



**ARGUS SPECTRUM**

Mesh network 10-year battery life Cloud service 1200 m communication range Secure connection



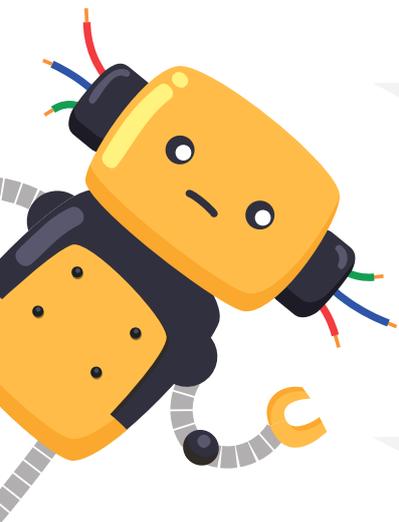
9 million devices sold 200 000 successful projects Passed tests in 83 countries 30 years on the market

# **THE BOOK OF WIRELESS**

**Streletz-PRO Wireless Fire Alarm System**

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I want to try wireless, but I don't want to deal with **batteries**

Batteries in Streletz-PRO last for 10 years!  
**See pages 11, 32, 38**

Wireless systems are vulnerable to **interference**

Wireless is more reliable than wired!  
**See pages 10, 12, 40, 47**

Wireless systems are a niche and **expensive** product

Wireless will help you boost your business!  
**See pages 30-34**



# About Us

Argus Spectrum was established in 1993 in St. Petersburg by scientists from the local Polytechnic University. The factory covers an area of 8000 square meters and houses four lines of surface mounting with automatic optical inspection systems, featuring robots from major global manufacturers. Additionally, the factory's test laboratory is well-equipped with a smoke channel testing equipment, conforming to both Russian and international standards.

As of today, Argus Spectrum boasts impressive achievements:

- Producing 100,000 devices per month.
- Employing 350 individuals with 50 specialists in the R&D department.
- Owning over 100 patents.
- Selling a remarkable 9 million wireless devices.

Argus Spectrum equipment has been successfully installed in more than 200,000 locations. Our products are protecting significant and high-profile installations including the world-famous Hermitage and the newly constructed Medical Academy in Saint Petersburg incorporating more than 20,000 wireless devices.

In the year 2020, an extraordinary achievement was accomplished when the Moscow Clinical Center for Infectious Diseases "Voronovskoye" was constructed in just one month. Ensuring the fire safety of this unique hospital involved the use of 15,000 wireless devices from the Streletz-PRO system.

We operate strict quality management systems in accordance with ISO9001. We have been recognized by and awarded the Toyota Bronze Medal for our Production Management System.



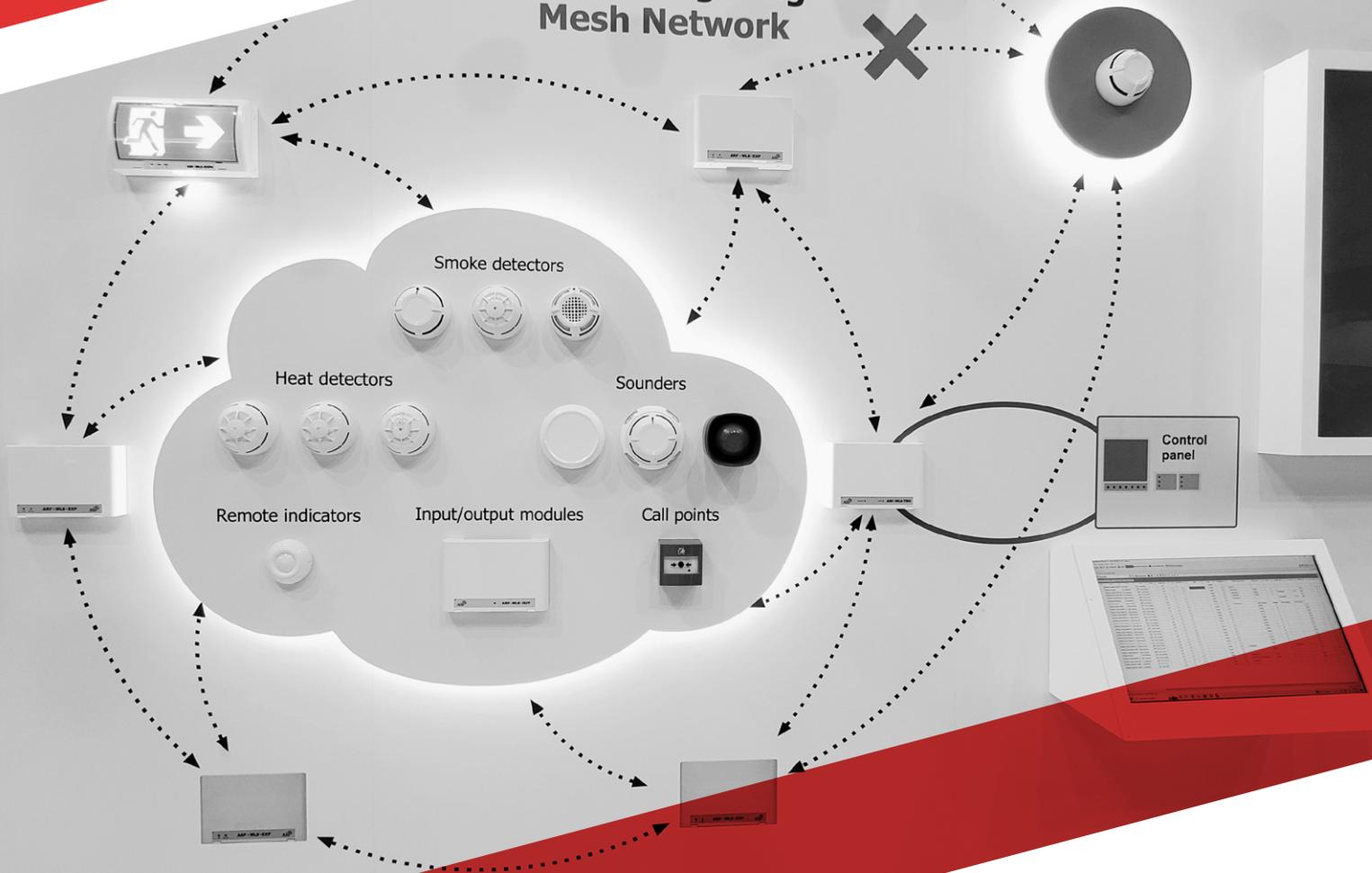
## [About Argus Spectrum International!](#)

A video about our company, our team and our work.

<https://catalog.argus-spectr.ru/video/en/about>

1

## Self-Configuring Mesh Network



# GENERAL OVERVIEW OF THE SYSTEM

Introduction to the products and solutions offered by Argus Spectrum, as well as diagrams showing how the system is built and the features it supports.

# Streletz-PRO Devices

Streletz-PRO is a brand of wireless fire alarm equipment. "PRO" means that this is the second generation of our wireless solution, based on the old Streletz system developed more than 10 years ago. Streletz-PRO includes all the

necessary equipment for a comprehensive fire protection setup. It covers fire detection, notification, fire suppression and much more. Our wireless system has no limitations in this aspect and can match the capabilities of wired systems.



## Streletz-PRO Features



Fire detection



Security alarm



Sound, voice, and visual alarm



Temperature sensors and leak detection



Fire suppression



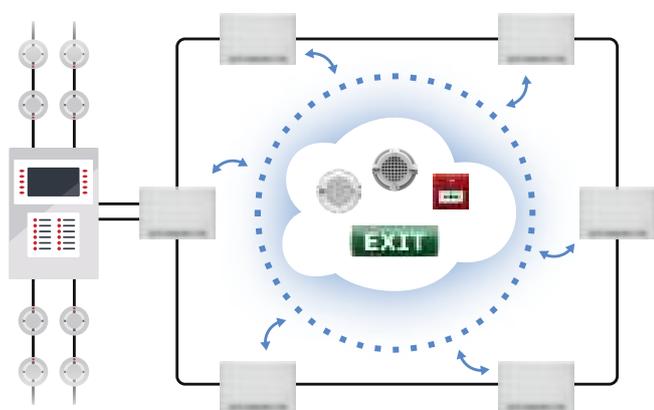
Remote access and monitoring

# How It Works

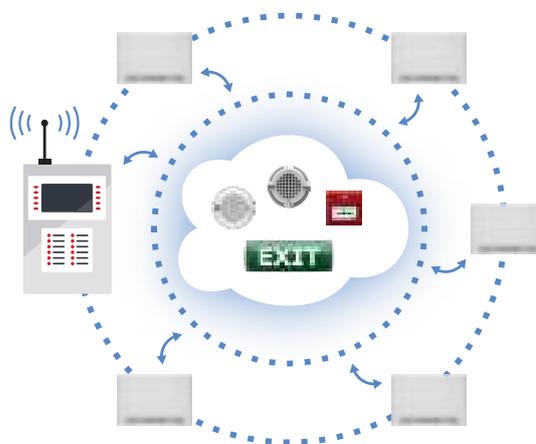
There are two ways of connecting a wireless network of Streletz-PRO devices to a control panel. You can connect a translator to the loop or use a special wireless card installed in the panel. Either way, the additional module will serve as bridge between the control panel and the wireless network. Signals from wireless devices are received by the translator or the wireless card and then get recognized by the panel. In order

to expand the range of the network, expander modules are placed throughout the building. These expanders create a wireless network, similar to Wi-Fi. Within this network, detectors and other devices can seamlessly switch between expanders, much like a smartphone switches between Wi-Fi access points. Expanders can be powered by the loop or an external PSU.

## Translator + loop powered expanders



## Wireless card + PSU powered expanders



Traditional wireless fire alarms usually have a limited range of use due to poor connection strength and small network coverage. But that's not the case with Streletz-PRO: a communication range of 1200 meters in free air ensures that even the thickest walls can be penetrated by wireless signals. The translator supports up to 126 expanders, which allows you to build a very robust and dense network. The communication protocol is designed in such a way that up to 2000 wireless devices can work in the same building. All this means that the Streletz-PRO system is suitable for almost all kinds of projects.

 Public buildings

 Medical facilities

 Apartment buildings

 Transport infrastructure

 Logistics and storage

 Industrial facilities



### Streletz-PRO Wireless fire detection

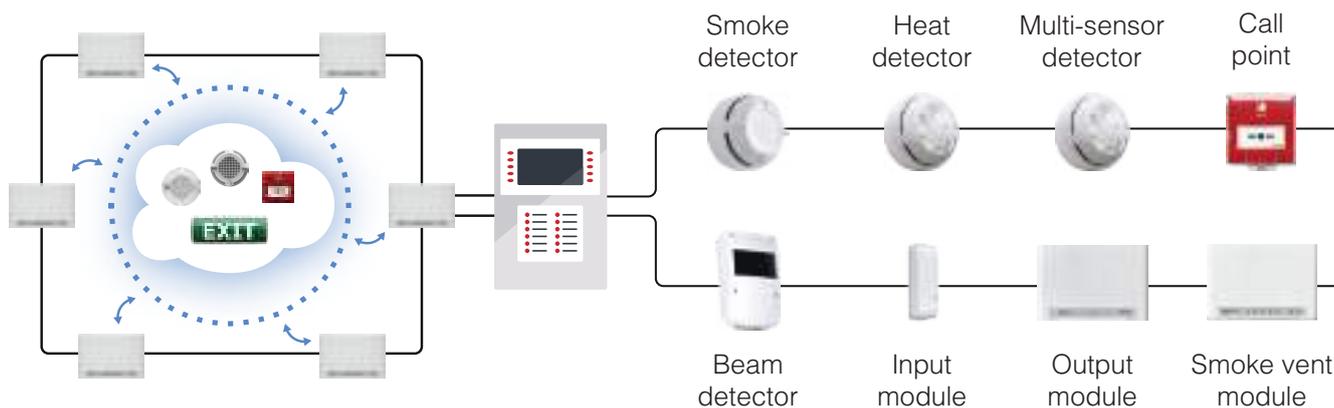
A video about features and technical specs of Streletz-PRO

<https://catalog.argus-spectr.ru/video/en/system>

# Hybrid Solution

Argus Spectrum offers a comprehensive product range, including analogue addressable devices. The fact that our main specialty is wireless, doesn't mean that our wired solution is compromised in any way. In fact, it is just as good as other intelligent fire systems from popular manufacturers.

Our addressable product line includes smoke, heat, multi-criteria and beam detectors, manual call points, sounders and VAD's, output and input modules. All devices come equipped with an integrated short circuit isolator. Addressable detectors by Argus Spectrum use a modification of a popular system protocol and compatible with different types of control panels.

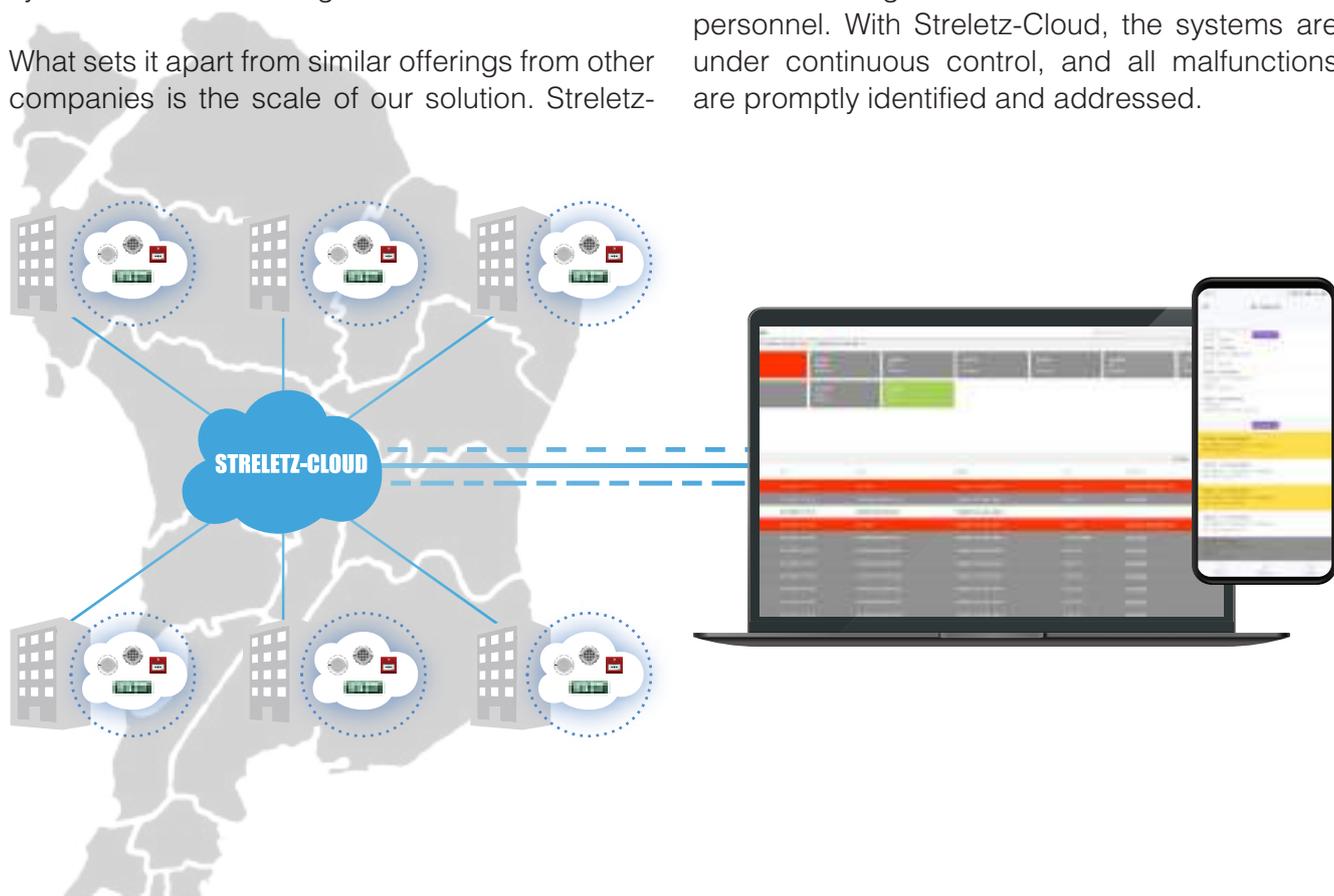


# Cloud Service

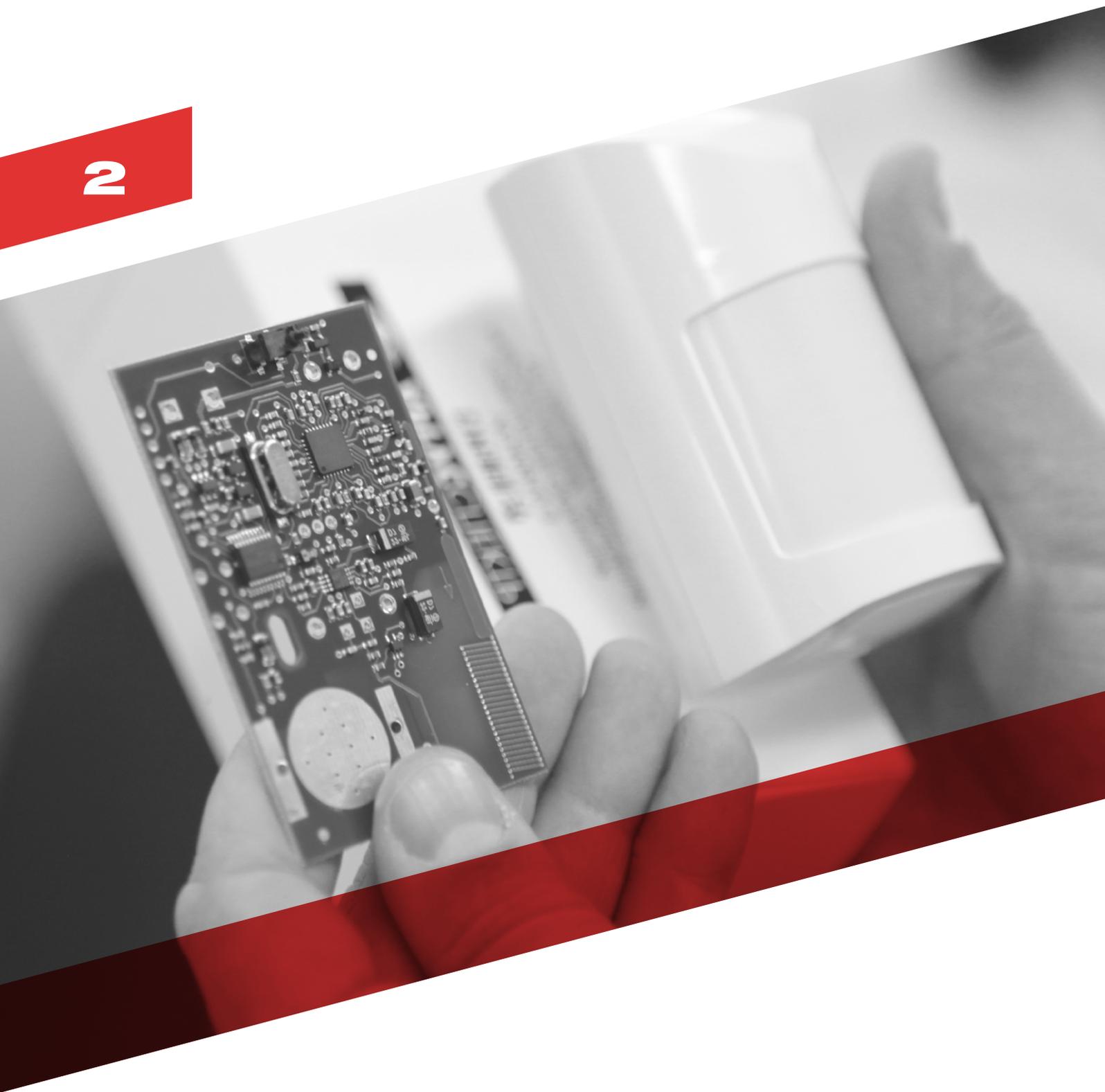
Argus Spectrum doesn't just make fire detectors, we also offer a unique and groundbreaking technology called Stretetz-Cloud. It is a cloud service that provides remote access to the fire system for fire alarm engineers.

