



by Honeywell

SWIFT™ Wireless Gateway

Description

SWIFT Wireless Systems provide a flexible, reliable solution for many applications that are problematic for traditional wired devices. The Gamewell-FCI, SWIFT™ Wireless Gateway connects to the SLC loop of an E3 Series® or an S3 Series control panel using the Velociti® protocol to communicate via the SWIFT Gateway. It can use up to 48 wireless sensors and monitor modules. This feature results in a system that combines the advantages of wired and wireless detection. In addition, it seamlessly presents both critical and routine device information to the end user.

SWIFT wireless devices communicate via a proprietary wireless mesh protocol to communicate with the Gamewell-FCI, E3 Series and S3 Series fire alarm systems by using the SWIFT Wireless Gateway. This gateway is the hub of one wireless network as well as the interface to the fire alarm control panel. The SWIFT Gateway connects to the SLC loop of an E3 and an S3 Series using the System Sensor Velociti protocol. New type IDs for wireless devices are supported that allow the FACP to display all events such as alarms and trouble indications. Unique trouble conditions required for wireless devices will be displayed on a supplementary annunciator for wireless event messages.

The SWIFT wireless devices use a unique patented cascading mesh protocol with a redundant communication pathway verification. The feature is capable of dynamically responding to changes in the environment. You can use a maximum of four mesh systems in an overlapping area. In addition, you can have multiple non-overlapping areas on a single panel. Since SWIFT devices operate as a mesh system, each device is capable of also acting as a repeater, eliminating the need for wired repeaters.

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 subsequently links to the successive parent devices until the message reaches the gateway. Alternate paths are also identified and supervised by the SWIFT protocol providing approved Class A wireless communication. In the event of a communication disruption in the wireless network, the mesh will automatically reconfigure the communication paths as necessary so that the best quality links between devices will be used. 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.

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SWIFT, Wireless Gateway System



SWIFT Wireless Gateway

Features

- Complies with UL® Standard 864, including 200 second polling and providing system response of devices within 10 seconds.
- SWIFT Cascading Mesh wireless protocol is specifically used for fire and life safety systems:
 - Supports mesh operation that provides verification of the redundant communication path that has been approved as Class A.
 - Automatically locates the strongest signal path for each device through mesh restructuring.
 - Each SWIFT device acts as repeaters in the mesh network, eliminating the need for wired repeaters.
 - Uses frequency hopping to prevent outside interference, whether intentional or accidental.
- Each SWIFT wireless gateway supports up to 48 SWIFT devices:
 - 1 wireless gateway
 - 1 display driver
 - up to 48 SWIFT sensors and modules
- Multiple SWIFT wireless mesh networks can be installed on the same fire alarm control panel, or installed on multiple panels in the same area.
- Up to 4 wireless networks can be installed with an overlapping radio network coverage.
- Site Survey feature offers an evaluation of a site before the installation, including an evaluation of a series of point-to-point communication tests and a background scan for radio interference.

SIGNALING



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COA #: 6186 7300-1703:0180



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Specifications are for information only, are not intended for installation purposes, and are subject to change without notice. No responsibility is assumed by Gamewell-FCI for their use.

Description (Continued)

One SWIFT Gateway System supports the following:

- up to 48 devices, comprised of one SWIFT Gateway and one SWIFT display driver.
- up to 48 wireless sensors and monitor modules.

The Gateway assumes one SLC address (module), and each wireless device assumes one module or detector address. 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 the common wireless range.

The SWIFT system has been designed so that it can be installed using only typical tools and magnets. 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).
- 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. This antenna communicates with the wireless devices within range of the PC. After the devices have formed a mesh, the SWIFT TOOLS can provide the current information on all devices in the mesh as long as the PC is within the range of the SWIFT Gateway.

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

SWIFT TOOLS is a Windows® PC-based utility that is used for the following:

- site evaluation
- system configuration
- diagnostics

A graphic representation of the wireless network provides important system data in an effective format, including communication links, signal strength, battery voltage, and more. The Site Survey feature provides the following:

- An evaluation of a site before the installation.
- A series of point-to-point communication tests.

Figure 1 illustrates the SWIFT Mesh Network.

