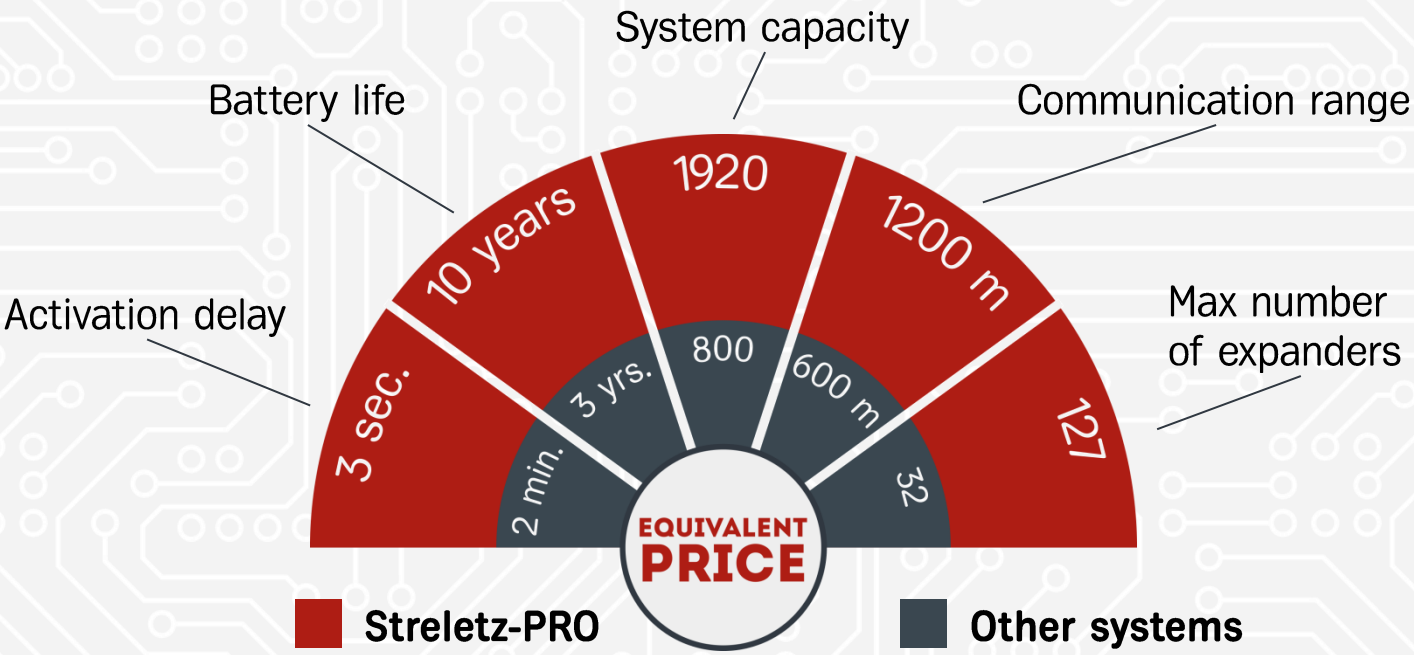
ARGUSSPECTRUM INTERNATIONAL

WIRELESS ALARM SYSTEMS: AN OVERVIEW



Nowadays, many of the fire alarm manufacturers provide their own line of wireless devices in one form or another. This trend is explained by the fact that radio-frequency technologies are becoming both cheaper and more sophisticated, making wireless alarm systems a reliable and cost-effective replacement for wired counterparts.

In this variety, the **Streletz-PRO** system, designed by Argus Spectrum International, stands out as the most advanced, secure, and feature-packed solution. This overview is aimed at comparing Streletz-PRO to six other systems from international manufacturers and demonstrating why it is the perfect choice when it comes to wireless fire protection.

