FWSG(A) SWIFT Wireless Gateway

The SWIFT® (Smart Wireless Integrated Fire Technology) Wireless System can be applied in many situations that are problematic for traditional wired devices. In cases where areas of a building are difficult or impossible to wire, visually sensitive, or have restricted access, SWIFT wireless sensors provide an efficient, reliable solution.

SWIFT wireless devices communicate via a proprietary wireless mesh protocol to communicate with NOTIFER® fire alarm systems by means of a SWIFT wireless gateway. The SWIFT gateway connects to the SLC loop of an N16, NFS2-3030, NFS2-640, NFS-320(C), (running version 24 firmware or higher) and the NFW-100X, or NFW-50X panel using FlashScan® protocol. (Canadian applications require FWSGA with NFS2-3030, NFS2-640 or NFS320C.) New type IDs for wireless devices are supported that allow the FACP to display all events such as alarms and trouble indications, as well as unique trouble conditions required for wireless devices. This capability eliminates the need for a supplementary annunciator for wireless event messages.

Wireless devices in a SWIFT network develop “parent-child” communication links with other devices in the mesh, so that a message originating from a remote device “hops” to the closest parent device, and then to successive parent devices until the message reaches gateway. Alternate paths are also identified and supervised by the SWIFT protocol providing approved Class A wireless communication. If a device does not have an established communication path with adequate signal strength, an additional device such as a wireless module may be installed in between so that it will act as a repeater.

A SWIFT gateway system supports up to 50 devices: 1 SWIFT gateway and up to 49 wireless detectors, modules, pull stations, and A/V bases. The maximum number of gateways on a system is limited by the number of available SLC addresses on the FACP, or a maximum of 4 gateways within common wireless range.

The SWIFT system has been designed so that it can be installed using only typical hand tools and magnets. However, the SWIFT Tools PC utility provides many benefits that can enhance the process of performing a site evaluation (Site Survey), installing a system (Mesh Configuration), or extracting detailed information from the system (Diagnostics). The utility runs on a Windows® laptop, and uses a USB radio antenna (W-USB) inserted into a USB slot to communicate with wireless devices within range of the PC. Once devices have formed a mesh, SWIFT Tools can provide current information on all devices in the mesh as long as the PC is within range of the SWIFT Gateway.

The result is a fire system that combines both wired and wireless detection and presents all event information at the panel and/or network displays, when used.

Features

- SWIFT wireless mesh protocol specifically for fire and life safety systems:
  - Operates in 902-928 MHz frequency.
  - Patented cascading-wave mesh operation provides a verification of redundant communication paths that has been approved for Class A.
  - In the event that a communication path is interrupted at any point by a change in the radio environment, the SWIFT mesh system will use the redundant or backup communication path.
  - In the event that any links cannot be established with sufficient signal strength, any SWIFT device can be added to act as a repeater, eliminating the need for wired repeaters. A wireless monitor module is recommended for this function, as modules are not subject to spacing requirements.
- Each SWIFT gateway system support up to 50 devices: 1 wireless gateway and up to 49 SWIFT devices.
- Multiple SWIFT wireless mesh networks can be installed on the same fire alarm control panel, or on multiple panels in the same area.
- Up to 4 wireless networks can be installed with overlapping radio network coverage.
- Site Survey feature allows for an evaluation of a site before the installation, including a series of point-to-point communication tests and a background scan for radio interference.
- SWIFT wireless devices use a standard “code wheel” mechanism for setting the SLC address.
- SWIFT wireless devices use (4) CR-123A lithium batteries (Panasonic CR123A or Duracell DL123A) which are UL listed for a battery life of 2 years.



Compatible Control Panels

NOTE: *Refer to panel documentation for UL/ULC compatibility.*

- N16 INSPIRE™ Series *(UL applications)*
- NFS2-3030
- NFS2-640
- NFS-320/C
- NFS-320SYS/C
- NFW-100X *(UL applications)*
- NFW-50X *(UL applications)*

SWIFT Tools

SWIFT Tools is a Windows PC-based utility that is used for site evaluation, system configuration, and diagnostics. The SWIFT Tools program is used with the W-USB adapter to communicate with wireless devices that are not joined in a network, or with one or more wireless gateways and all devices that have formed a network with each gateway. A graphic representation of the wireless network provides important system data in an effective format, including communication links, signal strength, battery voltage, and more.

Tool-less operation is supported, allowing you to perform site evaluation and system configuration and installation can be accomplished without using SWIFT Tools when necessary. Multi-colored LEDs on

SWIFT devices provide feedback for interactions. At any point, only one instance of SWIFT Tools can run on a laptop or PC.

SWIFT Tools has the following utilities:

- Site Survey
- Create Mesh Network
- Diagnostics

SWIFT Tools works in a wireless environment with the FWSG and devices within a range of approximately 20 feet. SWIFT Tools is designed for systems running Microsoft® Windows®.

MINIMUM SYSTEM REQUIREMENTS

Operating System: Windows 7 and Windows 8 (32 bit and 64 bit).

Hard Drive: 20 GB hard drive space with minimum 1GB free space on hard disk.

RAM: Minimum 512MB RAM.

Processor speed: 1GHz minimum (2.4 GHz recommended) Processor, 512K Cache.

Components and Ordering Information

NOTE: *Order "A" models for ULC applications.*

- **FWSG:** FlashScan Wireless SWIFT Gateway - 1 SWIFT Gateway is required for each wireless mesh, and supports up to 49 SWIFT detectors or modules. Connects to the SLC loop of a compatible panel using FlashScan protocol. Power may be supplied by the SLC circuit or via an optional 24VDC input.