Cloud servers support practically unlimited number of fire systems connected to one account. This enables the setup of a monitoring center that provides access to installed systems for service organizations and other authorized personnel. With Stretetz-Cloud, the systems are under continuous control, and all malfunctions are promptly identified and addressed.

What sets it apart from similar offerings from other companies is the scale of our solution. Stretetz-



2



## **STRELETZ-PRO FEATURES**

Mesh network, 10-year battery life, 1200-meter communication range and everything else that makes Streletz-PRO one of the most advanced wireless fire alarm systems on the market.



## Mesh Network

Mesh network is a clever technology that allows wireless systems to automatically create and adjust the network topology. The Strelitz-PRO system uses expanders positioned at different spots in a building, overseeing subordinate devices. This mesh routing tech has two main parts:

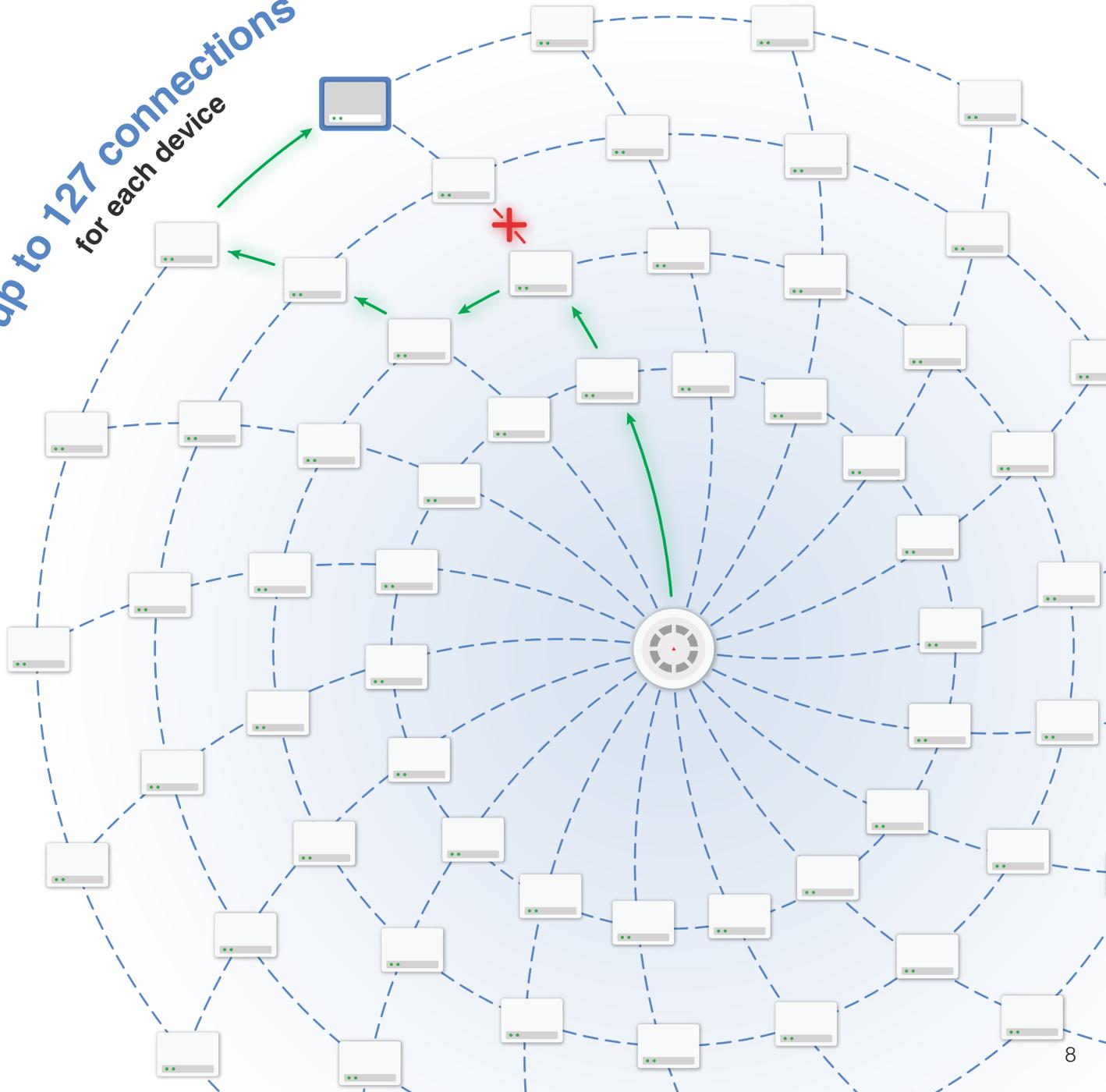
- Each device automatically chooses its parent expander;
- Expanders automatically form a network for delivering information to the translator.

Unlike “static” wireless systems, where a detector sticks to one expander with no backup, mesh tech elevates wireless security with these benefits:

- Unmatched reliability: If an expander falters or loses communication, the detector swiftly connects to another one.
- Easy setup: The system figures out which expander a detector needs and how expanders link up in the network. This means simpler design, setup, and operation.

Wireless devices do not need to be assigned to a specific expander nor do the expanders need to be specified how to communicate with each other.

**up to 127 connections  
for each device**





## Unprecedented reliability

In addition to multiple communication paths, a detector can also send its signals via 6 different frequency channels. And expanders have two orthogonal antennas to improve reception of signals with different polarization. This provides an extra level of communication reliability.

# 2

orthogonal antennas



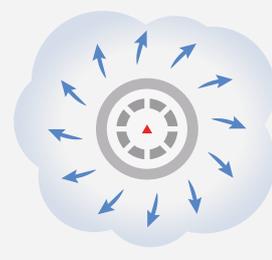
# 6

frequency channels



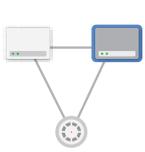
# 127

communication paths

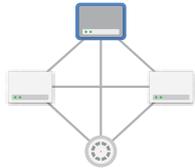


The number of communication paths in the wireless system depends on how many expanders are in the detector's range, and how the expanders are interconnected with each other. With every expander added to the network,

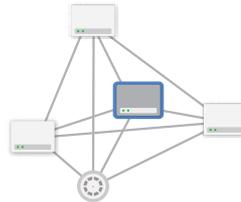
the variability of communication routes from a detector to the translator grows exponentially. This is part of what makes the Streletz-PRO system so robust and reliable.



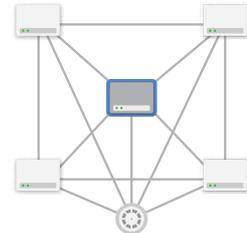
**1 expander**  
**2 paths**



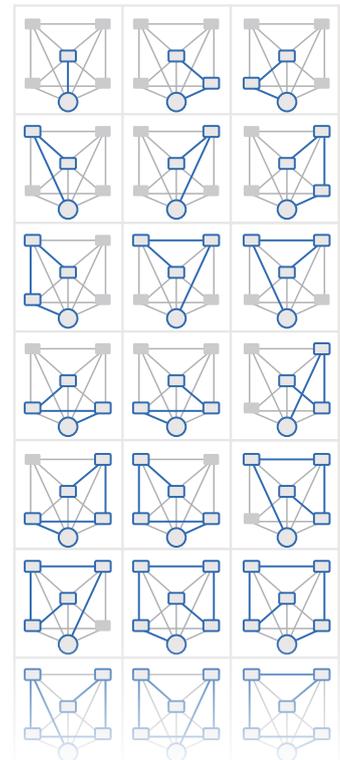
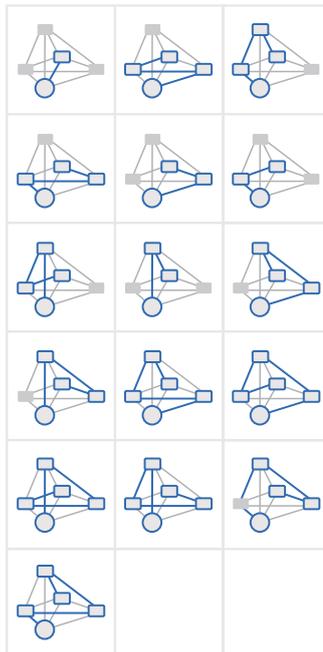
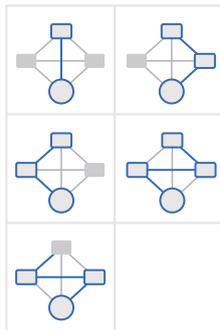
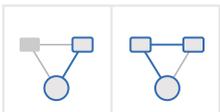
**2 expanders**  
**5 paths**



**3 expanders**  
**16 paths**



**4 expanders**  
**65 paths**



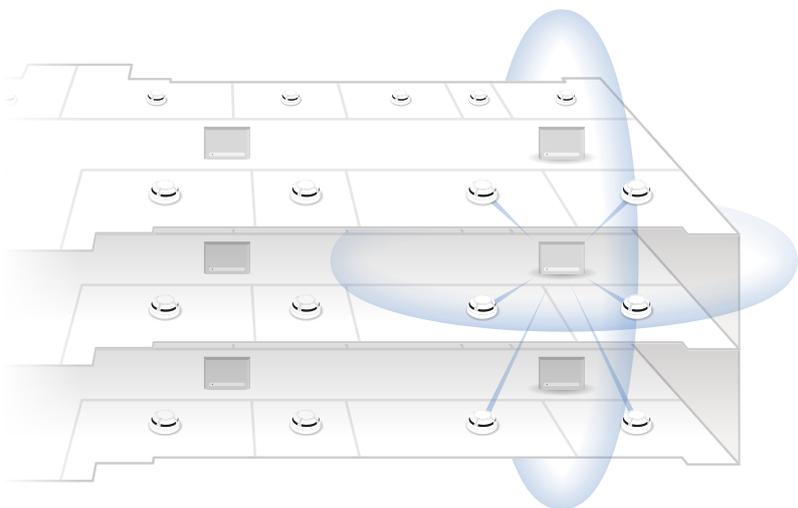


## Communication range

1200 m. in open air  
30-50 m. in a building

The number of expanders needed depends on the communication range, and each expander carries a cost and requires a suitable location. Sometimes, installing expanders too frequently isn't practical. So, here's the simple idea: a wider range means fewer expanders, reducing costs for setting up the wireless communication system on the premises. A larger range also makes it easier to maintain solid wireless coverage across the whole facility, preventing communication problems while using the system. Of course, the range depends on the material and number of walls, but on average, you can expect a value of around 30 meters.

Remember, expanders radiate signals in a sphere. This means detectors can stay connected, even if they're on another floor, above or below. This multi-path communication brings redundancy to devices and maximizes system dependability.



## Operating frequency – 865 to 867 MHz.

The operating frequency tells us if the Streletz-PRO system can work alongside other wireless devices in the area. The system uses frequency bands specifically set for security purposes. Stuff like consumer walkie-talkies and remote controls use the 433 MHz range, while Wi-Fi uses 2.4 or 5 GHz. This cleverly avoids any clashes – the Streletz-PRO frequency bands are interference-free.



## ERP – up to 25 mW

Effective radiated power has two main aspects:

- Ensuring safety for both people and the environment.
- Guaranteeing enough power to cover the needed range.

We can ensure safety through system certifications. Take the example of a mobile phone – its maximum ERP is roughly 2 watts. This is way higher than the Streletz-PRO, which is about a hundred times lower. Also, consider how a phone is close to the head, unlike a fire alarm detector mounted on a ceiling. The system even has an automatic power control, so radiation is usually below 25 milliwatts. Earlier, we talked about the range aspect. This power suffices for the required communication range.



### Designing the Streletz-PRO network

How to calculate the right number of expanders in and find the proper places in the building to install them.

<https://catalog.argus-spectr.ru/video/en/expanders>



## System capacity – 1920 devices

A wireless system's stability hinges on its capacity. If several low-capacity wireless systems are set up on the same floor, more devices mean disruptions in network operation. Streletz-PRO is a solution – it accommodates up to 1920 devices in one network without interference. This capacity lets you tackle intricate tasks and equip different facilities. The system can also handle up to 127 expanders for a robust network.



## 10-year battery life

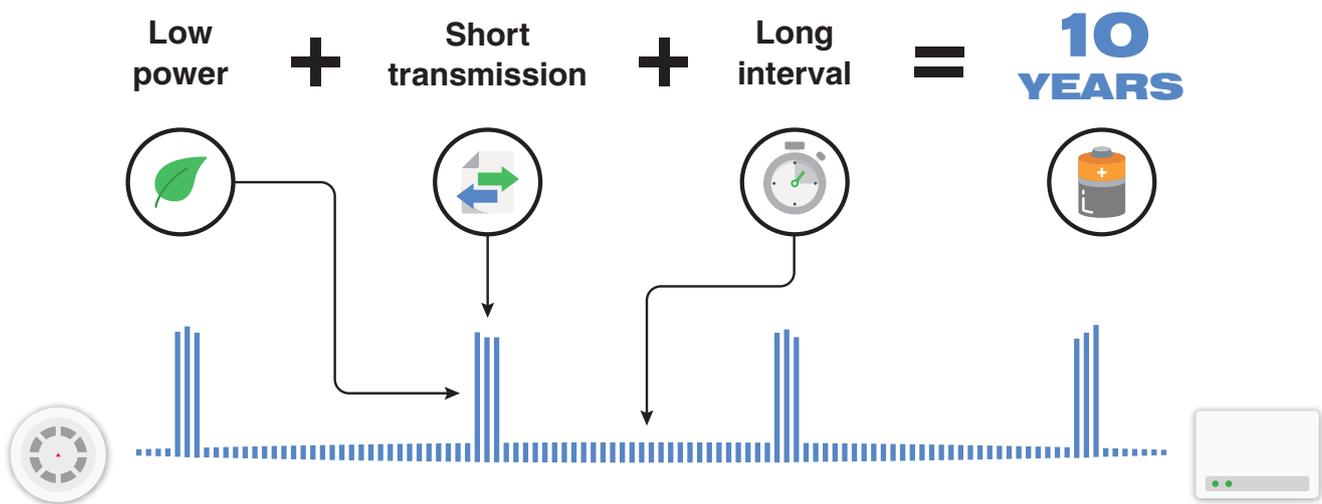
Significant increase in battery life has become possible due to the optimization of the data exchange protocol in the Streletz-PRO: mesh network technology allows each device to automatically select the shortest and most energy efficient communication route. Plus, electronic components have also become more energy-efficient and the advancements in the electric vehicle industry led to a new performance level of batteries. This means wireless Streletz-PRO devices now boast a 10-year battery service life. This extended lifespan of the batteries lowers the overall ownership cost of the system, as the batteries will last throughout the devices' entire usage span.



## Activation time – 3 seconds

While this detail may not seem crucial at first glance, its importance shines through during real-world operation. In a mere 3 seconds, VAD's, sounders, EVAC, and bracelets all spring into action – a rapid reaction unmatched by other wireless systems. It's also worth noting that this factor holds significant weight under fire alarm standards.

Every device connected to Streletz-PRO keeps both the main and backup batteries under control. If either battery runs low, the LED on the device will start blinking, and this data gets sent to the control panel. Thanks to the software-driven current state monitoring service, you can plan ahead and replace batteries before they become a problem.



### Batteries in Streletz-PRO: all you need to know

The video breaks down all the factors that contribute to the 10-year battery life in Streletz-PRO

<https://catalog.argus-spectr.ru/video/en/batteries>

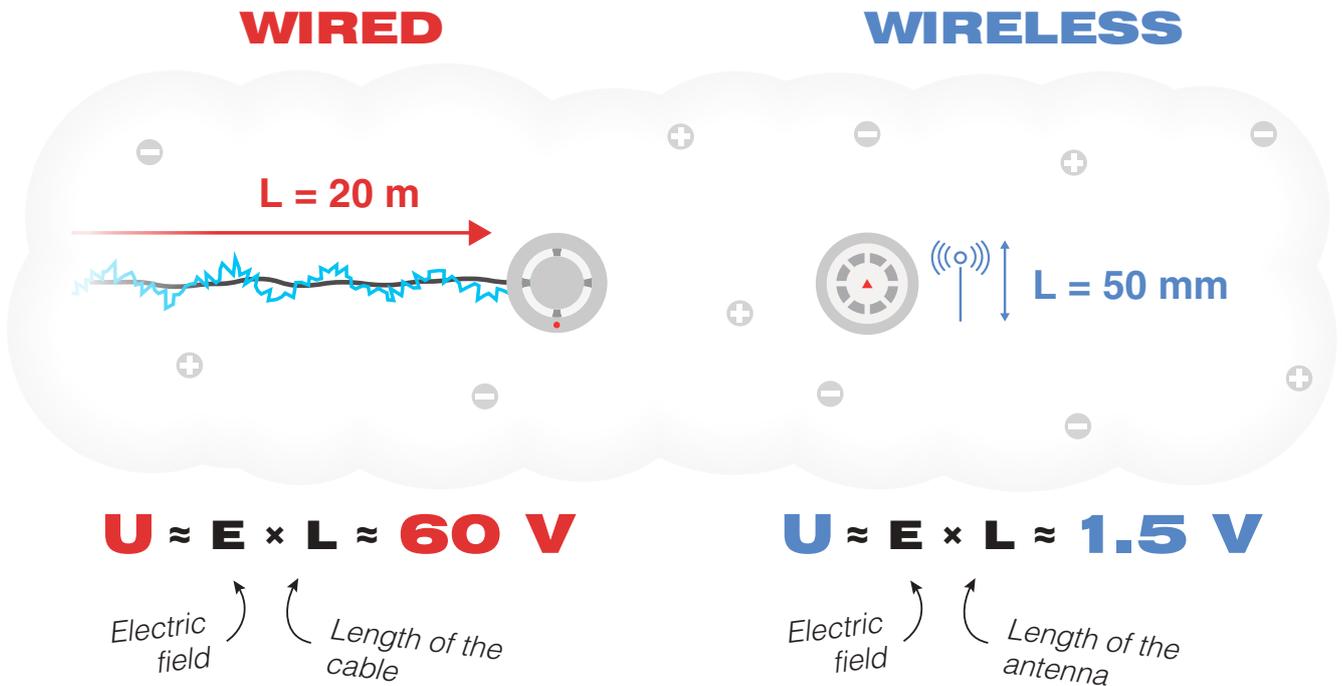


## Resistance to interference

Wireless systems are protected from electromagnetic interference even better than wired counterparts. The voltage that occurs due to EMI is directly proportional to the length of the

conductor. Therefore, long cables essentially act as antennas for interference. In wireless systems, you don't have long electrical currents that capture electromagnetic interference, making them much less troublesome to maintain.