EMS Wireless & Hybrid Fire Detection Solutions | NOTIFIER by Honeywell | SIEMENS | ARGUS SECURITY

apollo | ARGUSSPECTRUM INTERNATIONAL | Electro-Detectors

	Argus Spectrum International Streletz-PRO	Honeywell Life Safety Agile	Argus Security Sagittarius	Apollo XPander	Siemens Swing	EMS Firecell	Electro Detectors Zerio
System capacity							
The capacity of Streletz-PRO allows you to build one big wireless system that will cover your whole building. This is an important advantage over smaller systems, where you would need to install several translators each controlling its own separate network, since multiple translators have a tendency of interfering with each other.	1920	32	240	31	30	504	240

Communication range

Streletz-PRO has a substantial communication range that allows you to use fewer resources and equipment to fulfill complicated projects, such as buildings with thick walls or multiple floors.

Max number of repeaters/expanders

Expanders and similar devices act as communication nodes in a wireless network. A large number of expanders in Streletz-PRO provides wide-area coverage, while other systems will only be able to cover a small part of a building.	127 (standalone expanders)	32 (each device is a repeater)	7 (standalone expanders)	0	30 (each device is a repeater)	31 (standalone expanders)	7 (standalone expanders)

	ARGUSSPECTRUM INTERNATIONAL	NOTIFIER by Honeywell	ARGUS SECURITY	apollo	SIEMENS	EMS Wireless & Hybrid Fire Detection Solutions	Electro-Detectors
Expected battery life*	10 years	5 years	8 years	5 years	3 years	5 years	5 years
Battery type*	CR123A + CR2032 lithium batteries Freely available	4 × CR123A lithium batteries Freely available	2 × CR123A lithium batteries Freely available	6 × AA alkaline batteries Freely available	5 × AA lithium cells Proprietary battery pack	6 × AA alkaline batteries Freely available	2 × AA lithium thynol cells Proprietary battery pack
Operating temperature*	-30…55 °C	-30…60 °C	-10…55 °C	-10…50 °C	-10…50 °C	-10…55 °C	-0…60 °C

Expected battery life*

The long battery life of Streletz-PRO devices reduces the expenses required for system maintenance and makes it a lot more cost-effective than some other competitors.

Battery type*

Streletz-PRO only uses 2 batteries per detector, which also has a positive effect on the maintenance costs of the system. Additionally, some brands use proprietary battery packs, which are harder to get than mass production batteries.

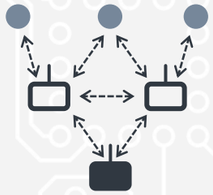
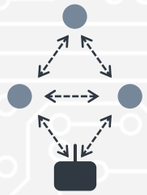
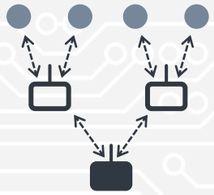
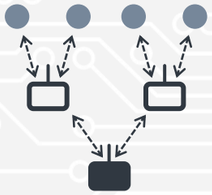
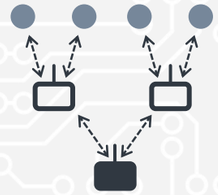
Operating temperature*

Radio transmitters can sometimes limit the acceptable temperature range of the device, especially below 0 degrees Celsius. Argus Spectrum engineers were able to overcome this drawback and create devices that can work in extremely cold conditions.

*The provided numbers are applicable to optical smoke detectors (chosen as an example as it's the most common device in a fire alarm system). Specifications can differ across the product range, e.g. sounders may use a different type of power supply.

Mesh network

In Streletz-PRO devices are not tied to a specific expander, and can dynamically find pathways to the central translator. This substantially enhances the design and installation process since there's no need to manually define and configure the network topology. It also means that in case of a expander fault, you don't lose connection with a portion of the network, and wireless detectors will find a backup communication route.

✓ Yes	✓ Yes	× No	× No	✓ Yes	× No	× No
						

Functionality

The product range of Streletz-PRO is not only limited to fire alarm devices. It is possible to create a multipurpose wireless network that will cover a wide range of security and safety issues.

						
Fire alarm Burglar alarm Panic alarm Automatic fire suppression Personal notification Positioning system Temperature and water leak monitoring	Fire alarm	Fire alarm	Fire alarm	Fire alarm	Fire alarm	Fire alarm

Intrinsically safe devices

Intrinsically safe devices are used in various types of industrial facilities that work with flammable or explosive materials, liquids, and gases. A line of intrinsically safe equipment allows Streletz-PRO to have a much higher range of use cases than competitors.

