STRENGTH

Brand Partners Products

31ST ANNUAL LEADERSHIP CONFERENCE

WELCOME

Wireless Fire Protection System

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NOTIFIER® by Honeywell

- **What is SWIFT?**
- **System Components**:
  - What's available now
  - What's coming soon
- **Why Should I Use SWIFT?**
- **How does SWIFT Work?**
- **Resources Available**



The SWIFT® system **seamlessly integrates, and synchronizes visually and audibly,** with existing wired installations. It provides a **unique level of reliability** enabled by its smart, true mesh, technology. **With redundant paths of communication** at all times, SWIFT ensures a **class A system** and reliability where it matters the most.



SWIFT Works with Current ONYX Panels!

- NFS2-3030
- NFS2-640
- NFS-320

On track to work with new NOTIFIER panels!



Wireless Detection



FWD-200P	Photo Detector
FWD-200ACCLIMATE	Acclimate
FWH-200ROR135	Heat, ROR/135 fixed
FWH-200FIX135	Heat, 135 fixed
FW-RM; FW-MM	Relay and Monitor Modules
FWSG	Gateway

Notification (Coming Soon!)



NBG-12LW	Wireless Pull Station
Wireless Pull Station	Wireless Pull Station (Spanish)
WAV-RL	SWIFT AV Base Wall (Red)
WAV-WL	SWIFT AV Base Wall (White)
WAV-CRL	SWIFT AV Base Ceiling (Red)
WAV-CWL	SWIFT AV Base Ceiling (White)
W-SYNC	Wireless Sync Module

Why SWIFT®
by NOTIFIER?



- **Detection, notification, and visual and audible synchronization** with existing wired installations
- **Seamless integration with wired installations** for increased hybrid opportunities
- **Self-healing system** for increased reliability, less signal interruptions and troubleshooting headaches
- **Each device is also a repeater** for minimal equipment investment
- **Lower cost of ownership** over the life of the installation
- **No annual fees or dedicated service contracts**
- **Counts towards Honeywell purchase levels**

As an Installer



Minimize the time invested in installation – save money / deliver faster

- Up to 75% installation time savings to meet short deadlines!
- Realize revenue sooner than with wired due to faster commissioning

Expand wirelessly onto a wired installation – get more jobs

- Painlessly pursue these job expansions, retrofits, and temporary sites
- Eliminate pain points, and conquer challenging obstructions, associated with traditional wired systems
- Capture jobs that would have otherwise been out of reach

Self-healing, reliable system

- Class A mesh network with redundant paths ensures reliability of system where it matters the most.

As an End-User



Lower installation costs – Save money

- Up to 75% installation time savings to meet short deadlines!
- Minimize revenue loss due to business disruption
- Maintain the historical, or aesthetic integrity of the property.
- Temporary fire protection during renovation, expansion, or construction.
- Redundant paths of communication at all times enabled by mesh technology.

Installations Where Wire is Unwanted/Unfeasible

- Preserve a building structure, historical integrity or maintain visual aesthetics