Streletz-PRO has been installed at a number of industrial facilities, so high-voltage power lines and equipment don't usually affect wireless communication in the system.



Our engineers took all the measures to protect the system from radio noise and bad signals:

**Smart Timing:** Devices communicate less frequently in standby mode to save energy. But when the connection is weak, they swiftly intensify communication to the expander for a rapid response.

**Signal Strength:** The transmission signal is usually dialed down for battery conservation,

but when interference strikes, the signal strength amps up to ensure a dependable connection.

**Frequency Flexibility:** Operating across 6 frequency channels within the 865-867 MHz range, the Streletz-PRO system automatically switches to backup channels when interference shows up. This secures consistent signal delivery.

These strategies combined bolster the system's resilience against a variety of interference types.



### Interference in Streletz-PRO: all you need to know

The video breaks down the myths and facts about the reliability of wireless communication in Streletz-PRO

<https://catalog.argus-spectr.ru/video/en/interference>



## Secure connection

Streletz-PRO goes the extra mile for security. It uses dynamic information encoding and a two-way authentication mechanism. This technology suppresses unauthorized tampering with the wireless system and device swapping. Such measures guarantee top-notch security and integrity throughout the wireless network.



## Programming and software

Linking wireless devices to the network is incredibly easy in Streletz-PRO. All you need to do is press one button on the device so that the translator will recognize it and establish the connection. Mesh network technology takes care of the rest: the device will connect to the expander with the strongest signal and find the communication path to the translator.



## Temperature range – -30 to +55 °C

Streletz-PRO operates within a temperature range of -30 to +55 degrees Celsius. Additionally, the system incorporates an automatic frequency adjustment principle to account for devices operating in varying temperature conditions. This feature ensures optimal performance and communication stability across different temperature environments.

After the initial programming, all the settings you change can be applied “over the air”. This makes it a lot easier to configure the system and make adjustments during setup.

The software provides full control over the wireless system. You can see the various measurements that the wireless devices make, such as battery voltage, the dust amount in the smoke chamber or the air temperature in the room. Plus, the software allows you to analyze the network topology and connection strength with wireless devices in real-time.

### Device data

Dust level	10%
Temperature	23°C
Main battery	3.2 V
Connection strength	51 dBm

Connection strength (dBm)

Time	Connection strength (dBm)
14:00	30
15:00	45
16:00	35
17:00	55

### Network topology

- Full graph
- Child devices
- Name



## **PRODUCT CATALOGUE**

A list of all equipment developed and manufactured by Argus Spectrum, with a few highlights of the main features for each device.

# Translator



## Translator Module

Serves as a bridge between the wireless network and a control panel from a different manufacturer.

-  Up to 126 linked devices/expanders
-  Up to 10 translators connected to the loop
-  Loop powered
-  Screen and buttons for setup and maintenance
-  MicroUSB port for firmware update

# Expanders



## Expander Module

-  2 low current outputs and one switch rated for 30V, 1A
-  2 versions: with and without a battery
-  Can be attached to a proprietary PSU to be installed as a single unit

## Fire Exit Sign with Built-in Expander



-  Additional insert signs included: fire, alarm, go left/right
-  Power by PSU
-  Built-in battery
-  4 brightness levels
-  4 modes of operation

# Fire Detectors



## Smoke Detector

-  Patented smoke chamber: protection from dust, insects, and light
-  Supports drift compensation



## Heat Detector

-  3 different modes of analysing the temperature



## Combined Sensor Detector

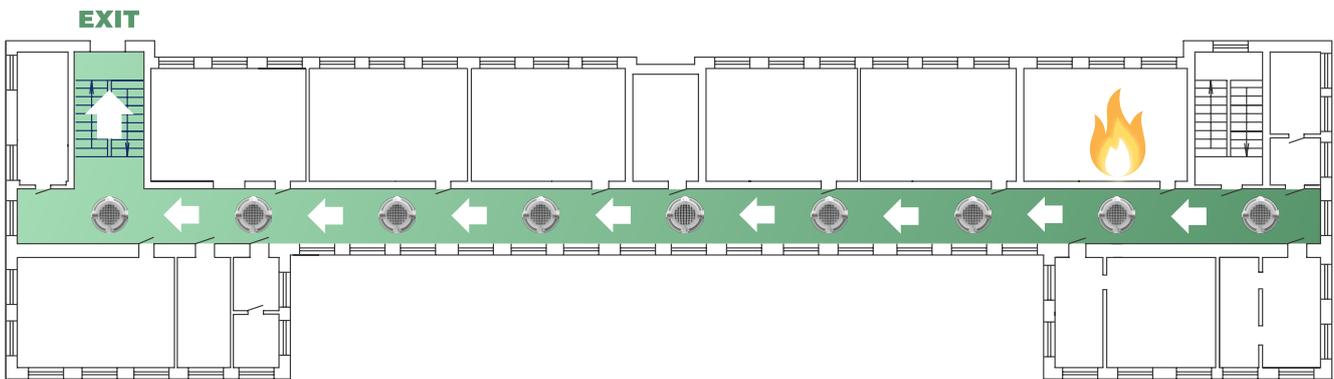
-  Patented smoke chamber
-  Supports drift compensation
-  3 different modes of analysing the temperature

## Smoke Detector with Speaker



-  Several detectors can be programmed as a dynamic evacuation system
-  Memory storage for 3 voice messages
-  Supports custom audio files
-  Sound pressure level at 1 m. – 86 dB

### Ariadne's thread



- 1** Fire is detected in the building, alarm devices are triggered



- 2** The detectors with built-in speakers initiate evacuation with a warning message



- 3** The devices one-by-one generate a short multi-frequency sound signal along with a light flash, showing the way to a safe evacuation exit



- 4** The system can reverse direction and activate independently on different floors, allowing for an adaptive evacuation strategy



## Smoke or Heat Detector with Sounder

-  Sound pressure level at 1 m. – 98 dB
-  Selection of 3 tones



## Beam Detector

-  Two versions with 80 or 100 meters max distance
-  Laser pointer for easier adjustment
-  Automatically adjusts to accumulating dust



## Flame Detector

-  Max range – 25 m.
-  Dual sensor
-  Detection angle 90°
-  Adjustable bracket



## Input Module



One programmable input for conventional detectors and other equipment

## Call Points



## Manual Call Point



Reliable mechanism



Water-proof version available



## Colored Call Points



Green – emergency door release



Orange – smoke & vent control



Yellow – suppression system activation

# Notification Appliances



## Voice Alarm Speaker

-  Sound pressure level at 1 m. – 87 dB
-  Memory storage for 3 voice messages
-  Supports custom audio files



## Sounder

-  Two versions: standard and compact
-  Sound pressure level at 1 m. – 92 dB
-  Selection of multiple tones
-  Works in sync with other sounders



## Fire Exit Sign

-  Powered by a PSU or batteries
-  Additional insert signs included: fire, alarm, go left/right
-  4 brightness levels
-  4 modes of operation



## Electronic Bracelets

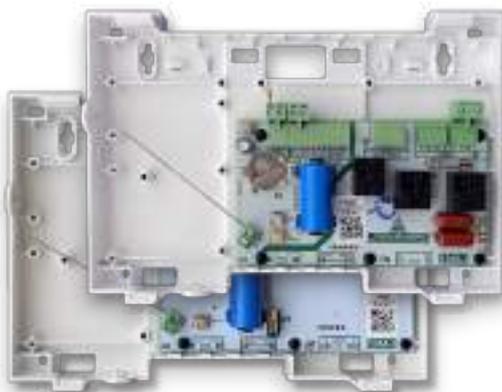
-  Personal emergency notification
-  Man down alert
-  Location control
-  Text message alerts
-  Panic button
-  Two versions: with and without a screen

## Fire Suppression



### Output Module

-  One output ~250V / =30V, 8A
-  External fault input



### Output Module for Smoke Vent Dampers

-  Two versions rated for ~220V or =24V
-  Max current – 3A
-  Monitors the actuator and power circuits
-  4 inputs for monitoring the state of the damper



## Fan Control Panel

-  Manual and automatic mode
-  Can be equipped with a frequency converter
-  Modifications for controlling a fan or an electric heater
-  Built-in expander



## Standpipe Valve Panel

-  Automatic, manual, and fault mode
-  Two modifications for single-phase or dual-phase motors
-  Built-in expander



## Fire Pump Panel

-  Automatic and manual mode
-  Modifications for low-power and high-power electric motors
-  Built-in expander

# Security Detectors



## Door Sensor

-  Two versions: standard and compact
-  Programmable input



## Passive Infrared Detector

-  Adjustable bracket
-  Does not respond to animals under 20 kg
-  Max range – 12 m.



## Glass Break Detector

-  Works with 6 types of glass
-  Max range – 12 m.
-  Input for a conventional window sensor



## Inertial Sensor

-  For detecting movement of objects
-  Compact size – 78×26×11 mm
-  Built-in reed switch
-  Can be used as a panic button



## Special Detectors

-  Water leak detector
-  Temperature sensor



## Wireless Key Fob

-  4 buttons, 12 combinations
-  15 programmable actions

# Loop Devices



## Fire Detectors

 Smoke, heat and multi-sensor detector



## Manual Call Point

 Reliable mechanism



## Beam Detector

 100-meter max distance



## Fire Exit Sign

 Additional insert signs included



## Sounder

 Sound pressure level at 1 m. – 92 dB



## Input Module

 One programmable input



## Output Module

 One output ~250V / =30V, 8A



## Smoke Vent Module

 Two versions rated for ~220V or =24V



## STRELETZ-CLOUD

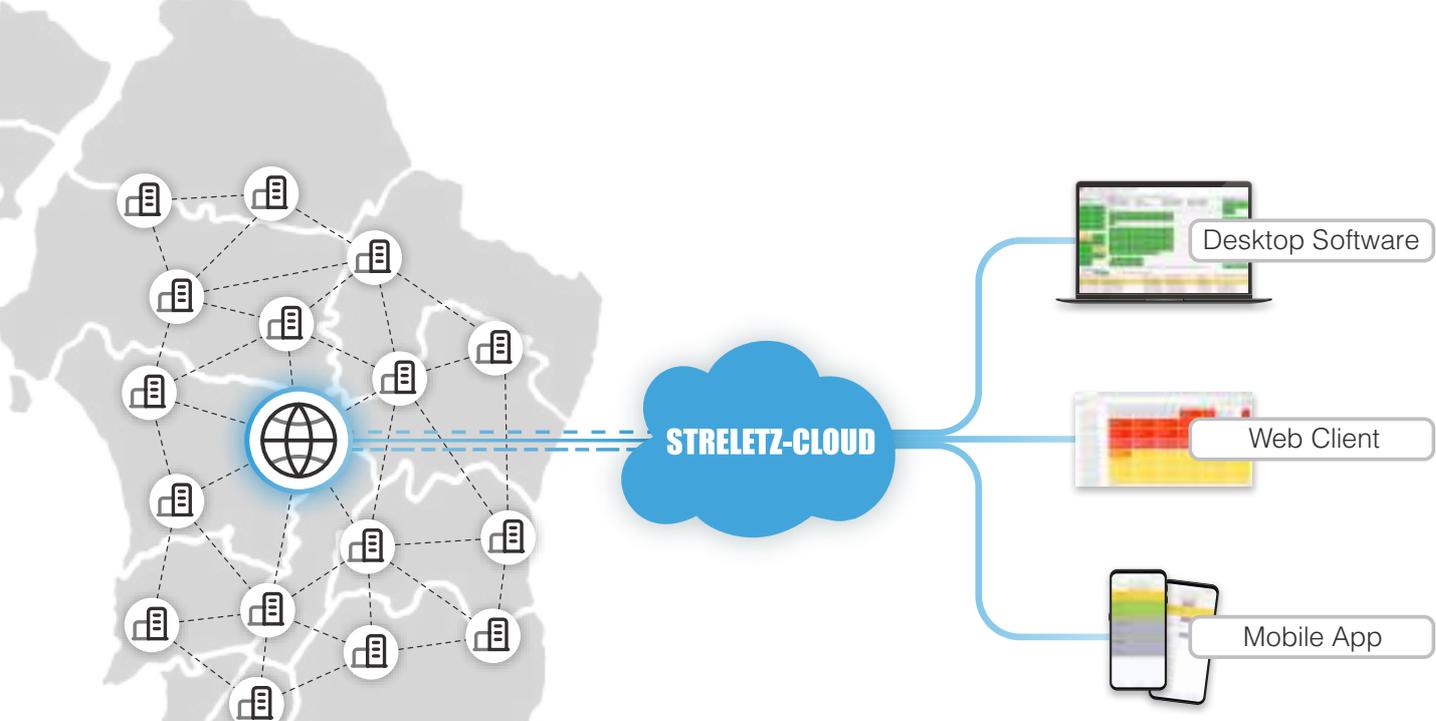
The technology that puts Argus Spectrum at the forefront of the fire alarm market: a cloud service for monitoring, controlling, and programming a fire system on-the-go.

When discussing Argus Spectrum technologies, particular attention should be given to the Strelitz-Cloud cloud service. This service provides access to installed systems for the servicing organization and other authorized personnel.

Through the cloud service, installed systems are continuously monitored, and any malfunctions are promptly identified and resolved. You can use Strelitz-Cloud through a web browser,

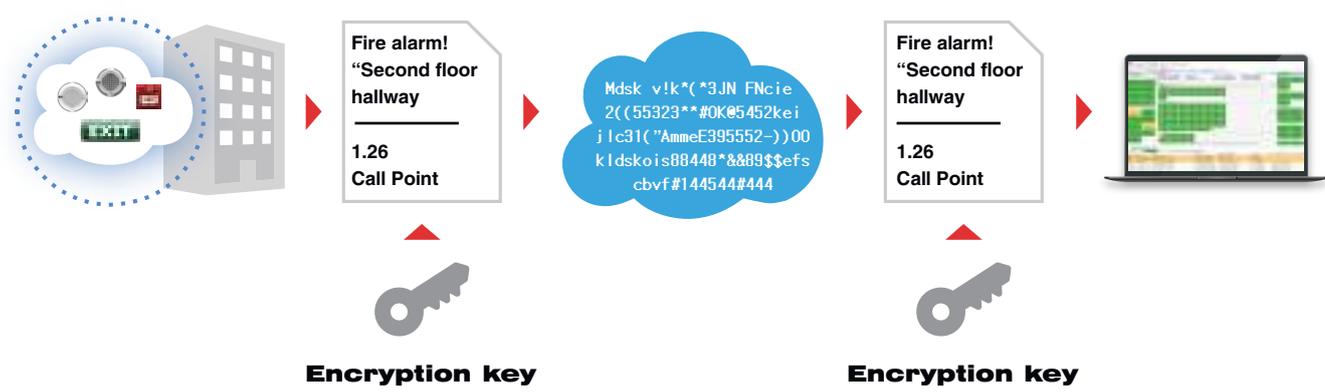
mobile app, or software, and your data remains encrypted and secure on servers. You can even remotely track things like smoke, temperature, dust levels, and more.

The fire alarm system's real-time status is just a smartphone away for those in charge of safety. This cloud-based approach assures steady supervision and quick action, keeping the fire alarm system dependable and effective.



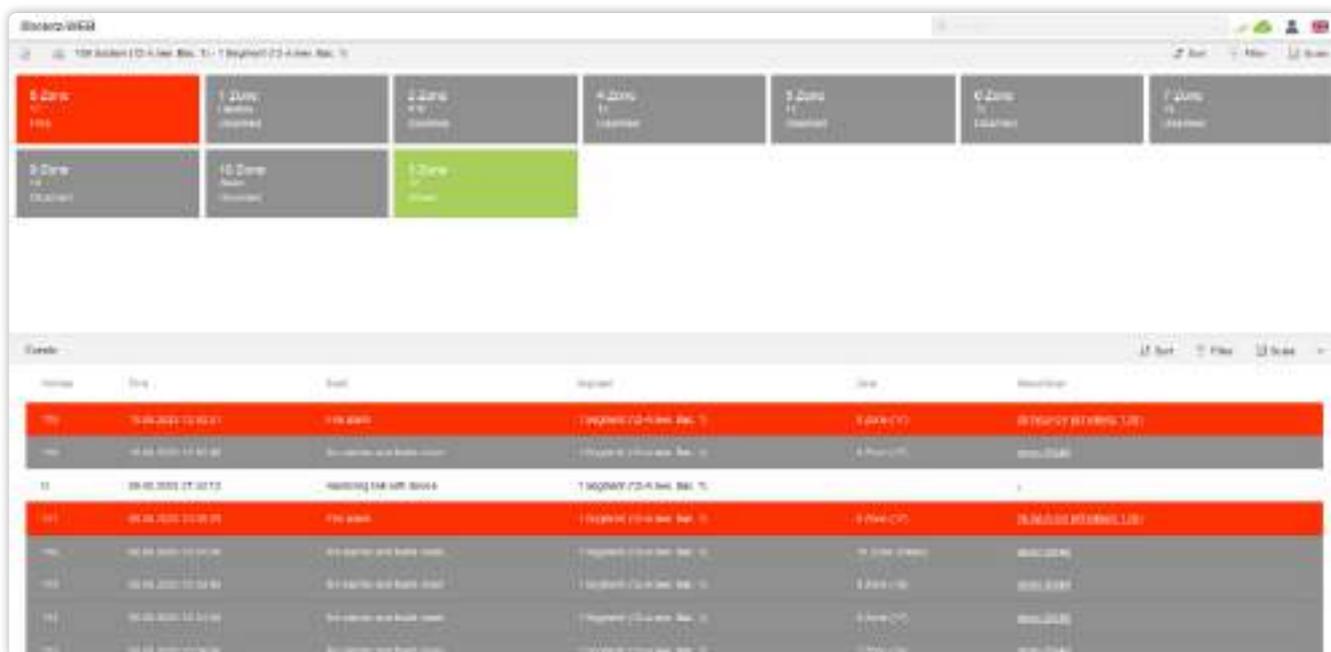
Strelitz-Cloud's fortified servers and impenetrable end-to-end encryption ensure data safety up to modern standards. Your valuable information is shielded at all stages, ensuring uncompromising protection. With state-of-the-art secure servers,

your data is safe from unauthorized access, and our robust end-to-end encryption guarantees confidentiality. Trust Strelitz-Cloud to keep your sensitive data locked away, setting new standards for cloud service security.