  NOTE: *Use of the 24VDC input may be more convenient for service as it allows for powering down a gateway without shutting down an SLC loop.*
- **FWD-200P:** FlashScan intelligent, wireless photo detector. Requires one B210W base for installation. Requires (4) CR-123A batteries (included). UL applications.
- **FWD-200ACCLIMATE:** FlashScan intelligent wireless Acclimate® heat and photo detector using combined heat and smoke sensor information and the ability to automatically adjust sensitivity based on ambient changes in the environment. Requires one B210W base for installation. Requires (4) CR-123A batteries (included). UL applications
- **FWH-200ROR135(A):** FlashScan intelligent wireless rate of rise (135°) heat detector. Requires one B210W base for installation. Requires (4) CR-123A batteries (included). Order FWH-200ROR135A for ULC applications.
- **FWH-200FIX135(A):** FlashScan intelligent wireless fixed-temperature (135°) heat detector. Requires one B210W base for installation. Requires (4) CR-123A batteries (included). Order FWH-200FIX135A for ULC applications.
- **FW-MM(A):** FlashScan wireless monitor module. Used to monitor devices with mechanical contact actuation. Includes a special cover with a built-in tamper magnet. Recommended for installation in a SMB500-WH box (ordered separately) rather than a metal backbox for best performance. Ships with 4 Panasonic® CR123A or 4 Duracell® DL123A batteries. (See data sheet for more information). Order FW-MMA for ULC applications.
- **FW-RM(A):** Wireless relay module for use with the FWSG(A) wireless gateway. Includes a special cover with a built-in tamper magnet. Recommended for installation in an SMB500-WH box (ordered separately) rather than a metal backbox for best performance. Ships with 4 Panasonic CR123A or 4 Duracell DL123A batteries. Order FW-RMA for ULC applications.
- **NBG-12WL(A)**: Wireless addressable pull station. Requires (4) CR-123A batteries (included). Order **NBG-12WLA** for ULC applications.
- **NBG-12WLSP**: Wireless addressable pull station. Spanish text. Requires (4) CR-123A batteries (included).
- **WAV-CRL, WAV-CWL:** SWIFT Wireless Addressable A/V bases, ceiling use. Requires (8) CR-123A batteries (included). Requires a non-compact ceiling-mount System Sensor® L-series notification device (ordered separately).
- **WAV-RL, WAV-WL:** SWIFT Wireless Addressable A/V bases, wall use. Requires (8) CR-123A batteries (included). Requires a non-compact wall-mount System Sensor® L-series notification device (ordered separately).
- **W-SYNC:** Wireless sync module. Requires (4) CR-123A batteries (included).
- **SMB500-WH:** Optional surface-mount backbox.
- **B210W:** Detector base used for wireless detectors. Includes a built-in magnet so that wireless devices can establish installed and tampered states.
- **SWIFT Tools:** Programming and diagnostic utility. Free download from www.notifier.com. For installation on a (typically laptop) PC running an approved version of Windows (See Minimum System Requirements for SWIFT Tools). Requires the W-USB radio/antenna dongle for communication with SWIFT Wireless devices.

  NOTE: *SWIFT Tools is intended for use with NOTIFIER branded products and can also be used with Fire•Lite® branded wireless products. It will not work with other brands.*
- **W-USB:** Wireless USB radio/antenna dongle that plugs into the USB port of a PC running SWIFT Tools. The W-USB provides a communication link with SWIFT Wireless devices that are within approximately 20 feet and have not formed a mesh. Alternately, when the devices have formed a mesh, bringing the PC/W-USB within range (20 ft.) of the gateway for that mesh will allow SWIFT Tools to acquire information on all devices in that mesh, including point-to-point signal strength for all links.
- **W-BATCART:** Wireless battery cartridge, 10-pack. For use with wireless pullstations and A/V bases.

Physical Specifications

Height: 1.875” (4.5 cm)

Diameter: 7.875” (20 cm)

Operating Specifications

Operating Temperature Range: 32°F to 120°F (0°C to 49°C)

Operating Humidity Range: 10% to 93% non-condensing

Electrical Specifications

External Supply Electrical Ratings: 18V - 30VDC

SLC Electrical Ratings: 15V - 30VDC

Maximum ambient noise level: -85 dBM

Minimum signal strength level for trouble report: -55 dBM

Maximum RF power output: +17 dbM

Radio Frequency: 902-928 Hhz (lower ISM band)

FWSG(A):

– Maximum current (when powered by 24VDC): 40 mA

– Maximum current (when powered by SLC): 24 mA

Agency Listings and Approvals

The file number(s) below reference the specific listings for the FWSG(A). In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult the factory for latest listing status.

- **UL Listed:** S635
- ULC Listed: S635
- **CSFM:** 7300-0028:0272
- **NYC Fire Dept:** COA #6180
- **FM Approved**
- **FCC ID:** PV3WFSGW
- **IC ID:** 12252A-WFSGW

Each device complies with part 15 of the FCC rules meaning operation is subject to the following two conditions: 1) The device may not cause harmful interference and 2) The device must accept any interference received including interference that may cause undesired operation.

Standards and Codes

The SWIFT Wireless System complies with the following standards and with NFPA 72 Fire Alarm system requirements.

- UL 864
- UL 268
- ULC S524 (when used with Canadian models)

ISO 9001 CERTIFIED
ENGINEERING & MANUFACTURING QUALITY SYSTEMS

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We cannot cover all specific applications or anticipate all requirements.
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