Retrofit and Expansion of Existing Installations

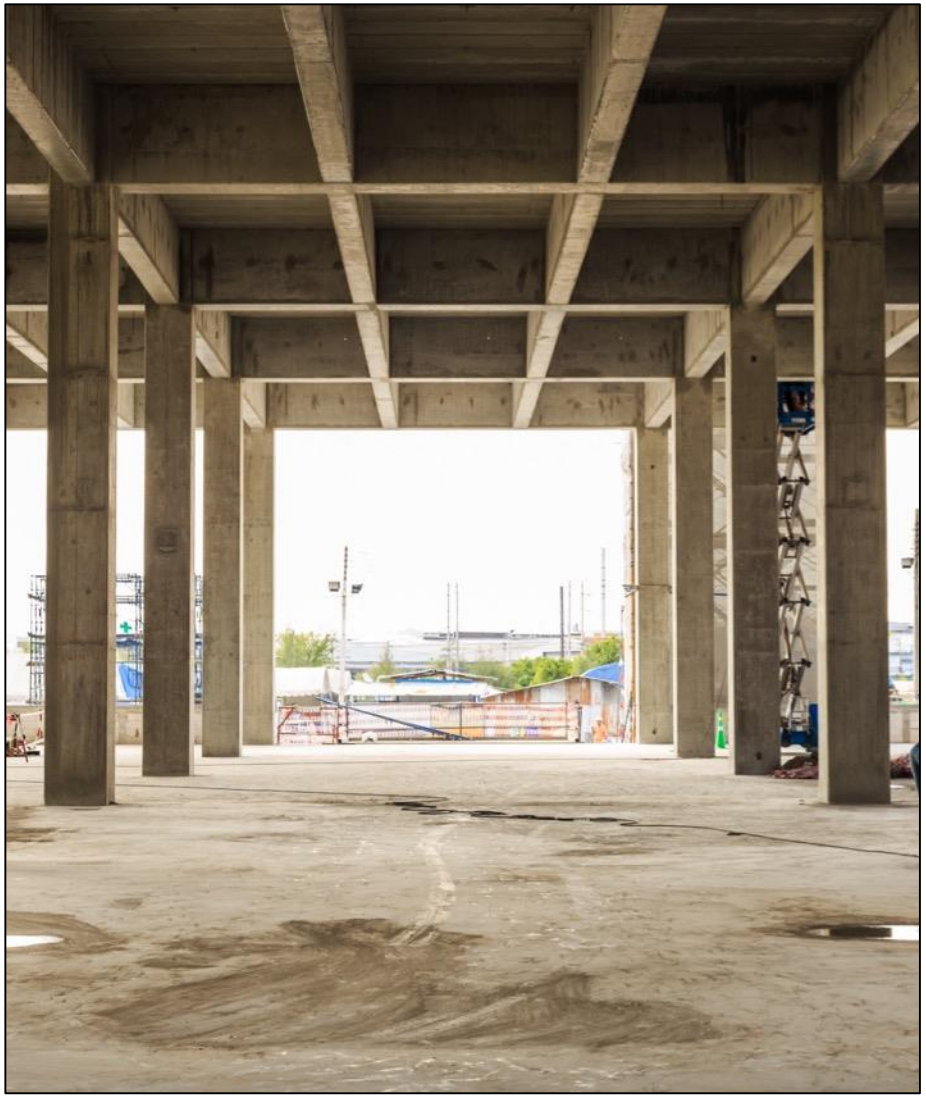
- Enables flexibility to accommodate frequent changes in device position

Temporary Installations and Structures Under Construction

- Early protection of premises
- Ability to reuse a system from one project to the next

Time-Critical Installations

- Minimize time invested in installation to mitigate high labor costs
- Provides ability to execute on short deadline jobs with faster installations than using wired devices



The SWIFT System

System Overview

- **Frequency Hopping & Spread Spectrum**
  - 902MHz-928MHz
- **50mW transmitter (+17dBm)**
- **Cascading Wave communication protocol**
  - Honeywell patented
- **Multiple antennas to overcome orientation issues**
- Capacity:
  - 4 overlapping meshes permitted; OR 4 gateways per installation
  - Up to 49 devices per mesh; **196 devices total**
- **Range/distance**



System Overview

- Mesh upgrade
  - Version 3 will establish the foundation needed to upgrade the entire mesh with a single command.
  - Subsequent upgrades after version 3 will not require the installer to go to each device individually
- An open or short circuit on a class X SLC circuit will no longer cause the network to reform
- An input in one mesh network can be used to control an output in another mesh network
- ULC approval?
- Tool enhancements
  - Redesigned firmware update screen
  - Automatic updates of the W-USB
  - Firmware updates packaged within the tool – no longer searching the internet/download folders for new versions



Technical Advantages of SWIFT

- **Redundant**
  - Class A connections for each device
  - A single device loss does not stop other device communication
- **Self Healing**
  - Rescue mode, Extended rescue mode, Mesh restructuring
  - Automatically adjusts for most building environment changes
- **Robust – interference immunity**
  - Uses multiple frequencies for each transmission
  - Withstands walkie-talkie interference at 2 feet
  - Alternate channel hop set used to avoid interference
- **Every device repeats** and extends the system range
- **Same as wired system** device features – but wireless

Gateway - FWSG

- Bridges communication from wired to wireless
- FlashScan only
- Powered by the SLC *or* external 24V
- Each mesh requires 1 gateway
- Each gateway occupies 1 module address



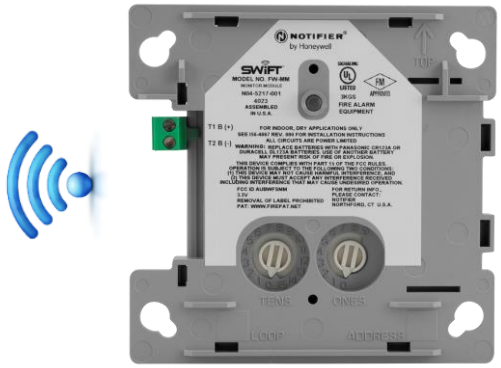
Detectors

- Basic operation identical to wired version
  - Panel makes alarm decision
- Four (4) CR123A batteries; included
  - At least 2 years of expected battery life
- 6” base ordered separately (B210W)
  - Magnet in base for “tamper” monitoring



Monitor and Relay Modules

- Four (4) CR123A batteries; included
  - At least 2 years of expected battery life
- Recommended to use plastic SMB500 4” box
- Module plate/cover included (is this relevant to say?)
  - Magnet included for “tamper” monitor
- Use to monitor any closed contact
  - Conventional pull station, waterflow, etc.