To get going with the service, simply log in to the web client from your workstation using the address [cloud.streletz.ru](http://cloud.streletz.ru). This becomes your control hub for systems in different buildings. As you arrive at the main page, you'll see all your

connected systems. With color-coded elements, it's a breeze to see how each system is doing. This layout offers a handy way to overview all connected systems, letting you efficiently monitor and handle various premises.



Put the mobile client on your phone for on-the-go help. This app guides you and your client through any hiccups, even if you're not at the office. When there's an alarm or issue, you'll instantly know thanks to push notifications.

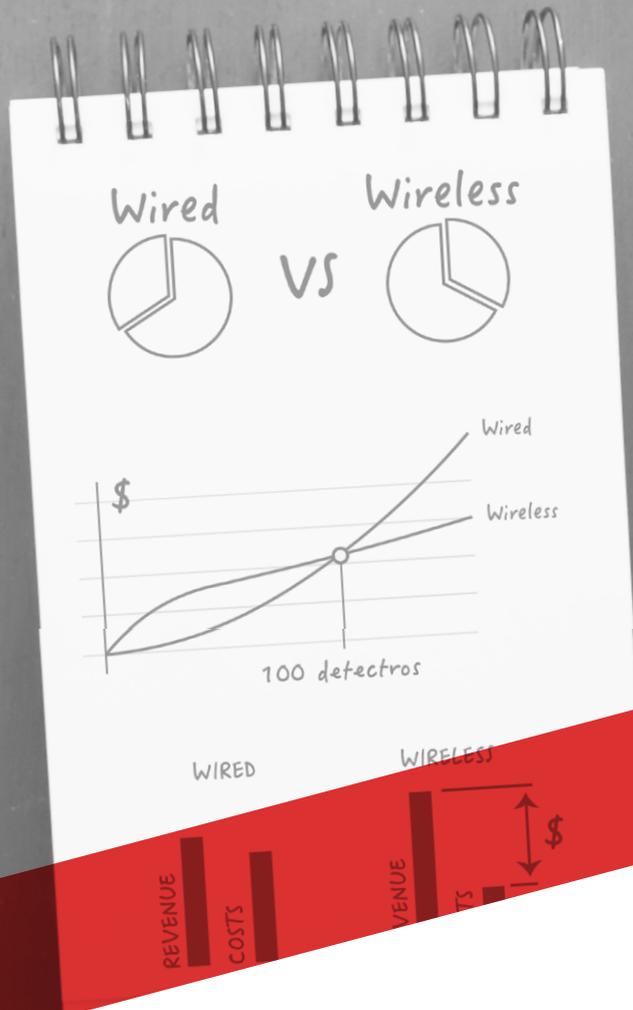
For a deeper look into the system's status, communication, and analog values, the software comes into play. To make this happen, save a configuration file from each installed system. This boosts your power to keep a close eye on and handle systems, making sure you swiftly tackle and solve any problems.



### [The Streletz-Cloud Service](#)

A video about the features of the cloud service, where you can use it and what you need to get started

<https://catalog.argus-spectr.ru/video/en/cloud>



## THE BUSINESS SIDE OF WIRELESS SYSTEMS

A breakdown of the common myth that wireless fire alarm is too expensive and bad for business, as well as some arguments proving that the opposite is true.

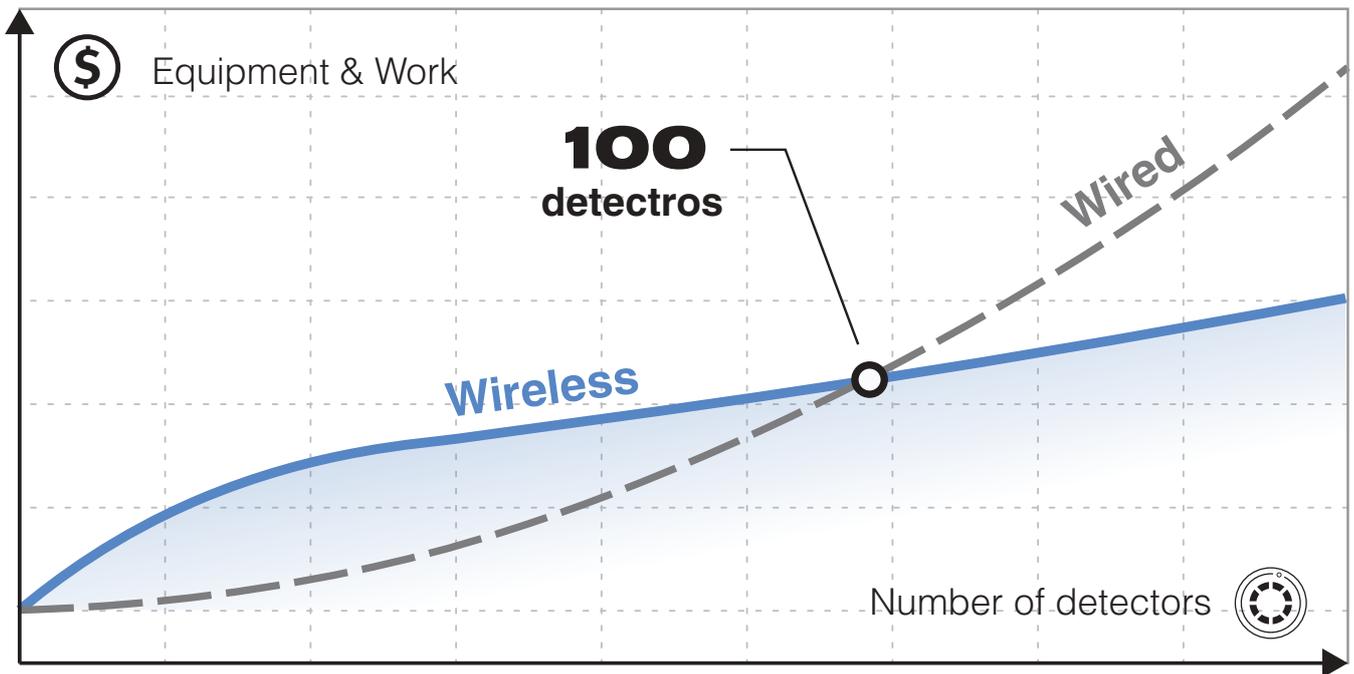
## ➤ Compare turnkey price

Comparing wired and wireless systems by looking only at equipment costs isn't the full picture. A wireless detector is usually 1,5-2 times more expensive than a wired one. Even when we consider fire-resistant cabling, the equipment cost on paper for the same place is usually lower for wired systems. To get the real picture, we need to think "turnkey," meaning equipment plus installation.

If we graph the cost per square meter, it gets interesting. On the X-axis, we have the number

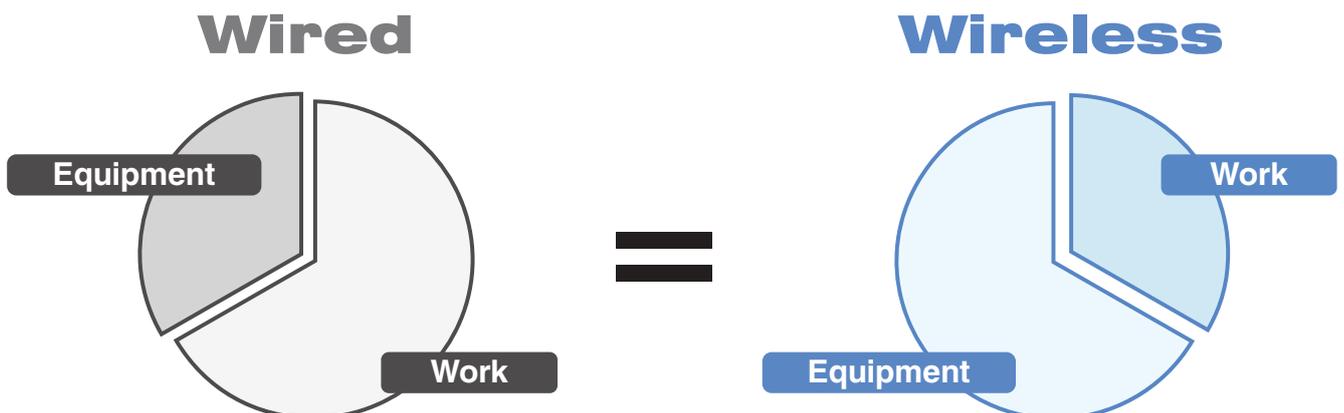
of sensors. For smaller spaces like apartments or homes, wired systems tend to be cheaper. There are fewer wires, fewer sensors, less labor. Here, the big price difference really matters. But when you increase the number of sensors, the cost advantage of wireless systems becomes clearer. Beyond around 100 sensors, the cost of the Streletz-PRO wireless system ends up lower than wired.

This shows how the overall cost situation changes as you add more sensors, making wireless systems like Streletz-PRO more economical in situations with many sensors.

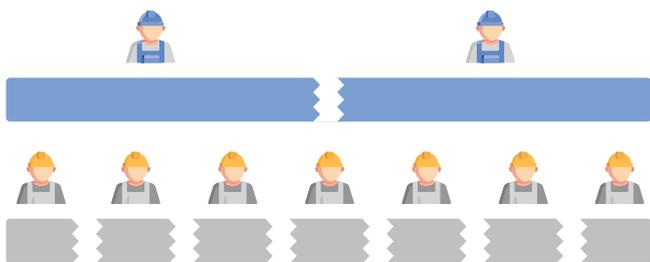


Let's also talk about the pricing. In wired systems, labor eats up about two-thirds of the cost, while equipment takes up the rest. But in wireless systems, it's the opposite – equipment costs make up about two-thirds, and labor costs are a third of the total project expenses.

Now, why switch to wireless if the total cost doesn't change? Well, the key lies in installation. Setting up a wireless system demands much less time and effort, often way less than wired systems. This installation efficiency is a strong plus for wireless.

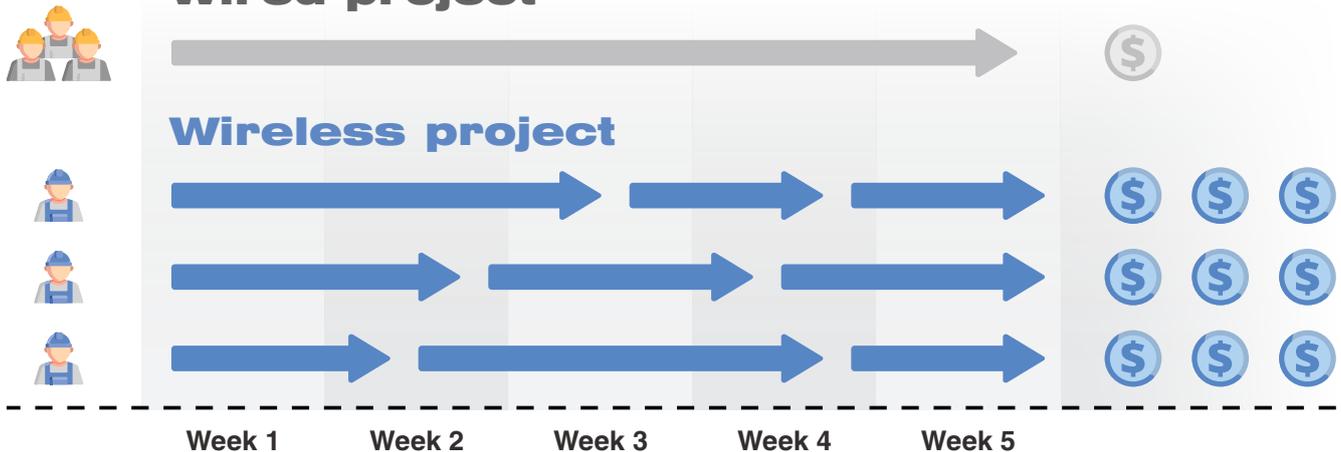


## Revenue per employee



The key concept of business is simple: when you share less, you get more. So, with wireless systems, you achieve more with less effort, leading to better earnings for each employee involved. With wireless, profits per employee can increase by around 1.5 times. Installation teams can be small, with 2-3 people. A single specialist can remotely program systems for different locations from the office. Designers can keep churning out projects without wasting time on cable details or connection plans.

## Wired project



### Streletz-PRO is your business tool

These claims don't mean Streletz-PRO will always be the cheaper option, nor do they suggest ditching wired solutions completely. But to have a successful project and streamlined installation, having Streletz-PRO in your toolkit is crucial. It makes managing your business simpler, broadens your capabilities, and acts as a steady income source.

Wired installations demand more time and effort, using up more of your company's resources. Also, remember that payments usually come in after a project is done. So, if you're dealing with wired

setups that take longer, your payment is delayed too. On the flip side, Streletz-PRO lets you set up systems quickly, leading to faster payments. The saved time can be used for more installations, and more after that. While your competitors are installing a wired system, you could potentially install 5 or 6 Streletz-PRO systems in that same time. This significantly ramps up your turnover and work efficiency.

This shows how Streletz-PRO doesn't only promise cost savings, but it also amps up resource turnover, speeds up revenue collection, and ramps up overall work effectiveness for project and installation businesses.



### Fire Alarm System in Medical Facilities. Wired System VS Wireless System

Video summarizes all of the advantages of wireless fire systems for projects in the medical sphere

<https://catalog.argus-spectr.ru/video/en/hospitals>

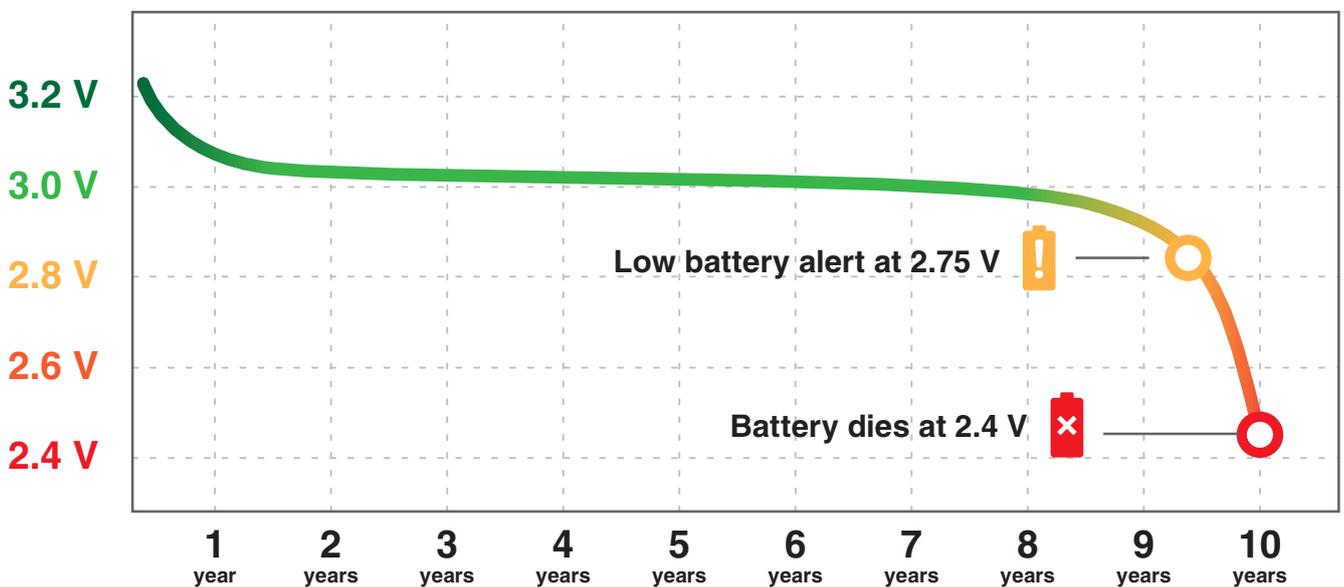
## ⚙️ Maintenance – your revenue source

Installation is your bread & butter as it brings in a good chunk of money, but it's not an ongoing thing. Company costs, though, keep rolling – rent, salaries, even the water in the cooler. To keep these going, a steady stream of income is crucial. And that's where maintenance comes into play! In tough times, maintenance is what keeps a company afloat. That's why everyone wants as many maintenance contracts as possible and looks to cut down operational expenses tied to it.

Now, here's the usual concern about wireless systems: how often do you need to swap out

device batteries? People worry it might become a frequent and costly task. Well, Streletz-PRO devices keep chugging along for a full 10 years on one battery set. In other systems, you have to replace batteries every 2-4 years. That, of course, piles up costs for both the owner and the servicing crew. Streletz-PRO kicks these costs to the curb. Even if for some reason the battery runs out earlier than expected, the device will not shut down or lose connection. It will switch to the backup battery, which will last for another year. This long battery life doesn't just cut maintenance expenses, it also boosts the appeal of Streletz-PRO in terms of cost-effectiveness and reliability for clients.

## Battery degradation graph

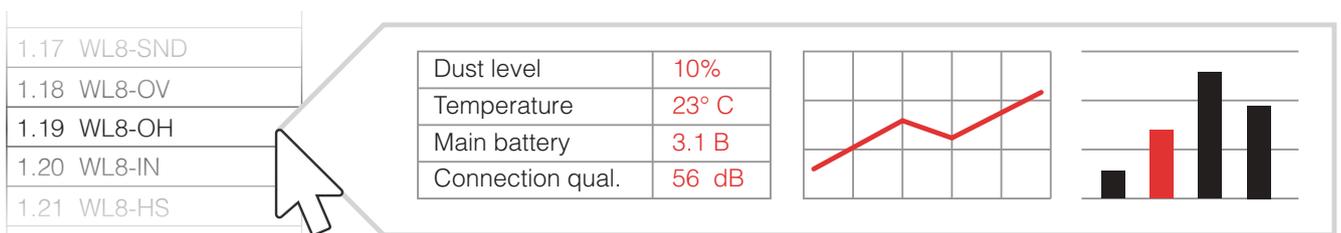


## 👤 Cost of ownership

Total cost of ownership is a parameter that customers are paying more and more attention to. The availability of remote monitoring and batteries lasting the entire operational lifespan effectively addresses a significant concern, such as "I'll be spending a fortune on batteries."

Moreover, a system should work without needing constant technician attention. This becomes

clear when dealing with "nuisance events" like cable breaks or false alarms. These pop up often in wired systems. Cables corrode, low-quality sensors create false alerts. . With Streletz-PRO, nothing breaks because there are no cables, no false alarms. Plus, we can service a sensor when needed, not on a schedule, thanks to being able to see dust levels on devices. This means operational costs drop while keeping security high!