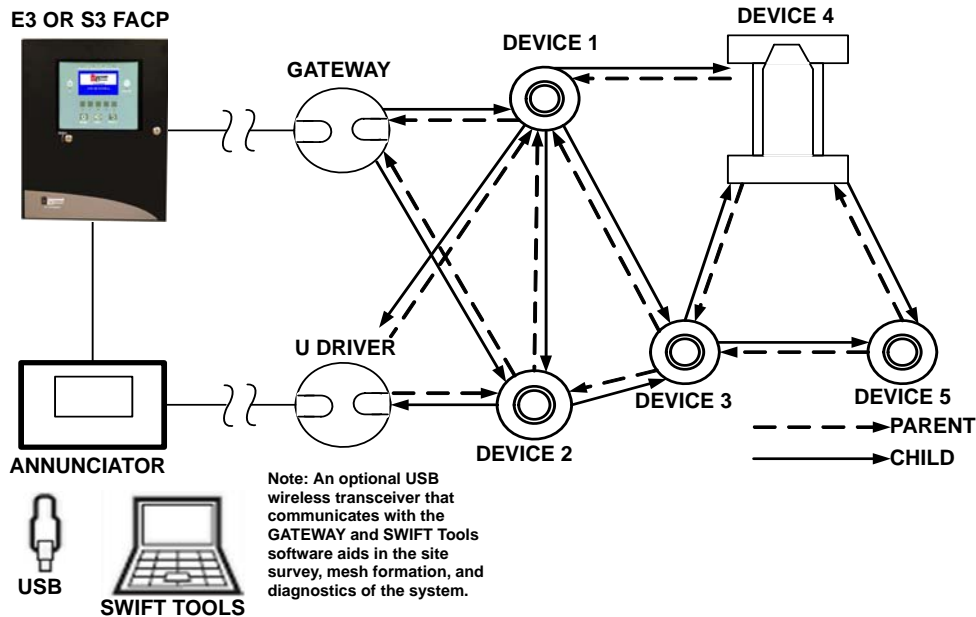


Figure 1 SWIFT Mesh Network

Features (Continued)

- A background scan to test for radio interference.
- SWIFT TOOLS is a 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 joined with one or more wireless gateways and all devices that form a network with each gateway.
- SWIFT devices use a standard "code-wheel" mechanism for setting the SLC address.
- Tool-less operation is supported for setting up a wireless network without a PC.
- SWIFT wireless devices use four CR-123A lithium batteries (Panasonic CR123A or Duracell DL123A) which are UL listed for 1 year of operation. The actual battery life is expected to be approximately 2.5 years.

SWIFT Components

Component	Description
VW-GATE	<p>Velociti Wireless SWIFT Gateway:</p> <ul style="list-style-type: none"> • One SWIFT Gateway is required for each wireless mesh, and supports up to 48 SWIFT detectors or modules. • Connects to the SLC loop of a compatible panel using Velociti protocol. • Power may be supplied by the SLC circuit, or via an optional 24VDC input.

Note: The 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).

WSD-P	<p>Velociti Wireless Photoelectric Sensor Requires 1 B210W base for installation and 4 CR-123A batteries (included).</p>
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WSD-ACCLIMATE	<p>Velociti Wireless Multi-Criteria Sensor Intelligent SWIFT Acclimate detector provides the following Acclimate features:</p> <ul style="list-style-type: none"> • Advanced sensing using combined heat and smoke sensor information. • The ability to automatically adjust sensitivity based on ambient changes in the environment.
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Requires one B210W base for installation and four CR-123A batteries (included).

WTD-RH	<p>Velociti Wireless Thermal Detector Rate-of-Rise, 135° Requires one B210W base for installation and four CR-123A batteries (included).</p>
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WTD-H	<p>Velociti Wireless Thermal Detector, Fixed Temp, 135° Requires one B210W base for installation and four CR-123A batteries (included).</p>
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B210W	<p>Wireless 6" (15.23cm) flanged Base includes a built-in magnet so that wireless devices can establish installed and tamper states. Includes a built-in magnet so that wireless devices can establish installed and tampered states.</p>
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WAM-MM	<p>Wireless Monitor module. Used to monitor devices with mechanical contact actuation. Recommended for installation in a SMB500 box (ordered separately) rather than a metal backbox for best performance. Ships with a special cover with a tamper built-in magnet. Ships with 4 Panasonic CR123A or 4 Duracell DL123A batteries.</p>
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SWIFT TOOLS programming and diagnostic utility	<p>Free download from Gamewell-fci.com/esd/downloads or Systemsensor.com. For an installation on a (typical laptop) PC, running Windows, it requires the W-USB radio/antenna for communication with SWIFT Wireless devices.</p>
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SWIFT Components (Continued)

Component	Description
W-USB	<p>Wireless USB radio/antenna 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.) (6.096 m) of the gateway for that mesh, it will allow SWIFT TOOLS to acquire information on all devices in that specific mesh, including point-to-point signal strength for all links.</p>

SWIFT Intelligent Wireless Gateway Specifications

Physical Specifications:

Height:	1 7/8" (4.5 cm)
Diameter:	7 7/8" (20 cm)

Operating Temperature Range:

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

VW-GATE:

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

VW-DIS-D:

Maximum current (when powered by 24 VDC):	30 mA
Maximum SLC resistance:	50 ohms
Minimum signal strength level for trouble report:	-55 dBm
Maximum ambient noise level:	-85 dBm
Maximum RF power output:	+17 dBm
Radio Frequency:	902-928 Hhz (lower ISM band)

Ordering Information

Part Number	Description
VW-GATE	SWIFT Wireless Gateway
VW-DIS-D	SWIFT Wireless Display Driver, requires GFANN-80-W annunciator

* **Note:** Consult with the Fire Alarm Control Panel Manufacturer to obtain the complete system requirements.

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