						
✓ Yes	× No	✓ Yes	× No	× No	× No	× No

COMMUNICATION PROPERTIES

Wireless communication isn't only characterized by general properties such as range and capacity. It's also important to know **how fast** information is transferred across devices, how the system protects itself from **interference**, what type of mechanisms are implemented to enhance connection **reliability**, and other possible limitations the system might have.

Understanding inner workings of the system is very helpful when choosing between different solutions on the market. **Argus Spectrum International** is open about its technology and provides extensive facts on the properties of wireless communication in Streletz-PRO.

Fast alarm activation
Communication in wireless alarm systems doesn't always happen instantly. Alarm signals from detectors are usually delivered immediately, while other commands may have a lower priority, which can cause sounders and other alarm devices to have a certain delay before activation. Argus Spectrum engineers were able to optimize communication protocol so that the delay between the alarm signal from the detector and the sounder activation does not exceed **3 seconds**.

Backup communication channels
When Streletz-PRO detects interference on the main frequency channel, it will automatically switch to a different one and continue operating normally. In fact, there are **6 frequency channels** available in the 868 MHz range that can be utilized by Streletz-PRO. This makes the system resistant to natural and technological sources of electromagnetic interference.

Effective radiated power adjustment
A simple but clever principle: when the connection is strong, devices lower the effective radiated power in order to save battery; when the device is starting to lose connection, it boosts up the transmission power.

Dense expander network
expanders in Streletz-PRO automatically arrange in a network, so signals can travel through multiple expanders before they reach the central controller. One expander can serve as a communication node for **31** others, which allows the network to get very dense and robust.

A lot of devices within one range
Some systems may struggle when a big number of wireless devices are located in an area, where each of the devices is in the communication range of all the others. That is not the case with Streletz-PRO: up to **2000 devices** can work in one area and not interfere with each other.

EMS Wireless & Hybrid Fire Detection Solutions · SIEMENS · ARGUS SECURITY · NOTIFIER by Honeywell · apollo · Electro-Detectors – no data

OCCUPATIONAL SAFETY

The connected worker devices market is a very promising and rapidly expanding prospect in the occupational safety industry. Different industries, such as **oil and gas, logistics, construction, manufacturing, mining** are investing heavily in new technologies that could help provide the highest level of safety for employees as well as monitor and coordinate the work process. Currently, the connected worker devices market is estimated to be worth **$400 million** and is expected to grow at a 13% annual rate, eventually reaching **$4 billion** in 2040.

Argus Spectrum International provides a reliable and versatile technological solution to safety and productivity in the workplace. The Streletz-PRO system can be equipped with personal wearable devices that cover a wide range of use case scenarios. These devices work in the same wireless network as the fire detectors and even use the same software.
Other systems mentioned in this review do not have this type of functionality.

Wearable device
Ergonomic design
No interference with the work process

Man down alert
Get alarm signals if the wearer has not moved for a certain time
Detect when employees may require medical help

Positioning
See real-time location of every employee
Indoor and outdoor positioning

Paging
Receive short text messages sent from the software
Coordinate and optimize the workflow

Panic button
Manually send alarm signals
Signals trigger sounders or other bracelets

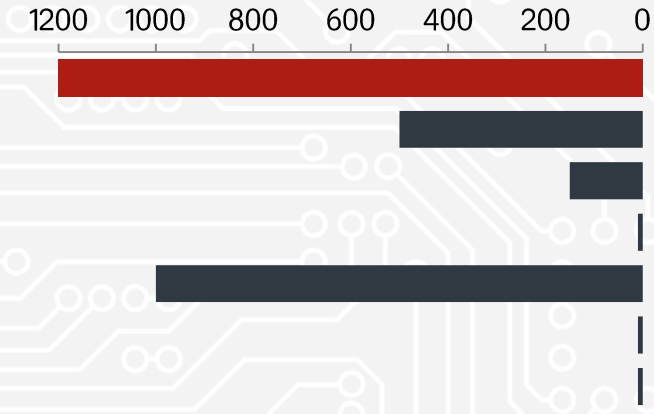
Personal notification
Receive vibration signals and text notifications
Ensure that every person is warned about the emergency

