

## WSK-WGI

### 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 a Silent Knight® fire alarm system by means of a SWIFT wireless gateway. The SWIFT gateway connects to the SLC loop of a 6700, 6808, 6820/EVS panel using SK protocol. 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, pullstations, 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.



## FEATURES & BENEFITS

- Wireless mesh technology (902-928 MHz frequency)
- Any wireless device can be added to act as a repeater
- Cascading-wave mesh operation provides a verification of redundant communication paths
- Each SWIFT gateway system supports up to 50 devices: 1 wireless gateway and up to 49 devices
- Standard "code wheel" for setting the SLC address
- 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
- Wireless devices use (4) CR-123A lithium batteries
- Battery Life – UL listed for 2 years

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.

## Compatible Control Panels

- 6700
- 6808
- 6820
- 6820EVS

## 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 WSK-WGI 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.

## SWIFT Components and Ordering Information

- **WSK-WGI:** 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 SK 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.

- **WSK-PHOTO:** Intelligent, wireless photo detector. Ships with B501W base included. Requires (4) CR-123A batteries (included).
- **WSK-HEAT-ROR:** Intelligent wireless rate of rise (135°) heat detector. Ships with B501W base included. Requires (4) CR-123A batteries (included).
- **WSK-PHOTO-T:** Intelligent wireless photo/heat detector. Ships with B501W base included. Requires (4) CR-123A batteries (included).
- **WSK-HEAT:** Intelligent wireless fixed-temperature (135°) heat detector. Ships with B501W base included. Requires (4) CR-123A batteries (included).
- **WSK-MONITOR:** 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. Requires (4) CR-123A batteries (included).
- **WSK-RELAY:** Wireless relay module for use with the WSK-WGI 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. Requires (4) CR-123A batteries (included).
- **WAV-CRL, WAV-CWL:** SWIFT Wireless Addressable A/V bases. Requires (8) CR-123A batteries (included). Requires a non-compact ceiling 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.
- **SWIFT Tools:** Programming and diagnostic utility. Free download from [www.silentknight.com](http://www.silentknight.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.

- **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 the wireless pullstations and A/V bases.

# WSK-WGI Technical Specifications

## PHYSICAL

Height: 1 7/8" (4.5 cm)

Diameter: 7 7/8" (20 cm)

## OPERATING

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

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

## ELECTRICAL

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 Hz (lower ISM band)

## VW-GATE:

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

Maximum current (when powered by SLC): 24 mA

## VW-DIS-D:

Maximum current: 30 mA

Maximum SLC resistance: 50 ohms

## AGENCY LISTINGS AND APPROVALS

The listings and approvals below apply to the WSK-WGI. In some cases, certain modules may not be listed by certain approval agencies or listing may be in process. Consult factory for latest listing status.

UL Listed: S3511

CSFM: 7300-0559:0510

FM Approved

FCC ID: PV3WFSGW

## STANDARDS AND CODES

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

UL 864

UL 268

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