## 🚚 Delivery and storage

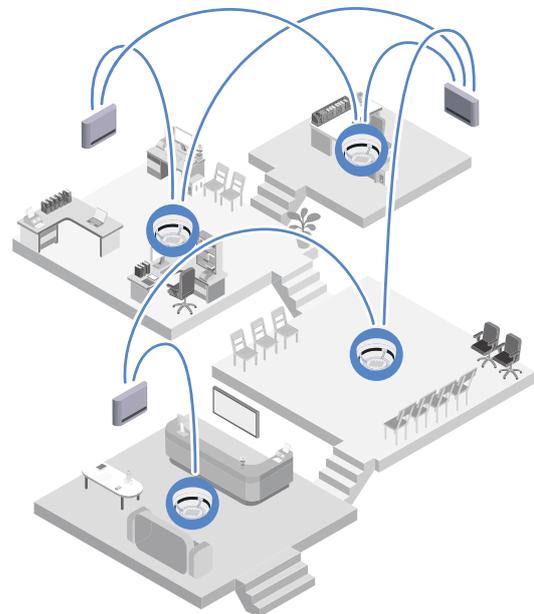
It's not just about buying the equipment; there's more to it. The equipment needs to be transported, unloaded, and stored on-site until it's time for installation. For a project of average size the wired system's equipment and materials take up 35 cubic meters and weigh 6 tons. That's

like a big truck or 2 Sprinter vans. Now, for the wireless system, you only need half of that - 18 cubic meters and 3 tons. It's clear that having less equipment to handle and install makes managing the building work easier. This, in turn, lowers the costs and boosts the project's profit for the installation team.

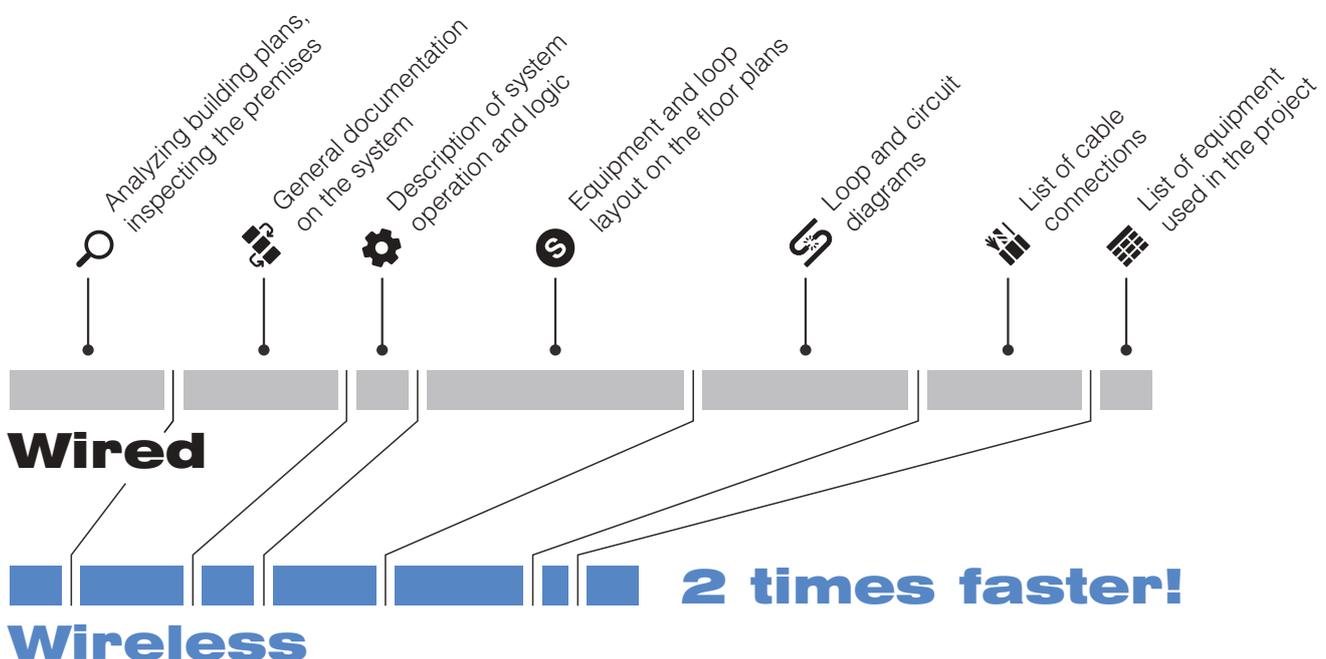


## 📄 Designing is simple

The Strelitz-PRO wireless system streamlines the design process, taking half the time compared to wired systems. With a wireless system, you don't have to deal with wires, saving time on tasks like finding places for trunking, creating electrical diagrams, and managing cable logs. Fire alarm engineers can confirm that going wire-free is a true relief.



While designing Strelitz-PRO has its intricacies, it is a lot easier than other systems that don't support mesh network. You don't have to manually specify the network topology while making project documentation, the system will organize itself once it's installed.



## Global economic trends

When deciding between wired and wireless solutions, don't forget about the global trends in cable prices. Copper prices have consistently climbed in recent years, even surpassing historical highs. Cable factories, like other businesses, are adjusting to operate amidst economic instability. This could lead to price hikes as they cope with

higher production costs. These rising cable costs impact various industries, including fire alarm systems.

To navigate this challenge, turning to wireless technologies is a smart move. They offer a way to ensure successful future projects and maintain the company's profitability, all while sidestepping the fluctuations in cable expenses.



2x1.5 Fire Alarm Cable

Price: ↑ **1 200 \$/km**

- 0 + 🛒

## Σ The business side – summary

Using wireless equipment speeds up installation, leading to quicker revenue generation. This boosts turnover, ensuring a steady cash flow to cover regular payroll. If funds are tied up in projects for too long, managing becomes tricky.

Wireless also trims operational expenses for technical upkeep. All system parameters can

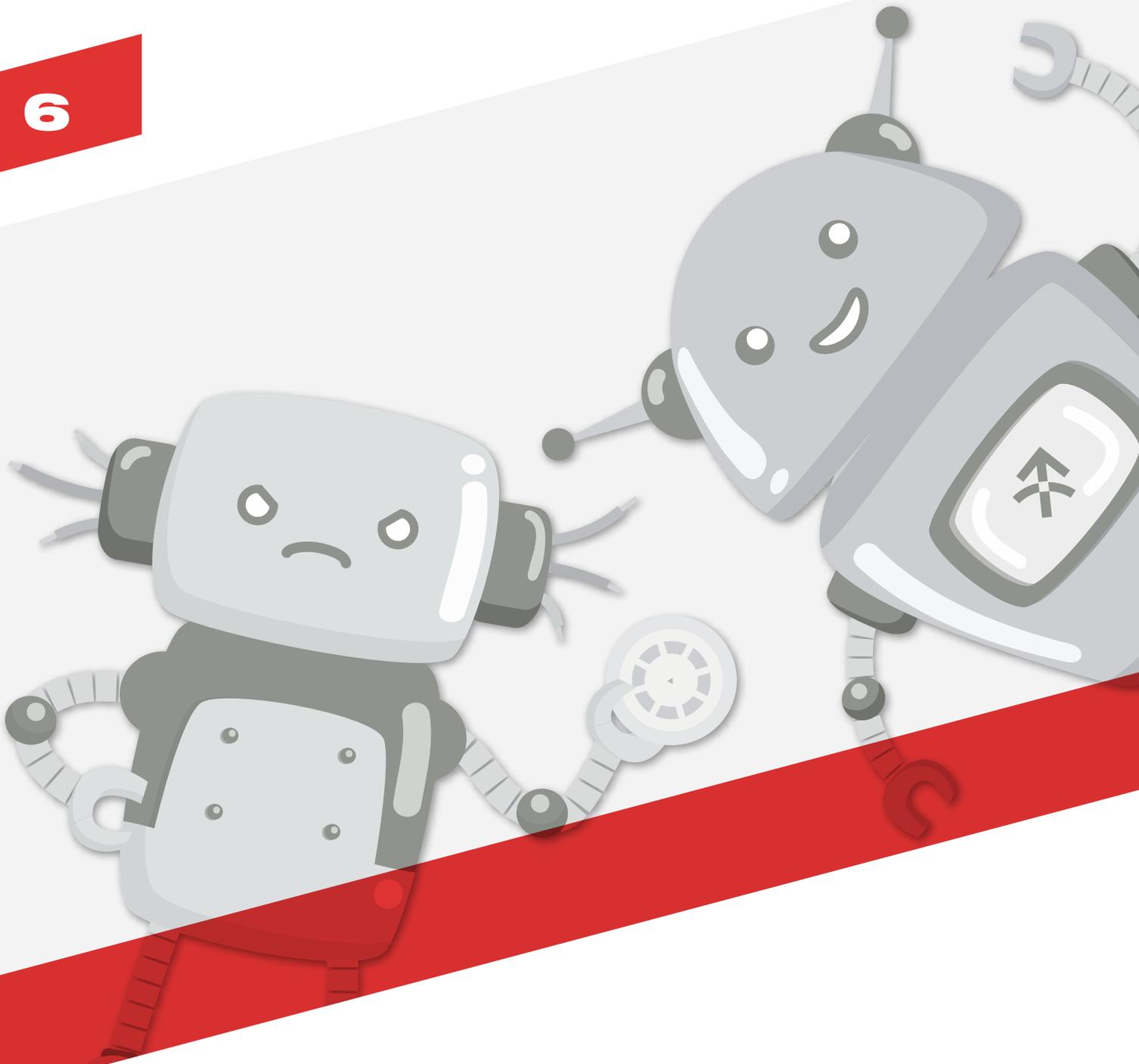
be monitored remotely from the office using just a special communicator and internet. Setting it up is a breeze. With batteries lasting 10 years, maintenance costs are minimal.

For large projects, we offer pre-programmed equipment at a steady price. No extra costs for commissioning, plus you get a triple-tested system. This saves you money and ensures a reliable setup.

### Wired

### Wireless

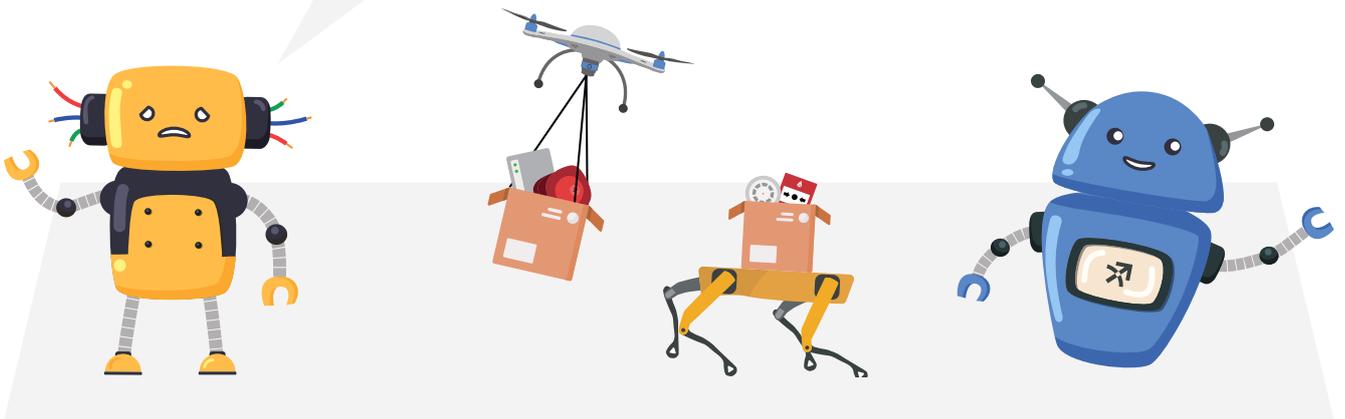
<b>Reliability</b>	Loop connection	Mesh network
<b>Project timeframe</b>	Several weeks	Several days
<b>Worker qualification</b>	Requires experience	Easy to install
<b>Project cost</b>	Costly	Cost effective



## FAQ

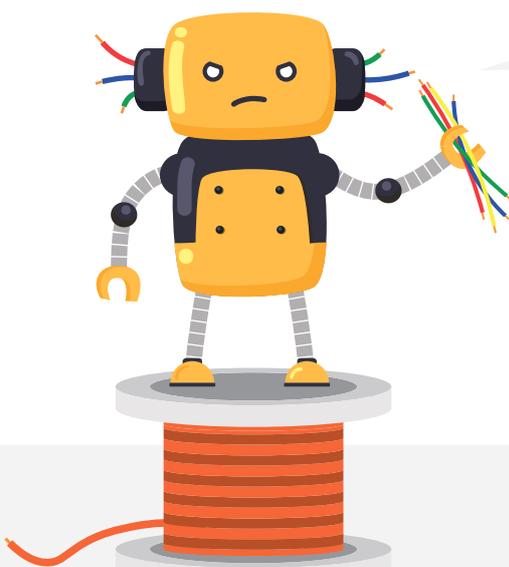
Popular questions and misconceptions we hear from our customers concerning the functionality, reliability, and the economics of wireless fire alarm systems.

We are paid for time we spend on a project, so doing work as quickly as possible is not in our business interests. I fail to see how wireless can provide any benefit to me money wise.



Here are the advantages that Strelitz brings, benefits that other companies have already harnessed:

- Pre-Programmed Ease: Get a ready-to-install equipment kit at no extra cost. Rest assured that the system will function seamlessly, saving you time and unexpected troubleshooting.
- Minimal On-Site Time: Access markets that were previously out of reach for wired systems due to the reduced need for on-site intervention.
- Do more projects: In the same amount of time it would take you to install one wired system you can do several wireless projects. Profit margins from each project add up to a greater revenue over time
- Retrofit an old alarm: The installation process is very quick and not disruptive, so no need to close the building. Plus, no electrical wiring means that the interior stays untouched. And you can even leave the old equipment, and install new detectors next to old ones.



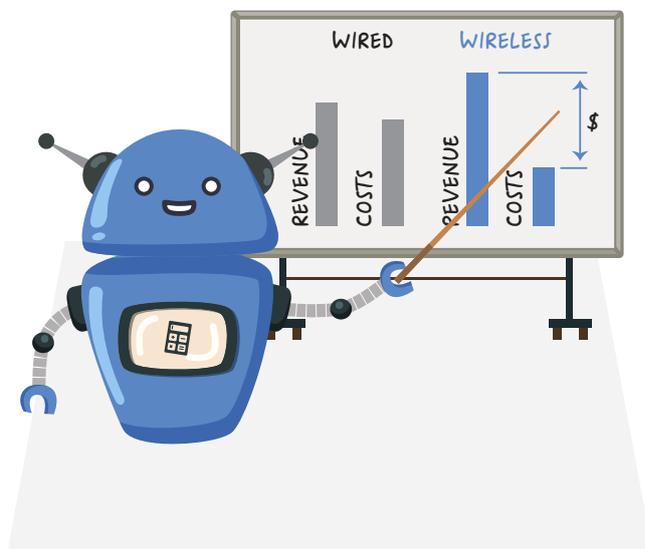
Selling and installing cables is a big part of our work and revenue. Wireless takes that away from us!

Equipping a security system for a building involves two key parts: selling the equipment and handling its installation.

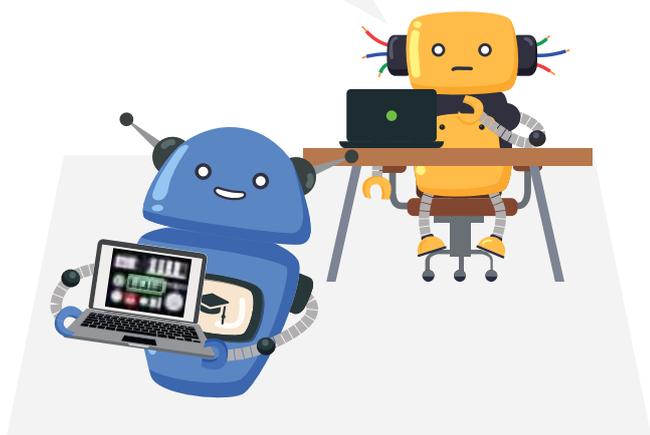
Indeed, selling cables can be profitable. But the same holds true for selling Strelitz equipment. Moreover, the higher the equipment's price, the greater the potential profit. Consider this: A detector is priced at \$40. If you buy it with a 10% discount and sell it to the end customer at the retail price, your profit per sensor amounts to \$4. This profit per sensor adds up as you multiply it by the total number of sensors needed.

Let's recall the core principle of any business: profit equals revenue minus costs. Essentially, to boost profit, we have two paths — increase revenue or cut costs.

In Streletz, the advantage is clear: there's significantly less effort in installing wires, resulting in reduced time spent on the project. This means fewer hands are needed to achieve the same workload in the same timeframe. Consequently, labor costs, the expenses, are lower. Additionally, for projects involving travel, expenses related to trips, lodging, and transportation are minimized. It's a simple principle: to gain more, spend less.



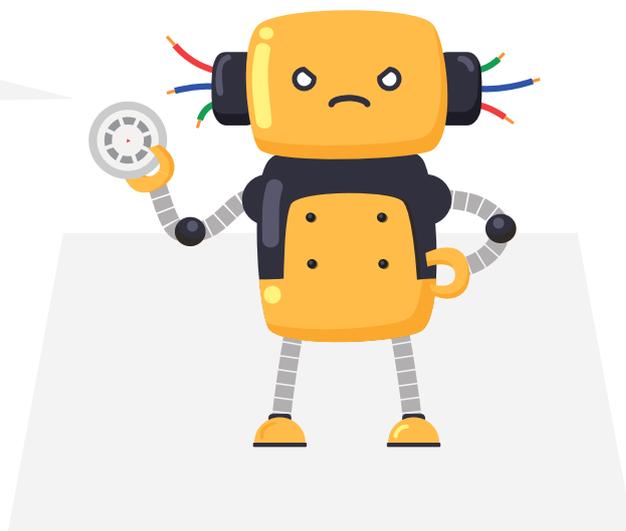
We already know how to work with wired systems and don't have any time to learn wireless.



Interestingly, the structure of our wireless system follows a similar pattern across leading fire safety system manufacturers. There are fire detectors, input and output modules, software for setup and maintenance. The difference is that the wireless equipment is supervised by the control panel via a translator, and instead of a loop, our devices connect wirelessly to expanders. Switching to our equipment is just as straightforward as with any other fire system.

And if you do need some help, don't worry. We offer remote training through our website, where you can participate in online classes, practice with a virtual equipment kit and get your own personalized certificate.

I've had some negative experiences with other wireless solutions. Why should I expect Streletz-PRO to be any different?



The Streletz-PRO product line has been substantially re-developed and enhanced from a previous wireless solution that was first introduced to the market more than 10 years ago. The developers of the system have extensive experience in wireless technology, and are highly alert to the type of problems fire alarm engineers are faced with.

All systems evolve over time. Right now, wireless systems have made remarkable progress. Just think of the speed and reliability in cellular networks. Our equipment embraces these advancements, unlocking new features and possibilities. It's like comparing your phone from 15 years ago to today's model. The original Streletz was designed nearly 20 years ago, and it's still good today. However, the new Streletz-PRO goes beyond, offering mesh network, wider coverage, faster speeds, and more devices.

While many new wireless system makers are entering the market, they lack the extensive development experience of Argus Spectrum. Any challenges we faced have already been tackled, forming the bedrock for the Streletz-PRO system. Other manufacturers are still following this path.



