temperature measurement and flame safety detection into one low cost, fully integrated device. The Paragon scanner provides high integrity sensing of multiple flame properties, including amplitude, flicker frequency and flame learned vs. stored curve fitting. These measured properties are utilized to provide superb discrimination in a multiple burner, multi-flame application as well as monitoring performance characteristics such as peak flame temperature.

## **Phoenix Flame Scanners**

Fireye Phoenix 85UVF self-checking scanners are used to detect ultraviolet emissions from fossil fuel flames such as natural gas, coke oven gas, propane, methane, butane, kerosene, light petroleum distillates and diesel fuels. They are suited for application to duct burners, industrial gas burners, refinery applications ignition systems and low NOx detection in continuous or non-continuous burner operation.



Power Generation



Petrochemical



Pulp and Paper



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## **Fireeye Products**

- Flame-Monitor® Burner Management Series
- Burnerlogix® Burner Management
- Nexus® Combustion Efficiency System
- InSight Scanners®, Paragon, Phoenix Integrated Scanners
- MBCE, MBPF
- FEX Flame Analysis Software
- Simplicity Scanners
- MicroM Series Microprocessor Control