Pull Station

- Look and feel with wired
  - Same key to reset as wired
- 4 batteries
- Integrated LED to display status
- Multilingual
  - NBG-12LW; NBG-12LWSP
- Integrates with mesh same as others
  - Profile
  - Code wheel
- No changes required to panel to support PS



AV Base

- Uses wall and ceiling L-Series notification devices
  - Horn, Horn/Strobe, Chime, Chime/Strobe, Strobe
- 8 batteries
  - 4 for the radio – 2 years of operation
  - 4 for the AV – alarm time in ambient conditions r
    horn-strobe) to 7 days (15CD strobe only)
    - depending on the L-series device and setting
- Synchronized Addressable A/V
  - Each output is independently address, controlled
  - All outputs in a single mesh network will be in sy
- Audible pattern configured by the setting on the L-se
- Supports multiple output patterns controlled by the panel
  - Strobe and Audible
    - Audible pattern determined by the switch setting on the L-series notification device
  - Strobe only (Audible silenced)
  - “magnet test” mode
- Integrates with mesh same as others
  - Profile
  - Code wheel
- No changes required to panel to support AV



Sync Module

- Powered by 24V
  - Single module can be used to activate multiple points/ zones (unlike a single relay module)
  - 4 backup batteries for the radio/wireless repeate
- Synchronized A/V
  - Each module is independently address, controlle
  - Each module provides the control signal, the syn capabilities to a remote NAC expander
  - All outputs in a single mesh network will be in sy
  - One sync module can drive up to 4 power suppli
- Supports System Sensor AV Spectalert and L-Series
- Supports multiple output patterns controlled by the panel
  - Strobe and Audible
    - Audible pattern determined by the switch setting on the L-series notification device
  - Strobe only (Audible silenced)
  - “magnet test” mode (only L-Series)
- Integrates with mesh same as others
  - Profile
  - Code wheel
- No changes required to panel to support AV



SWIFT Tools

- A Windows™ PC based application for
  - Collecting & analyzing site survey data
  - Configuring and installing a system
  - Diagnostics
  - History
  - Statistics



W-USB



- W-USB
  - Connects to a PC (Windows XP, 7, 8)
  - Communicates to wireless devices for configuration and diagnostics
  - Expected range of 20’
  - Depends on environment