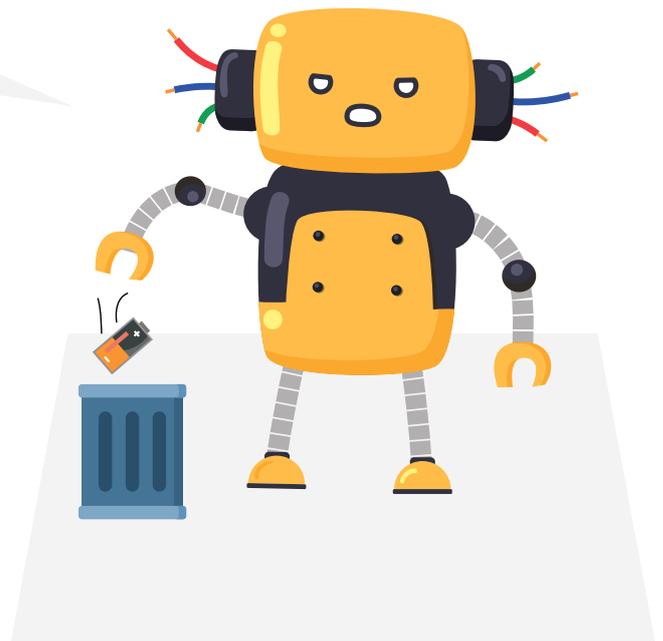
Batteries will die sooner or later, and replacing them is very expensive.

The Streletz-PRO system has already proven to be a reliable solution for fire safety, but no conversation about it ends without mentioning batteries.

Some fire alarm professionals and engineers are convinced that 10-year battery life for wireless detectors is an unrealistic marketing claim. Their opinions might be rooted in a personal experience with wireless from 15 years ago that didn't work for them, leading them to assume it's all bad now.

Can batteries drain sooner than expected? Yes, but there's always a cause. Often, it's linked to using the system in cold spaces or repeatedly triggering alarm devices during setup. If they stay activated frequently, batteries will deplete.

In Streletz-PRO, detectors and devices run the entire 10-year service life on a single battery set. Here's how it works:



Communication in Streletz-PRO operates like this: detectors send messages to expanders at set intervals and get an confirmation. The device then enters standby mode, repeating the process later. The standby mode consumes barely any power. So this communication technology saves a lot of energy. But if a fire or fault is detected, it is sent to the control panel immediately with top priority.

The rise of electric vehicles has brought two notable changes. Firstly, we've seen the emergence of new battery technologies, and secondly, new electronic components have been developed that boost energy efficiency. By integrating these components into Stretetz-PRO, power consumption has been impressively cut by about five times compared to the old Stretetz system. Our analysis of installations done over the last two years shows that the batteries are still fresh and only starting to lose power.

A significant advantage of Stretetz-PRO is the real-time monitoring of both main and backup battery charge levels. And the best part is that this can be managed remotely without any need for to visit the building. All it takes is an internet connection through a dedicated device. This feature aids in maintenance planning, helping lower operational expenses. Moreover, the battery lifespan is sufficient to periodically activate devices for testing as required by regulatory standards.



Wireless alarms are a good solution for simple projects like hospitals, schools, or museums. But they are not viable large buildings, like industrial facilities or apartment buildings.



Absolutely, Stretetz-PRO is gaining immense popularity, especially in places like hospitals, schools, and daycare centers. Professionals love our system for its quick installation and the fact that it doesn't disrupt daily operations.

However, the potential of wireless systems stretches even further, especially in residential buildings. In the next section, we'll delve into how wireless technology is specifically applied in this area and share our experiences of setting up Stretetz-PRO in residential properties.

As for apartment buildings, one standout aspect of the Streletz-PRO system is its impressive communication range. Expanders can be installed on every other floor, rather than on each floor. Installing them on each floor improves reliability and doesn't come at a steep cost.

Testing revealed that the Streletz-PRO system remains reliable even when exposed to electromagnetic interference. Streletz-PRO has

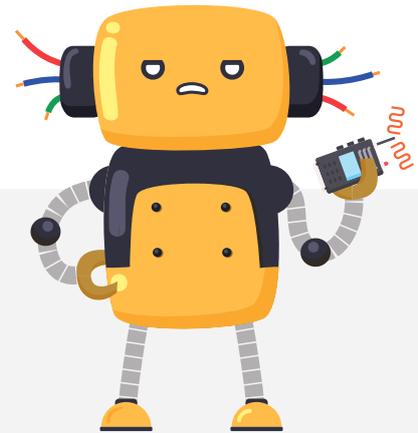
been installed at a number of industrial facilities, so high-voltage power lines and equipment don't usually affect wireless communication in the system. Moreover, wireless systems are protected from electromagnetic interference even better than wired counterparts. Long cables essentially act as antennas for interference. In wireless systems, you don't have long electrical circuits that capture electromagnetic interference, making them much less troublesome to maintain.

Wireless connection is not secure, it can be blocked with a jammer!

Let's address the pressing question upfront – the issue of jamming, a common concern raised in our discussions. It's important to acknowledge that if someone can create something, another person can find a way to break it. Now, let's consider what's easier to get hold of – a jammer or a simple pair of scissors? Wired systems are vulnerable to disruptions caused by a pair of scissors, and no special knowledge is needed.

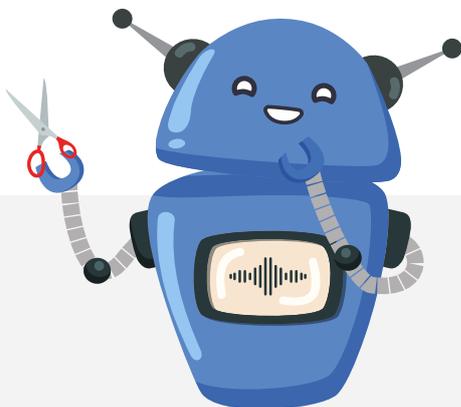
With that said, let's dive into a comprehensive response, split into two parts: unintentional interference and intentional jamming.

Unintentional interference covers signals that appear in the environment, possibly affecting the system but without malicious intent. This includes signals from all kinds of electronics: Wi-Fi routers, Bluetooth devices, walkie-talkies,

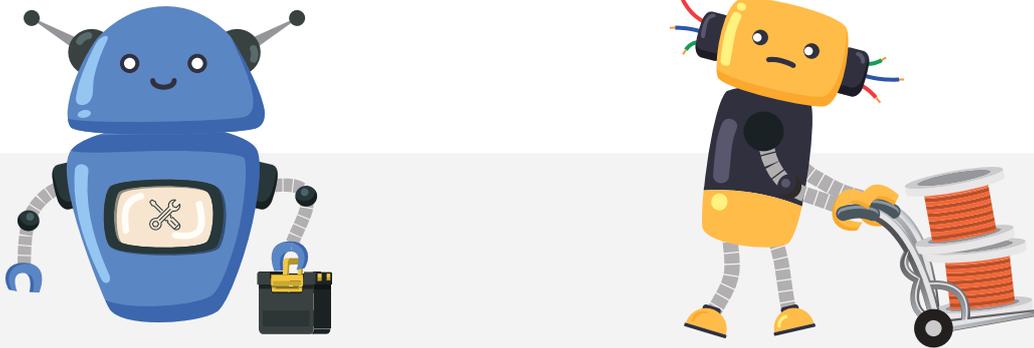


cellular networks. However, most of these signals won't impact the Streletz-PRO system because they operate on entirely different frequency ranges. While Streletz-PRO functions in the 865-867 MHz range, Wi-Fi operates at 2.4 or 5 GHz, and consumer radios at 433 MHz. Therefore, unintentional interference is a non-issue.

Intentional jamming, on the other hand, results from malicious actions or specialized services. It's crucial to grasp what constitutes a source of interference that can significantly affect a system's operation across substantial distances, like an entire building. Such equipment isn't pocket-sized; it requires transportation in a cargo vehicle, accompanied by another vehicle with a power station. If jamming is attempted in a specific building area, the system will alert with an "External Interference" message. Additionally, understanding how cellular signal jamming works today is essential. It doesn't involve disrupting the GSM signal frequency band. Instead, it entails substituting the base station, leaving all devices operational except phones.



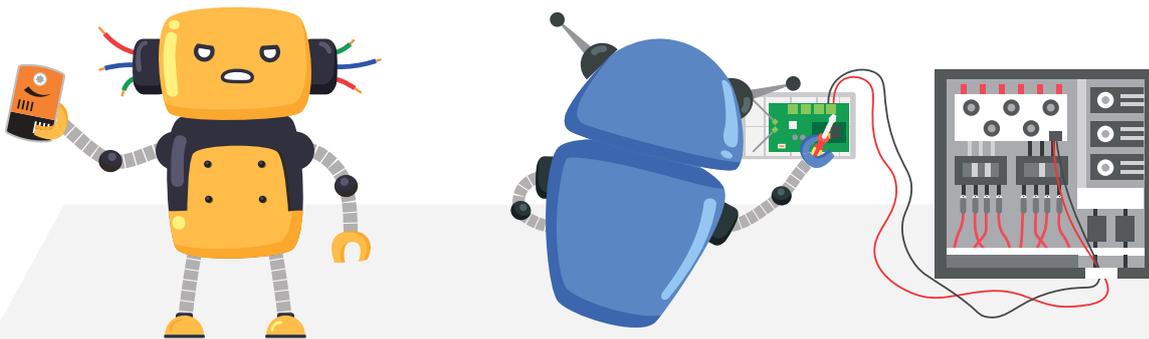
No wireless system is completely wireless. What's the point of it if I still have to install at least some cables?



Absolutely, there are certain wired connections to consider. For example, expanders send a lot more signals and consume a lot more power than detectors. So they can't be powered by batteries and require a PSU connection. Additionally, it's not feasible to wirelessly transmit 220V to a smoke vent damper. Thus, a 1-2

meter cable would need to be connected to the wireless output module to activate and monitor the damper status. However, these connections are quite minimal. Unlike wired systems that can span kilometers in wiring, the Stretz system needs just tens to a few hundred meters at most.

Wireless systems are insufficient for serious projects, you can't build a fire suppression or a smoke ventilation system with wireless equipment.



Stretz-PRO offers all essential output modules to manage various fire suppression and active fire protection functions. We have modules that control the smoke vent dampers, equipped with circuit monitoring to detect breaks and short circuits. These modules can also control the position of the damper to determine whether it's open or closed. To control the smoke vent

fan we offer a wireless control panel compatible with different kinds of fans. Argus Spectrum also makes manual call points for emergency door release, smoke & vent control, and suppression system activation. Lastly, Stretz-PRO provides solutions for integrating the fire alarm with the standpipe system: there are wireless control panels for solenoid valves as well as fire pumps.



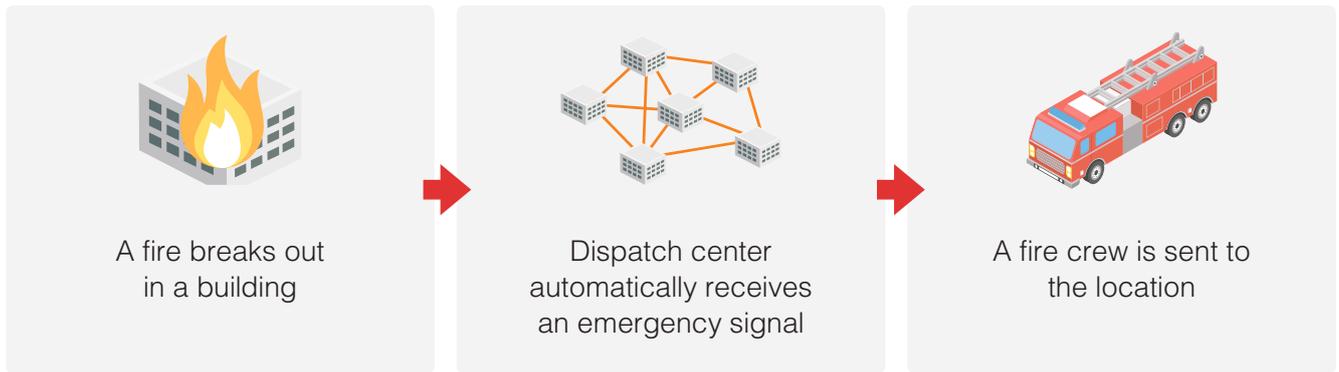
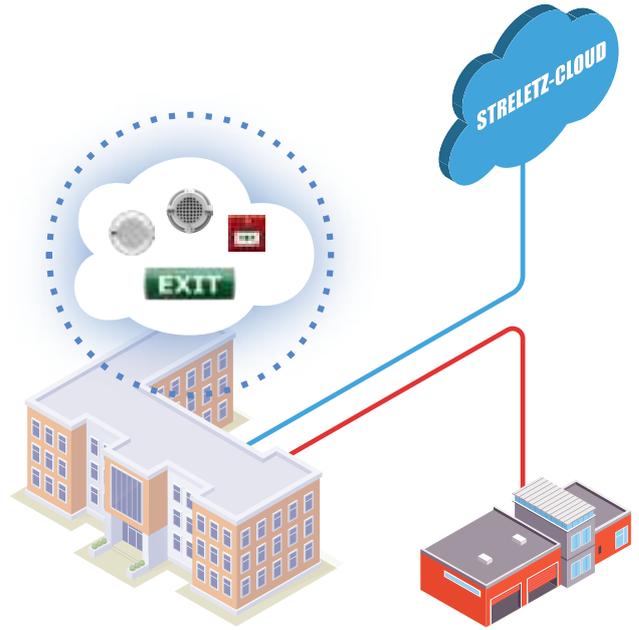
## CASE STUDIES

Just a few examples of how Streletz-PRO can be installed in any type of building and how it can shine where traditional wired systems fail.

# Streletz-PRO for Schools

Argus Spectrum has been dedicated to enhancing the safety of childcare facilities, such as schools and kindergartens. Since 2019, we've been actively involved in a project to modernize fire protection systems within these facilities. The goal is to achieve this upgrade without disrupting the facility's daily operations. With a significant number of schools involved, several hundred facilities undergo these upgrades annually.

In this project, each school is linked to the city-wide wireless emergency system Streletz-Monitoring. This system works automatically, transmitting a fire signal directly to the fire department via the wireless network. If a fire breaks out – no human intervention required.



Schools are seamlessly linked to the Streletz-Cloud cloud service, extending accessibility to the installed systems for authorized personnel nationwide. This cloud service ensures ongoing monitoring of the systems, swiftly detecting and

addressing any malfunctions that may arise. The fire alarm's status at the facility remains readily accessible to safety personnel at the school – all it takes is a smartphone to check.



Head of the education department

School principle

Fire alarm maintenance engineer

Fire alarm maintenance manager

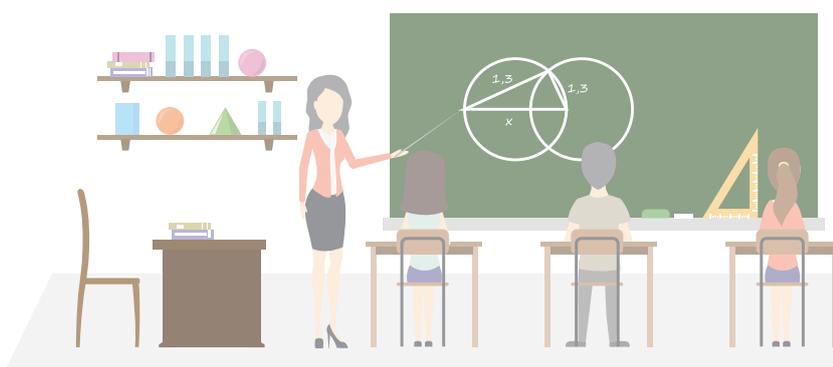
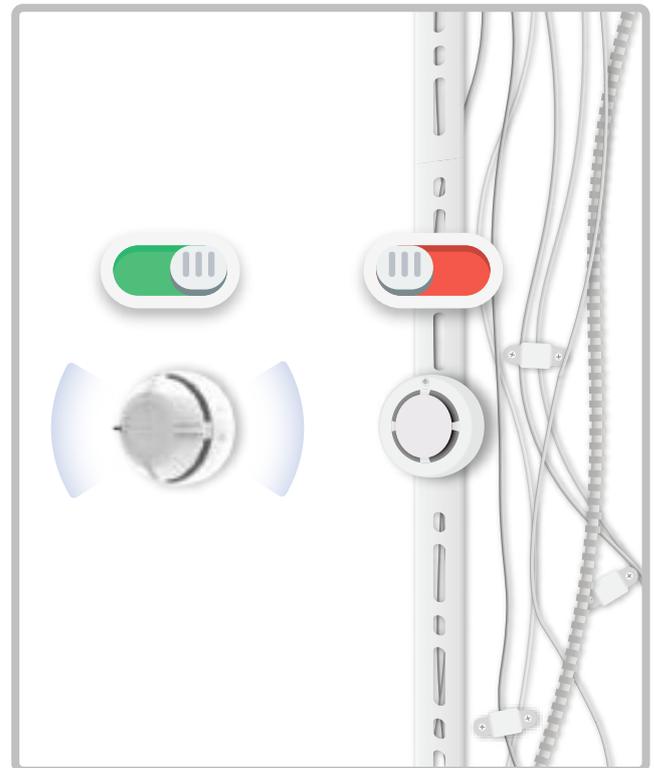
Schools received ready-to-install equipment kits, a solution where our technical experts handled all project development. The factory handled equipment manufacturing and programming, ensuring that everything works properly. Devices were labeled with their installation spots within the building, neatly organized in boxes for effortless

access. Consequently, the installation team had minimal tasks remaining – simply affixing equipment to ceilings and walls. Without the need for wiring and with programming already taken care of, only two individuals were allocated for each site. Remarkably, each installation was completed within a mere two days.



While installing Stretetz-PRO, the existing alarm system can continue to function concurrently. No immediate removal is necessary, given that the wireless equipment doesn't rely on the pre-installed cable lines and circuits. For efficiency, Stretetz-PRO detectors can be set up alongside the old devices, and the old system can be dismantled when it doesn't disrupt the educational process.