PRODUCT RANGE

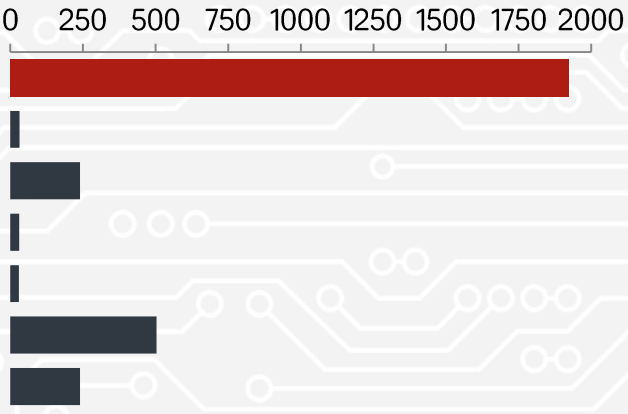
	ARGUSSPECTRUM INTERNATIONAL	NOTIFIER® by Honeywell	ARGUS SECURITY	apollo	SIEMENS	EMS Wireless & Hybrid Fire Detection Solutions	Electro-Detectors
Smoke detector							
Smoke detector with built-in sounder		×	×	×	×	×	
Smoke detector with built-in speaker		×	×	×	×	×	
Heat detector					×		+
Heat detector with built-in sounder		×	×	×	×	×	
Combined sensor detector				×	×	×	×
Call point							
Beam detector		×	×	×	×	×	×
Flame detector		×	×	×	×	×	×
Voice annunciator		×	×	×	×	×	×
Sounder					×		
Detector base with sounder	×	×			×		×
Input module					×		
Output module					×		
Output for AFES modules		×	×	×	×	×	×
Wireless key fob		×	×	×	×	×	×
Keypad		×	×	×	×	×	×

SUMMARY

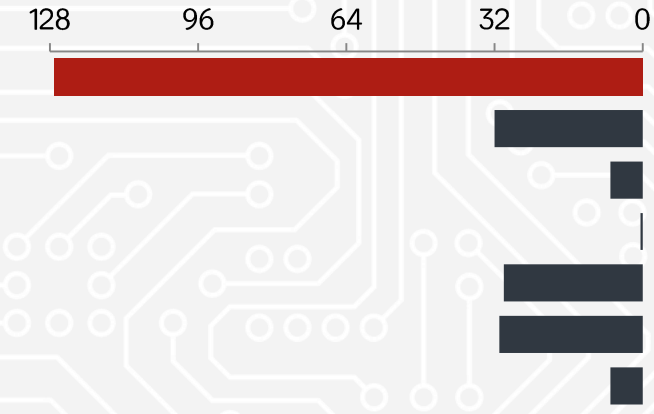
Communication range



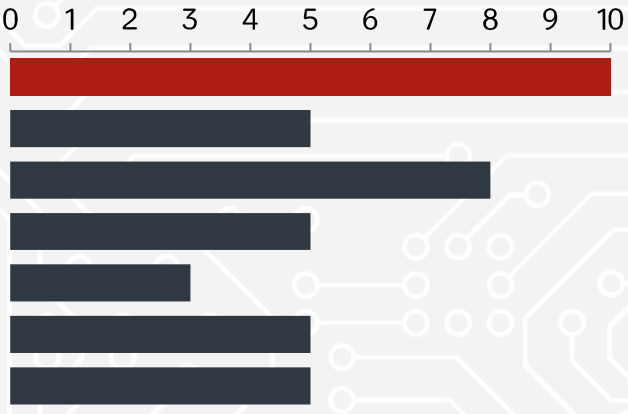
System capacity



Max number of repeaters/expanders



Battery life



Objectively, **Streletz-PRO** has the most advanced technical specifications and is miles ahead of its' competitors in terms of communication distance, overall capacity, and power consumption.

In addition to that, it also has the most versatile product range, incorporating some types of devices that no other company has a wireless model for (e.g. flame and beam fire detectors).

This makes Streletz-PRO not just a state-of-the-art product, but an important step forward in the fire alarm industry.