Update with new images and include some of the new benefits of the tool

How It Works

System Demonstration

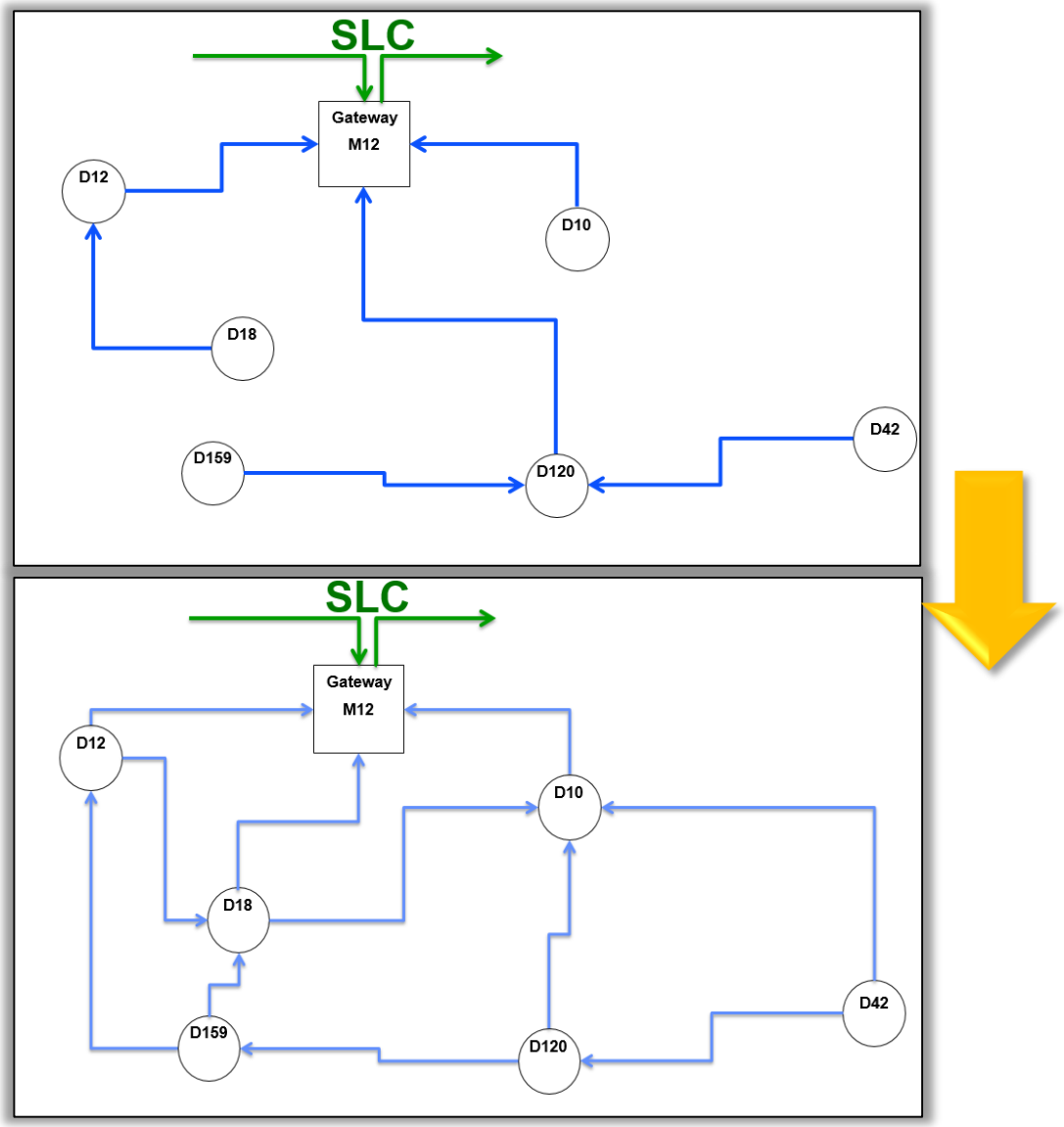


How the SWIFT mesh technology works

2 step process

- ✓ Assigning profiles
- ✓ Create mesh network

- A site survey is ***highly recommended before installation***, to determine if SWIFT is the right solution