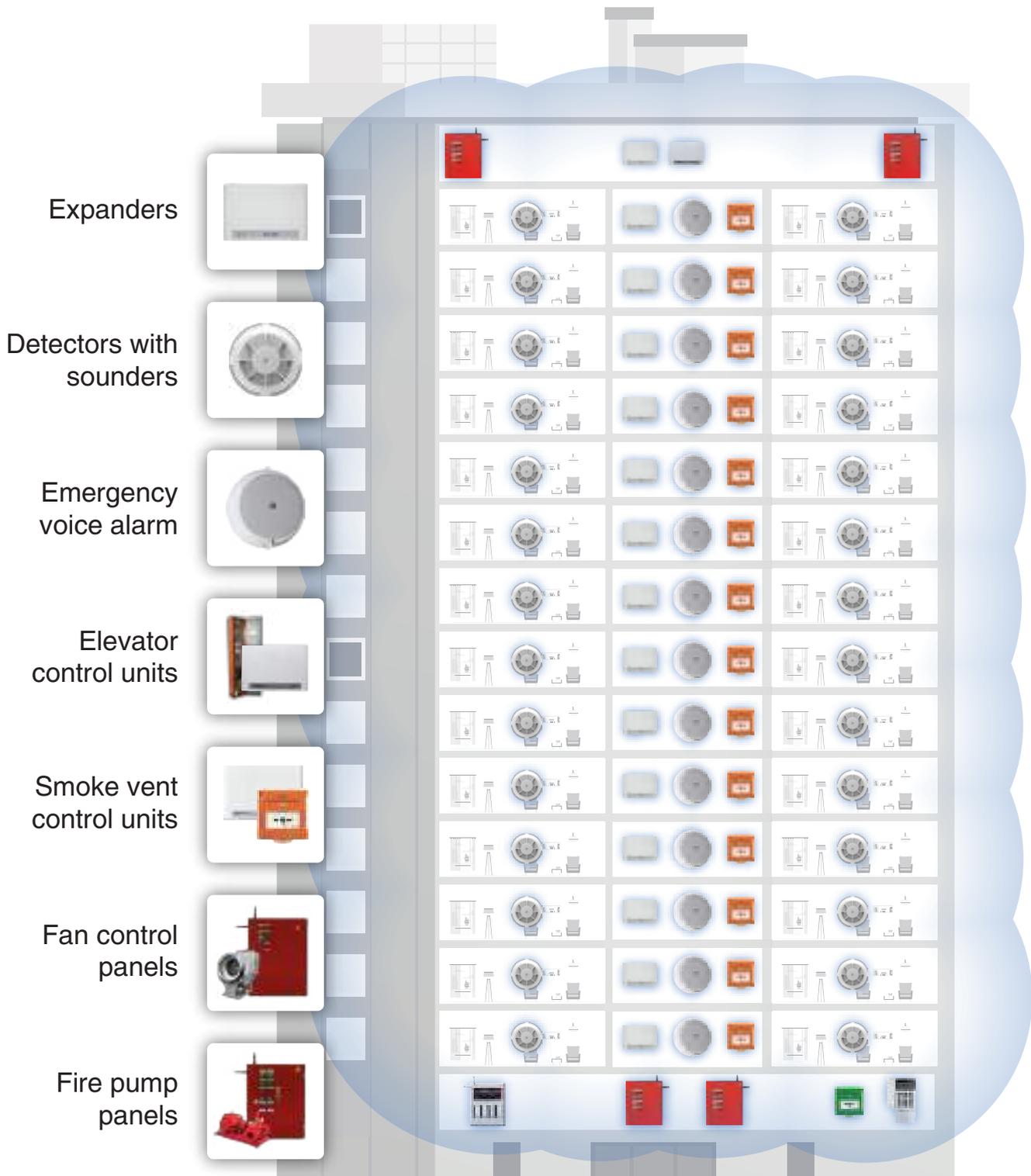
In contrast, when dealing with wired systems, the facility often needs to shut down for installation. Extensive drilling and storage of construction material on the floor are common, posing risks like unintended damage to wall coverings or accidental drilling into concealed wiring. Schools don't need to close down during the transition from the old fire alarm system to Stretetz-PRO. Such closures are unnecessary since the installation is swift and causes minimal disturbance.



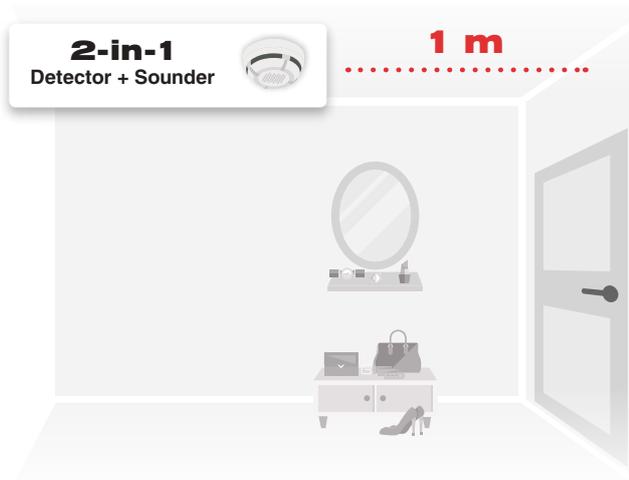
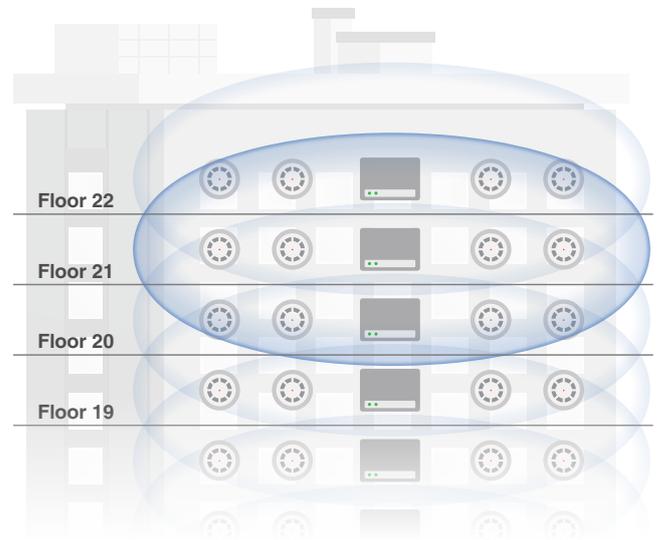
# Streletz-PRO for Apartment Buildings

Streletz-PRO is a superb choice for apartment buildings and residential complexes. It offers all the essential features and a diverse range of options to adhere to regulations. This system is adaptable for installation at any construction phase. Concerns about residents inadvertently damaging fire alarm wiring during

apartment renovations are nonexistent. The well-known advantages of simple installation and maintenance take on added importance, especially given the scale of these systems, which demand extensive wiring stretching over dozens of kilometers.



What about wireless communication? At first thought, one might assume that ensuring wireless network coverage within a vast building is more challenging than laying out cables. However, experience has shown that Streletz-PRO handles these dimensions remarkably well. In multi-apartment buildings, the most effective approach to establishing a wireless network involves placing a single expander on each floor's stair landings, within each stairwell. Thanks to the omnidirectional nature of these expanders, neighboring floors also receive coverage. This design ensures a strong system reliability – each repeater functions as a backup for its neighboring ones.



One great benefit of the Streletz-PRO fire alarm is its unique “2-in-1” detector. Typically, detectors included in the general fire alarm system are placed in apartment hallways. Additionally, standalone detectors are positioned within other rooms of the apartment. These detectors don't send signals to the general system but directly alert the apartment residents. The Streletz-PRO achieves all of this through cleverly designed smoke and heat detectors with built-in sounders. This smart solution not only helps you save on equipment costs but also reduces installation time significantly.

## Apartment buildings protected by Streletz-PRO



# Streletz-PRO for Industrial Facilities

In an industrial setting, ensuring the reliability of a Fire Alarm System takes center stage. Any glitch could lead to substantial financial losses from disruptions in production. Additionally, overlooking an alarm might trigger global disasters by releasing harmful substances. This is where the Streletz-PRO excels, making it an ideal fit for industrial enterprises. Thanks to its mesh network, it offers a higher level of dependability compared to wired systems.

Moreover, the ease of installation is a key factor. Consider the Basfiber basalt fiber plant, where they chose the Streletz-PRO due to its economic efficiency and quick implementation. Mounting devices in tall production workshops is already a complex undertaking. Yet, laying cable communication lines poses an even bigger challenge. In some places, it's simply unfeasible due to limited access to lifting equipment. Additionally, one production building is separated from the main plant by a city road, making cable installation through it impossible.

## Basfiber factory

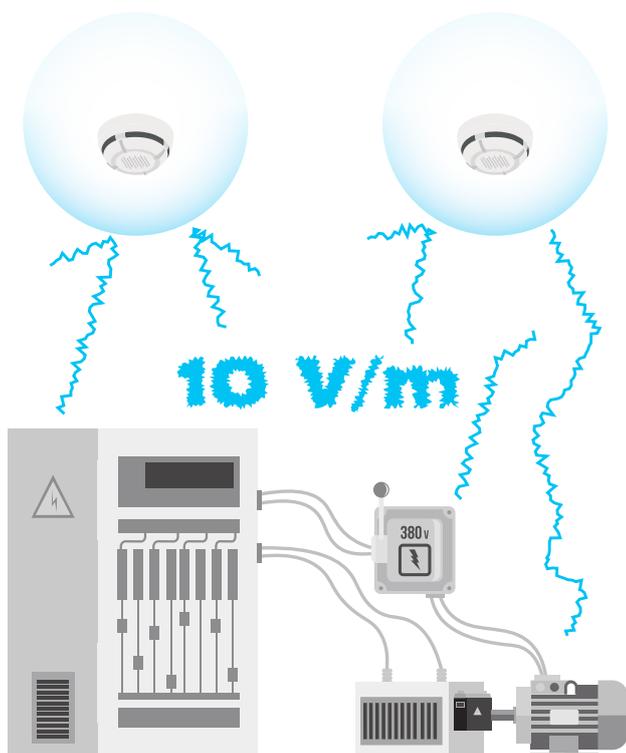
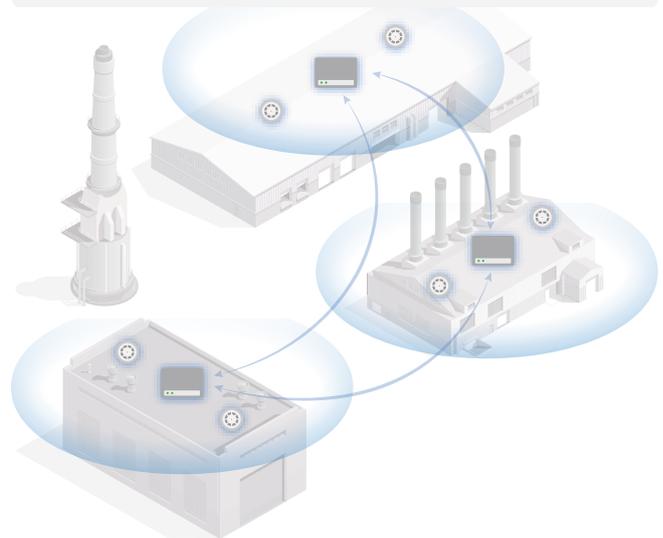
Basalt fiber plant

 21 500 m<sup>2</sup> square footage

 Work done in 10 days

 1 000 detectors

 Crew of 4 workers



Many experts express concerns about the Streletz-PRO potentially malfunctioning when exposed to electromagnetic fields from high-voltage industrial setups. Yet, these worries are baseless. Experience shows that in industrial facilities Streletz-PRO detectors work just as well, as wired detectors, if not better. Moreover, to ensure uninterrupted wireless communication, we've introduced a three-step algorithm to counteract interference:

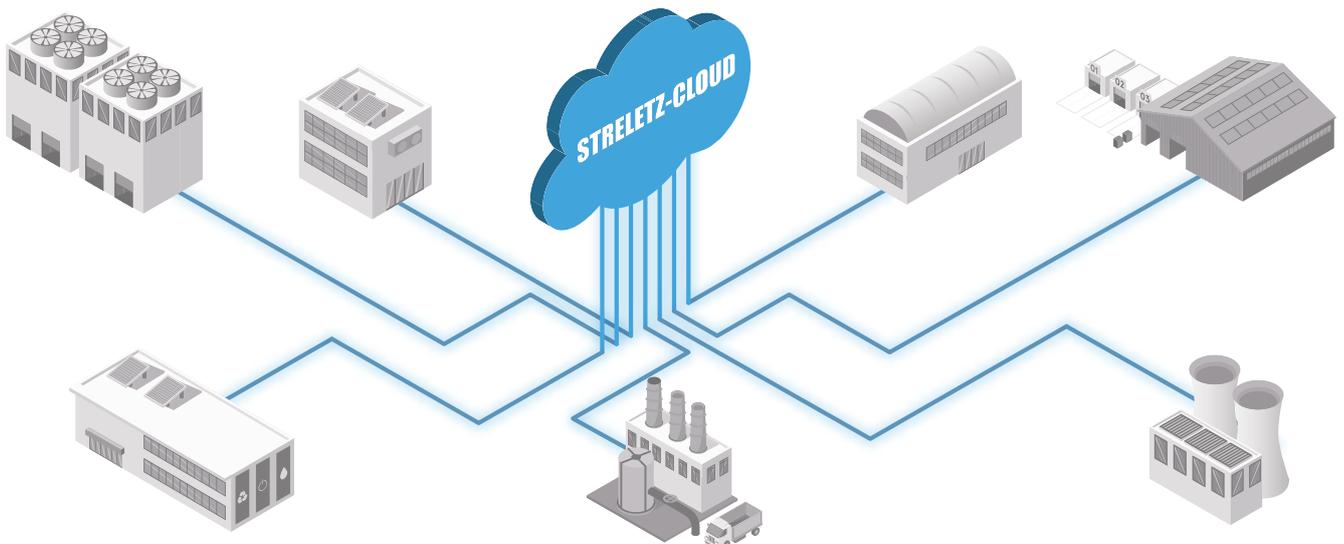
**$T_2 < T_1$**  The device sends signals more often

**$A_2 > A_1$**  The power of the signals is increased

**$F_2 \neq F_1$**  The signals are sent via backup frequency channels

Another valuable aspect of the Streletz-PRO, extensively embraced in industrial settings, is its remote monitoring capability via Streletz-Cloud. This cloud service simplifies connecting to systems and overseeing their technical status, including communication strength, dust, smoke, and temperature. This feature greatly streamlines maintenance, making it easier to establish a technical monitoring center for scattered locations, while also being cost-effective – all you need is an internet connection.

While security and IT experts might have reservations about relying on public servers, there's an option to set up an internal safety monitoring network on your own servers. our software even enables the multiple workstations within a local network. The software is also compatible with operating systems based on Linux kernel. This can be an important factor for clients who already have custom software solutions for building management, and want everything to work on the same server infrastructure.



## Industrial facilities protected by Streletz-PRO



# Streletz-PRO for the COVID-19 Hospital

It's spring of 2020. COVID-19 is rapidly spreading across the world and the vaccine hasn't been created yet. Healthcare facilities are working at full capacity, there's not enough hospital beds for everyone who caught the virus. Cities, especially big ones like Moscow, need more hospitals to fight the pandemic and to save the lives of people. So on the 5th of March 2020, the Russian Government ordered a construction of a new contagious disease hospital in the Moscow region. The hospital was going to consist of 50 single-story and 14 two- and three-story buildings across a 40-hectare area. Work began on March 19th. There was no time to waste - any delays could potentially cost lives. About 11,000 construction workers were working 24 hours a day, 7 days a week.

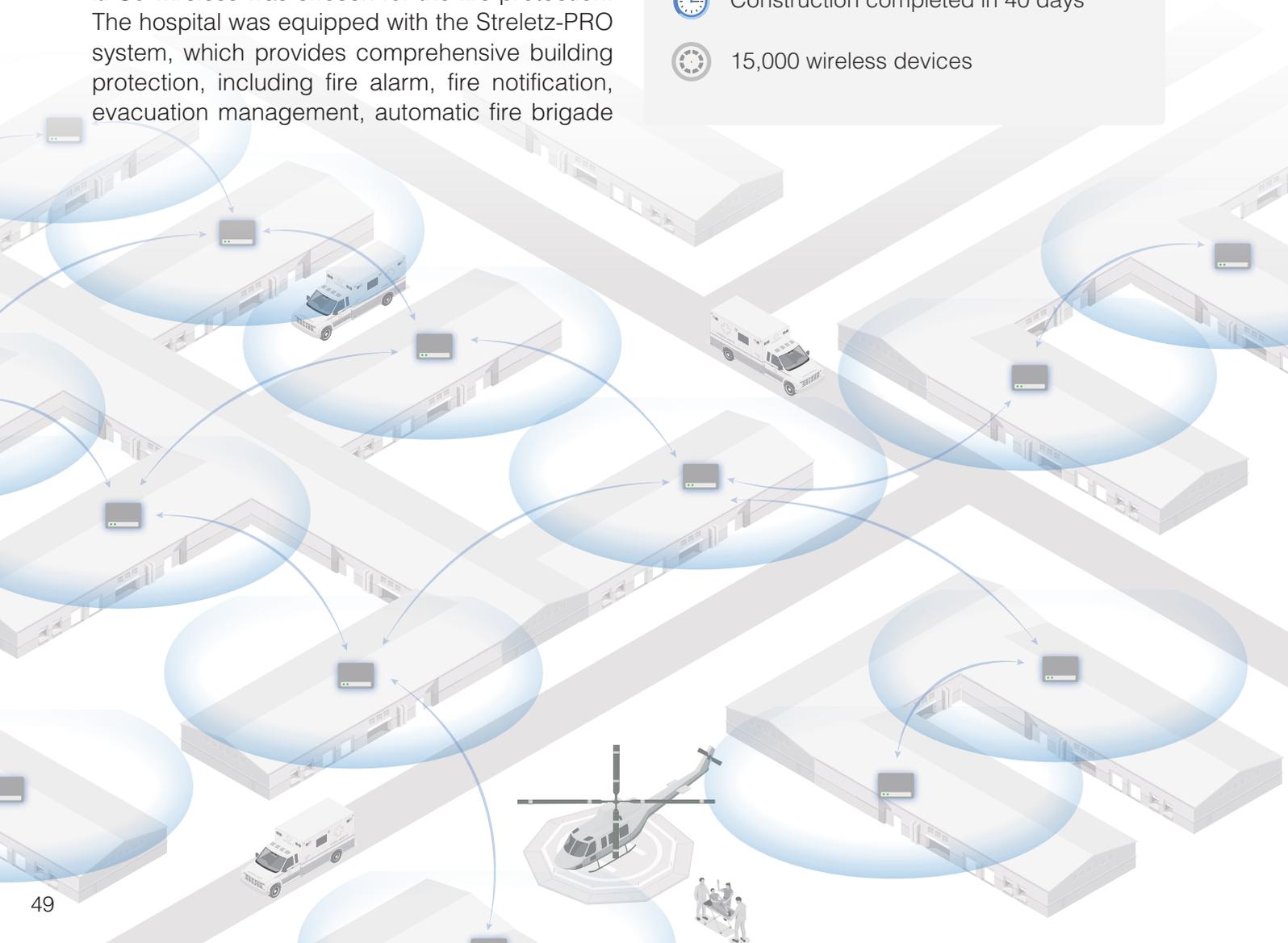
As for the fire alarm system - there was no time to install cables and do all the work that comes with it. So wireless was chosen for the fire protection. The hospital was equipped with the Streletz-PRO system, which provides comprehensive building protection, including fire alarm, fire notification, evacuation management, automatic fire brigade

notification, and continuous technical monitoring. Due to the urgent construction timeline, fire alarm works were conducted simultaneously with utility installation. This is not an issue for wireless equipment, since you only need a couple of minutes to equip one room with detectors. The hospital was completed in 40 days. The first patients started to check in on April 19th. Argus Spectrum is proud to be a part of such a unique and important project.