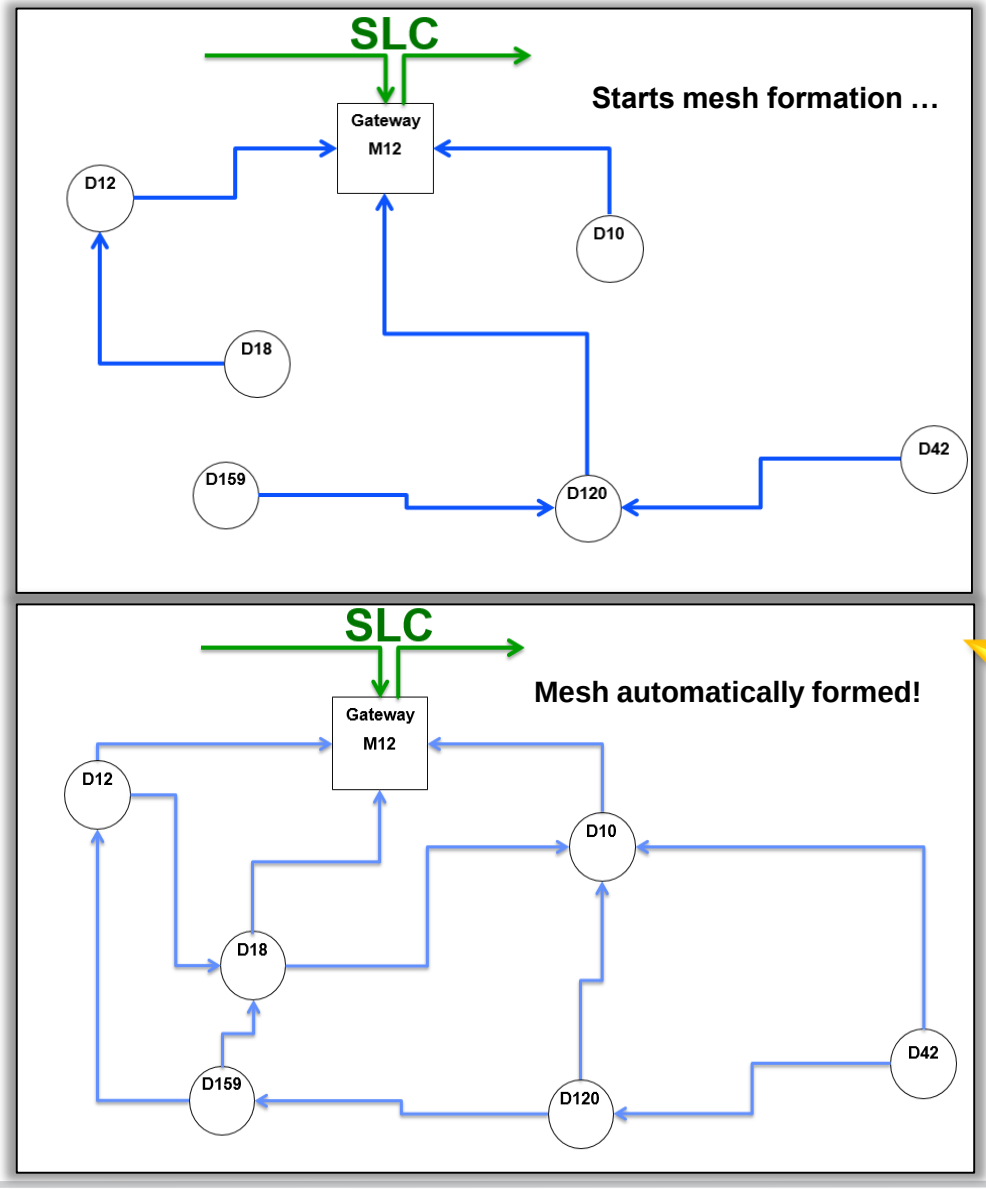


How the SWIFT mesh technology works

The system automatically:

- ✓ Starts mesh formation
- ✓ Restructures the mesh to identify best paths of communication
- ✓ Establishes redundant paths of communication and meets class A requirements
- ✓ Forms the mesh
- ✓ Self heals if a wireless path is disrupted/blocked

No need for user to manually identify communication paths!



Interference Sources

Sources of interference

- Walkie-talkie radios using our frequencies
- RFID readers (using our frequencies)
- Wireless clock networks (using…)
- Old cordless phones (using…)
- Long distance LAN links (using…)



Does NOT cause interference

- Walkie-talkies that are NOT using the same frequencies
- WiFi networks and devices (2.4GHz and 5.2GHz)
- North American Cell phones
- Bluetooth devices

Interference only comes from sources in our band

Interference Mitigation Strategies

- ✓ **Follows FCC regulations for frequency hopping**
  - Share the airwaves with other systems
- ✓ **Device spacing requirements (signal strength)**
- ✓ **Detect and identify devices close to interference**
  - Redundant Transmissions
    - Data is sent twice
- ✓ **Alternate wireless channel set**
  - This secondary channel “hop set” is used when interference is detected in the primary channel “hop set”
  - None of the channels in the primary channel “hop set” overlap with the channels in the secondary channel “hop set” overlap

Interference is detected but not disruptive

Range (signal strength & distance)

- Primary connection minimum signal strength threshold
- -55dBm at installation
- Ensures immunity at 3 feet to a 1W interference source
- Secondary connection threshold
- -80dBm or 15dB higher than the noise floor
- Default minimum – 1 primary, 1 secondary
- Not a UL requirement, can be disabled
- Disabling reduces interference immunity

Stable solution – no nuisance troubles

Success Stories



Riverglade Dr
Mill Valley Estates




Success Stories: Hospital

Application:

- Well known, 4 story hospital plus basement (confidential)
- Building fully involved with asbestos
- Retrofit construction

Customer need:

- Current system failing
- Under Joint Commission Regulation
- Full replacement costs over $4M
- Cannot get in the way of a full HVAC system in 5 years

Solution:

- Fire marshal, dept. of public safety, end user, owner, and architect
- Site survey with hospital on full generator, with wireless ventilators, in hallways, in common areas
- 4 gateway system: detectors, relay modules, and pull station (with monitor module)



Photo does not represent actual building / application

Success Stories: Military Base

Application:

- Military base established as temporary site during WWI; still operates today
- Training site for the National Guard
- Multiple small buildings (dining hall, storage, bathrooms, etc.)

Customer need:

- Site not connected off premises; needs 911 call
- All small buildings have a conventional panel
- Buildings are heated
- 11-12buildings first

Competitive alternative:

- Considering using AES® Radio Technology
- ~$500K for parts, plus installation



Photo does not represent actual building / application

Solution:

- Site survey with positive results
- All small panels connected to an Onyx 320, and to fire department
- Fully integrated with current system; ~$10K for wireless parts

Success Stories: College Hall

Application:

- Historical site that was made into a college hall
- Mostly an office building

Customer need:

- Hard wired system failing
- Needs to upgrade from heat to smoke detector in every room
- Historical site so preservation is important

Solution:

- Prior site survey; one gateway enabling expansion
- Adding 3 gateways
- Mostly smoke detection (120), pull stations and monitor modules



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Success Stories: High School

Application:

- Private catholic high school
- Permanent installation

Customer need:

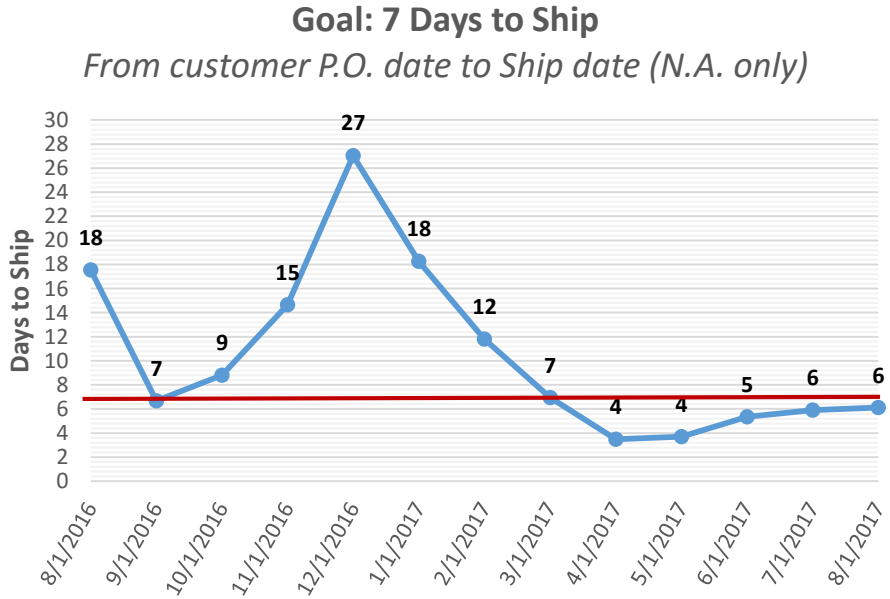
- Short timeline due to school start
- To be completed during the summer
- Expand onto existing wired system

Solution:

- Successful site survey
- 3 gateways almost fully loaded
- 140 devices, pull stations/monitor mod. at every door, cafeteria and sprinkler
- Delivery of parts in a matter of days!