## Voronovskoye

Clinical Center for Infectious Diseases

-  81 300 m<sup>2</sup> total square footage
-  64 buildings
-  Construction completed in 40 days
-  15,000 wireless devices



One of the main challenges of installing a fire alarm in a medical facility during the pandemic was to minimize installation time and reduce the number of visits to the building. Wireless technologies made these goals a lot more achievable. The system was designed while the construction was still in progress. All equipment came pre-programmed from the factory, so

the fire alarm engineers only had to mount the detectors didn't have to waste time on linking and configuring the detectors. The settings and logic of the system were adjusted remotely, via a cloud connection to the control panel. This type of workflow is only possible with Argus Spectrum technology.



**Argus Spectrum – partner in the fight against COVID-19**

A video about our contribution to the COVID-19 hospital project.

<https://catalog.argus-spectr.ru/video/en/covid-19>





**150**  
buildings  
**40 000**  
devices

## Schools and kindergartens

In 6 months, 150 children's educational institutions were equipped with new fire alarm and remote monitoring systems.



**100**  
buildings  
**20 000**  
devices

## Sports schools

100 Sports schools were efficiently equipped with Streletz-PRO without disrupting the classes and tournaments.



**140 000 m<sup>2</sup>**  
square footage  
**40 000**  
devices

## Medical Academy

A modern medical complex comprising 7 buildings in St. Petersburg features a combination of wired and wireless detectors. Patients are monitored with electronic bracelets.



**81 300 m<sup>2</sup>**  
square footage  
**15 000**  
devices

## Hospital for Infectious Disease

The medical complex was built in record time in 2020, completed within 40 days. Wireless technologies enabled the simultaneous installation of Streletz-PRO alongside other construction activities.



**12 249 m<sup>2</sup>**  
square footage  
**1 500**  
devices

## Apartment Building

The system incorporates 4 wireless networks and features wireless smoke ventilation control units.



**21 500 m<sup>2</sup>**  
square footage  
**1 000**  
devices

## Manufacturing Plant

Installation was carried out by a team of 4 engineers over 10 days at the Basfiber basalt fiber manufacturing plant.

8



## VIRTUAL CLASSROOM

Brand new and unique training center that allows you to learn the Streletz-PRO system and software without having the actual equipment at hand.

Argus Spectrum is very pleased to present its new and unique service for the fire detection world!

Web Camera + IP connected kit of actual devices - a leading edge virtual classroom for the programming of Stretetz-PRO wireless fire detection system!

The online practical training is simple and easy to use! You will need a desktop or laptop computer and internet access. The online practical training is the perfect way to learn Stretetz-PRO. You can

study from home or from any place in the world at any time!

The virtual classroom allows fire alarm engineers from all around the world to use one of the remote equipment kits to introduce themselves to the Stretetz-PRO wireless alarm system. The user can control and monitor the equipment kit in the Stretetz-Master software, while simultaneously observing each device through a live camera feed. The service is completely online, which means that you don't need physical access to a real system in order to learn how to use it.



### **Stretetz-PRO in a virtual classroom**

An introduction to our revolutionary online training center.

[https://catalog.argus-spectr.ru/video/en/virtual\\_classroom\\_ad](https://catalog.argus-spectr.ru/video/en/virtual_classroom_ad)



### **The video tour of the remote equipment kit**

In this video, you will learn how to use the software to test the system, check the connection strength, read measurements from devices, and change their settings.

[https://catalog.argus-spectr.ru/video/en/virtual\\_classroom\\_tour](https://catalog.argus-spectr.ru/video/en/virtual_classroom_tour)



	Streltz-PRO	Taurus	Firewave	Firecell
Mesh	✓			
Battery	70	70	3	5
Capacity	1920	126	126	504

## OVERVIEW OF WIRELESS FIRE SYSTEMS

A comparison table that puts side to side the some of the popular and recent wireless fire systems – an analysis that demonstrates that Streltz-PRO really is the best choice on the market.

**Streletz-PRO**

Argus Spectrum

**Taurus**

Argus Security S.r.l.

**XPander**Apollo Fire  
Detectors Ltd.**FireCell**

EMS Ltd.

**Mesh network**

In a mesh network, 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 configure the network topology. Systems with no mesh network support can be sometimes tricky to install - you may need to relink devices a couple of times before you find the expander with the strongest connection.

**Yes**

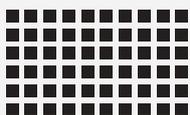
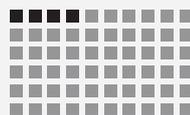
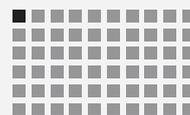
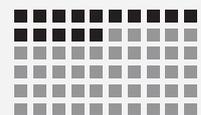
No

No

No

**System capacity**

Systems with large capacity allow you to build one big wireless system that will cover your whole building. Otherwise you will need to install several translators each controlling its own separate network. Wireless systems are often challenged to operate reliably in large buildings, but Streletz-PRO isn't! The communication protocol is designed in such a way that up to 1920 wireless devices can work in the one system.

**1920****128****31****504****Number of expanders**

Expanders and similar devices act as communication nodes in a wireless network. The more nodes the network has, the bigger the area it's able to cover. The large number of expanders in Streletz-PRO doesn't just mean that the network area is big. The expanders also provide numerous communication paths, which is an important factor in system reliability.

**127****15****0****31**

## Streletz-PRO

## Taurus

## XPander

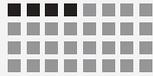
## FireCell

### Number of devices per expander

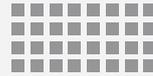
While installing a wireless fire alarm you may face a situation where you need to link a detector to a specific expander, because it provides the strongest connection. But that expander may have already reached its limit on linked devices. This limit is an important factor in the flexibility and configurability of the system. The feature also means that Streletz-PRO is well-suited for buildings with large open spaces with many detectors.



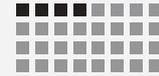
**256**



**32**



**0**

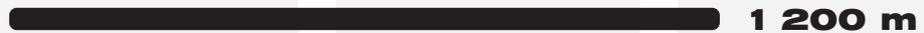


**31**

### Communication range

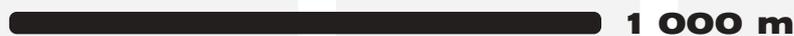
Big communication range in open air is an indicator of how stable the connections in the system are going to be in buildings. Streletz-PRO has the best communication range on the market - 1.2 km max between an expander and a device. Connections between two expanders are even stronger, and the distances can reach up to 2 km.

#### Streletz-PRO



**1 200 m**

#### Taurus



**1 000 m**

#### XPander

Undisclosed

#### FireCell

Undisclosed

### Expander layers

This parameter corresponds to the number of times a signal from a device can be repeated by the expanders before reaching the translator. This has a direct effect on how far the network can span in the building.

#### Streletz-PRO



**10 hops**

#### Taurus



**8 hops**

#### FireCell



**4 hops**

#### XPander



**0 hops**

## Streletz-PRO

## Taurus

## XPander

## FireCell

### Battery life

Long battery life reduces the expenses required for system maintenance and makes a wireless alarm a cost-effective fire protection solution. Streletz-PRO has an outstanding 10-year battery life and allows you to view the voltage level of each battery in every device via the software.



**10 years**



**10 years**



**3-5 years**



**5 years**

### Battery type

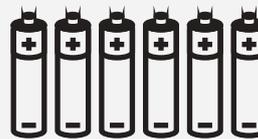
Maintenance costs greatly depend on the number and the type of batteries used in the devices. Streletz-PRO uses generic mass production batteries, rather than proprietary battery packs that are only available from the manufacturer.



**CR123A +  
CR2032**



**CR123A × 2**



**AA × 6**



**AA × 6**

### Emergency voice alarm communication

Emergency voice alarm communication is a critical component of fire alarm systems. If you are doing a wireless project, you would want to choose a system that support wireless EVAC, or else you would have wireless detectors, but still need to install cables for the speakers.



**Wireless**

Only  
wired

Only  
wired

Only  
wired

## Streletz-PRO

## Taurus

## XPander

## FireCell

### Smoke vent system control

Smoke vent systems are vital in fire safety, designed to extract smoke and heat from buildings during a fire. They are usually connected with wireless fire alarm systems via wired control panels, but Streletz-PRO has wireless modules for smoke vent dampers and fans.



**Wireless**

Only  
wired

Only  
wired

Only  
wired

### Standpipe system control

Standpipe system is a crucial firefighting tool, providing water access on multiple building levels. Streletz-PRO has wireless control panels for valves and pumps, meaning that you don't have to use a wired alarm if your building is large and equipped with a standpipe system.



**Wireless**

Only  
wired

Only  
wired

Only  
wired

## References

- FireCell Datasheet Pack [<http://emsgroup.co.uk/wp-content/uploads/2018/11/October-2018-FireCell-Datasheet-Pack-Compilation.pdf>]
- FireCell Frequently Asked Questions [<http://emsgroup.co.uk/support/faqs/>]
- MK99 FireCell Setup Guide [<http://emsgroup.co.uk/wp-content/uploads/2018/11/MK99-FireCell-Setup-Guide-Iss-8-V3-Software.pdf>]
- FireCell Product Showcase MK42 [<https://emsgroup.co.uk/wp-content/uploads/2021/12/EMS-FireCell-Product-Showcase-MK42-Issue-13.pdf>]
- Taurus Wireless Fire System [<https://www.argussecurity.it/productssystems/wireless-fire-detection/taurus/>]
- Wireless Translator Module (916) [<https://www.argussecurity.it/product/wireless-translator-module-916/>]
- Wireless Dual Optical Smoke Detector (916) [Wireless Dual Optical Smoke Detector (916)]
- XPander Diversity Loop Interface Module [<https://www.apollo-fire.co.uk/products/xpander/zone-monitor-units/xpa-in-14050-apo---xpander-diversity-loop-interface-module/>]
- XPander Optical Smoke Detector with Base [<https://www.apollo-fire.co.uk/products/xpander/combined-devices/xpa-cb-12034-apo---xpander-optical-smoke-detector-with-base/>]

Information on communication range, battery life and battery type is provided for optical smoke detectors. Specifications can differ across the product range, e.g. sounders may use a different type of power supply.

**Streletz-PRO**

**Taurus**

**XPander**

**FireCell**

**Product range**

Smoke detector



Smoke detector + sounder



Smoke detector + voice alarm & VAD



Heat detector



Heat detector + sounder



Combined sensor detector



Call point



Beam detector



Flame detector



Voice alarm speaker



Sounder



Detector base with sounder



Fire exit sign



Input module



Output module



Fire suppression control panels



10



# WIRED TO WIRELESS

Equipment correspondence tables as well as some tips that will help you easily change your project from a wired system to Stretz-PRO.

Switching to Stretetz-PRO is smoother and quicker than you might think. Just follow these easy steps:

- Swap devices with Stretetz-PRO equivalents.
- Remove wired connections and insert expanders.
- Insert the translator and a compatible control panel.
- Order the equipment, spend a couple of days installing, and finalize the paperwork.

Stretetz-PRO's range is almost the same as wired systems, making most device swaps

straightforward. Equipment correspondence table on the following pages demonstrates how easy this process is.

Interestingly, moving from wired to wireless is easier than switching between two wired systems. Different wired systems might not match in terms of characteristics or capabilities. For example, a control panel might not support the old signal line length. Some detectors could lack addressable features, requiring extra zone circuits and input modules in the project. Stretetz-PRO detectors have no wired connections, so replacing them eliminates these concerns.

## Make the switch to wireless today!



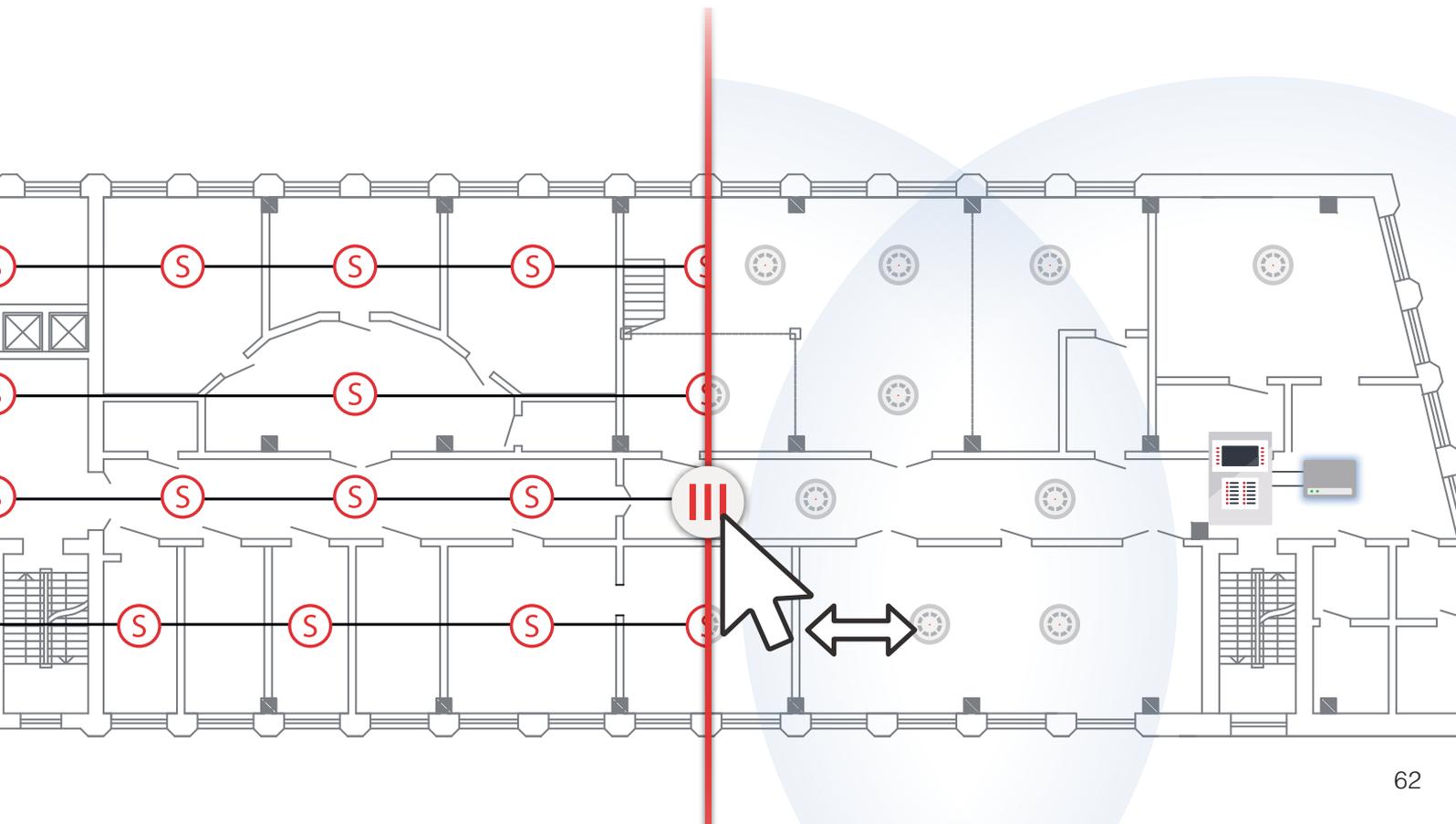
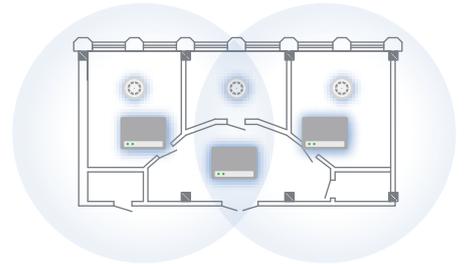
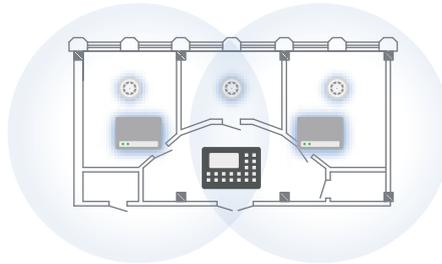
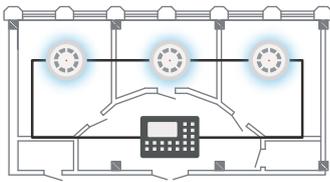
Swap the detectors



Remove wires and insert expanders



Replace control panel, add translator



# Transition Table

Equipment	Bosch product	Streletz-PRO counterpart
<b>▼ Panels</b>		
Control Panel	AVENAR 2000	 Compatible control panel + WL8-TRV
<b>▼ Fire detectors</b>		
Smoke detector	FAP-425-O-R	 WL8-O
Smoke detector + sounder	FAP-425-O-R + FNM-420-A-BS-WH / FNM-420-A-BS-RD	 WL8-OS
Smoke detector + voice alarm & VAD	<i>no direct counterpart</i>	 WL8-OV
Heat detector	FAP-425-T-R	 WL8-H
Combined sensor detector	FAH-425-OT-R	 WL8-OH
Beam detector	FIRERAY 50 RV, FIRERAY 100 RV (conventional)	 WL8-B
Flame detector	FCS-8000-VFD-B	 WL8-FL
Call point	FMC-210-DM, FMC 300RW, FMC-420RW	 WL8-CP

Equipment	Bosch product	Streletz-PRO counterpart
<b>▼ Notification Devices</b>		
Sounder	FNM-420-A-WH, FNM-420-A-RD	 WL8-SND
		<i>or</i>
Sounder + VAD	FNX-425U-WFWH, FNX-425U-RFWH, FNX-425U-WFRD	 WL8-OV
		<i>or</i>
Voice alarm speaker	FNM-420V-A-RD, FNM-420V-A-WH	 WL8-V
		<i>or</i>
Voice alarm speaker	FNM-420V-A-RD, FNM-420V-A-WH	 WL8-OV
		<i>or</i>
<b>▼ Input and output modules</b>		
Input module	FLM-420/4-CON, FLM-420-I2	 WL8-IN (one input)
		<i>or</i>
Input module	FLM-420/4-CON, FLM-420-I2	 WL8-EXP (two inputs)
		<i>or</i>
Output module	FLM-420-RHV, FLM-420-RLV1, FLM-420-NAC	 WL8-OUT (one output)
		<i>or</i>
Output module	FLM-420-RHV, FLM-420-RLV1, FLM-420-NAC	 WL8-EXP (two power outputs)
		<i>or</i>
I/O module	FLM-420-O111	 WL8-EXP



**ARGUS SPECTRUM**



### **Batteries in Streletz-PRO**

Overview of the factors that contribute to the 10-year battery life in Streletz-PRO

[catalog.argus-spectr.ru/video/en/batteries](http://catalog.argus-spectr.ru/video/en/batteries)



### **Interference in Streletz-PRO**

The myths and facts about the reliability of wireless communication in Streletz-PRO

[catalog.argus-spectr.ru/video/en/interference](http://catalog.argus-spectr.ru/video/en/interference)