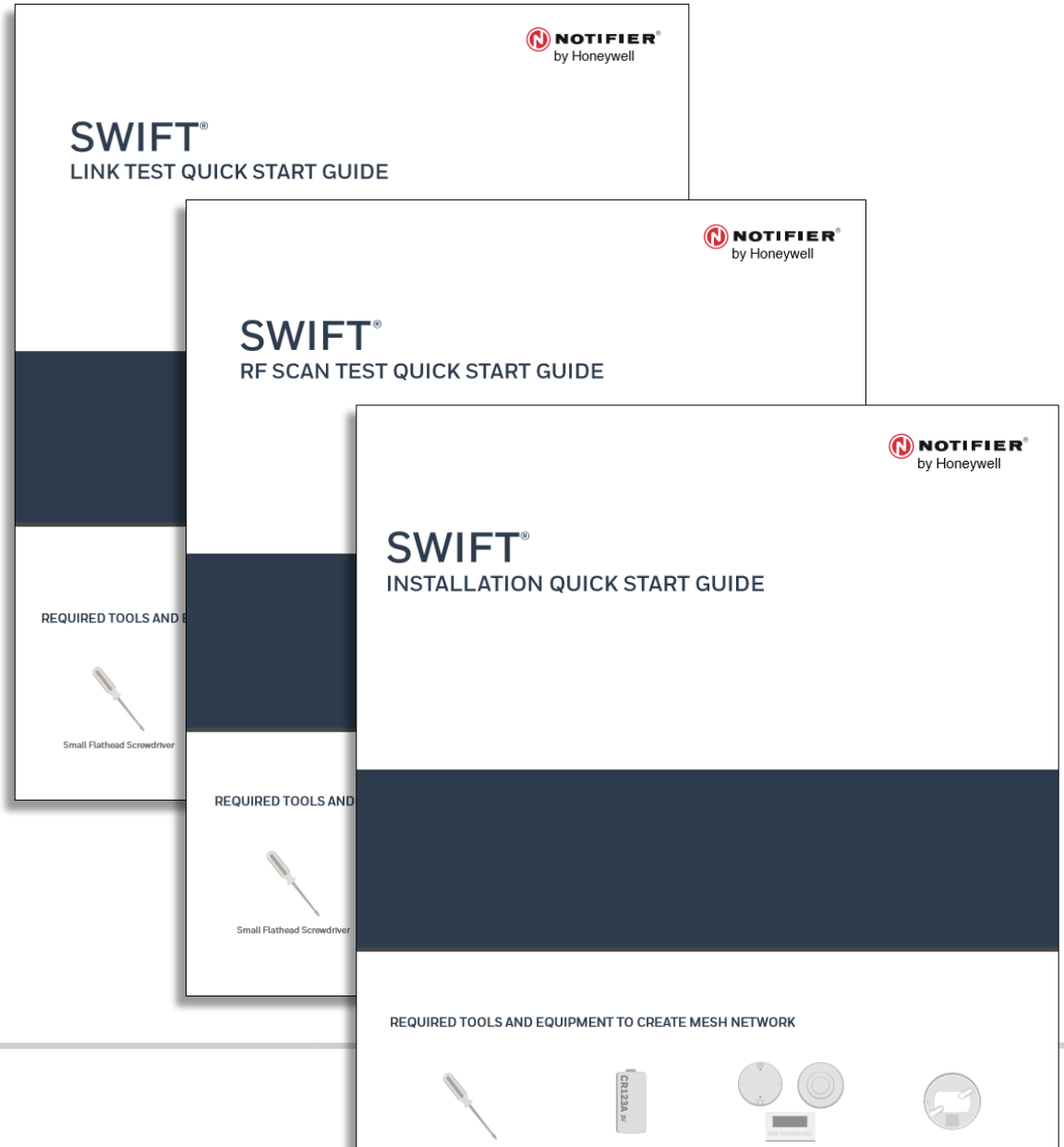
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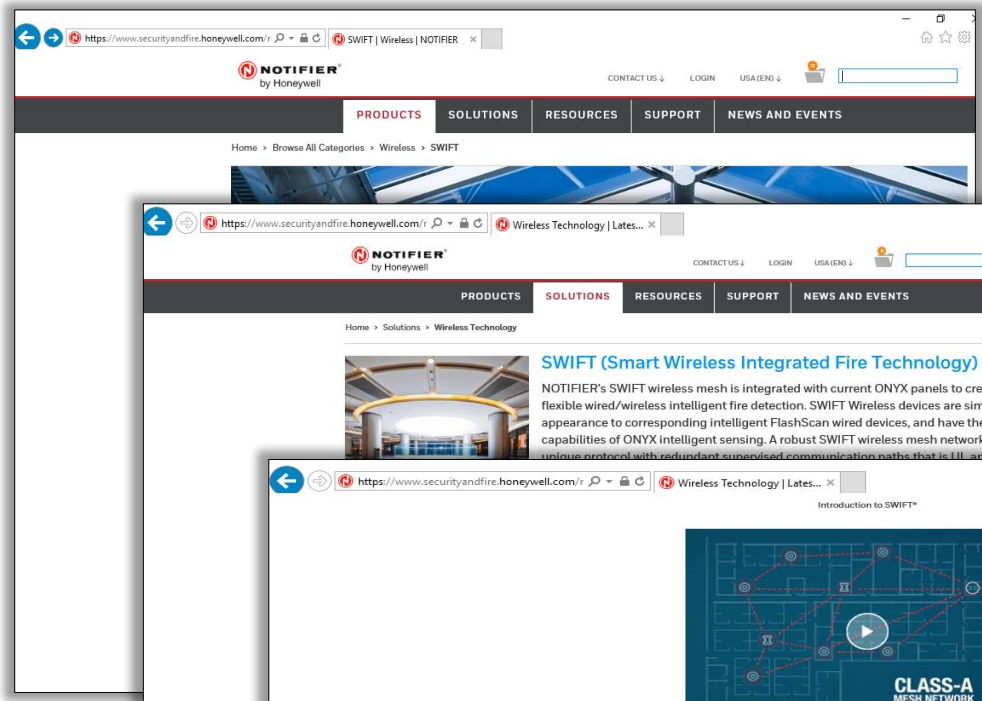
Resources Available

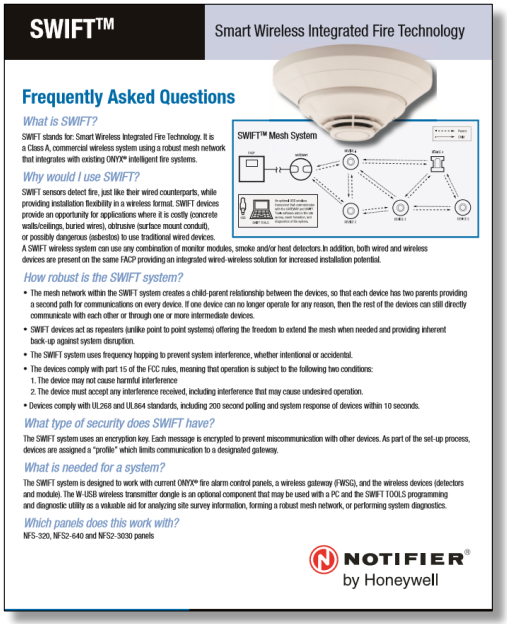
Resources and Support Available

- **Quick Start Guides**
  - Site survey: Link test and RF scan
  - Installation guide
- **Tech Support Team**



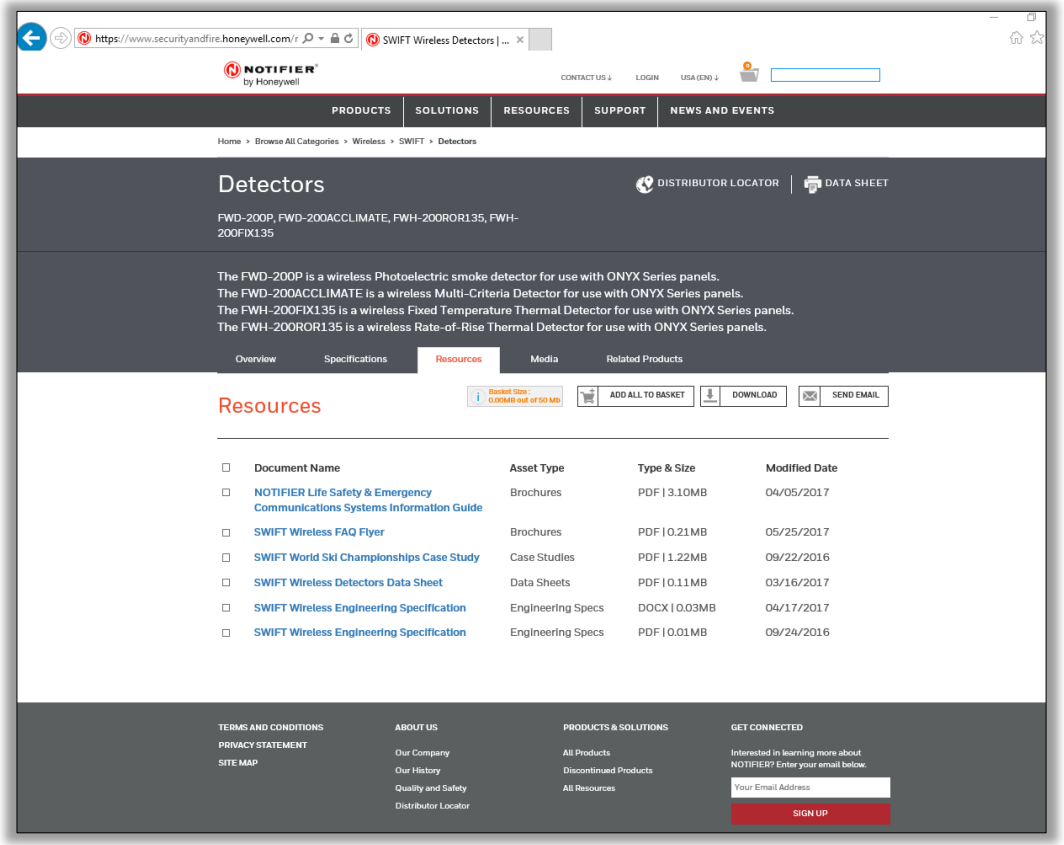
Resources and Support Available





Resources and Support Available

- Datasheets per product
- Installation manual
- Engineering specs



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- Participate in Polling and Conference Trivia
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- View Presenter Lists, Documents, Photos, and More!

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THANK YOU

NOTIFIER®
by Honeywell

Appendix

Repeaters

- Every device is also a repeater
  - Extending the distance at each location
  - Dedicated repeater network is not required
- Class A fault & Weak Link troubles
  - SWIFT Tools identifies poor connections
  - SWIFT Tools recommends placement of repeaters
    - Add a device in between to improve the signal strengths

