

# Waterfall Secure Bypass

Secure On-Demand Time-Limited Bi-Directional Communications



- Control access from corporate networks
- Enables remote vendor and emergency support
- Enables central engineering teams
- Hardware-enforced time limits on remote access
- Automatic notifications

***Would you rather be:***

***100% secure  
99% of the time,***

***or 99% secure  
100% of the time?***

## Overview

The Waterfall Secure Bypass provides a time-limited bi-directional connection between two networks. When the Secure Bypass unit is activated, a relay closes creating an electrical connection between input and output networks.

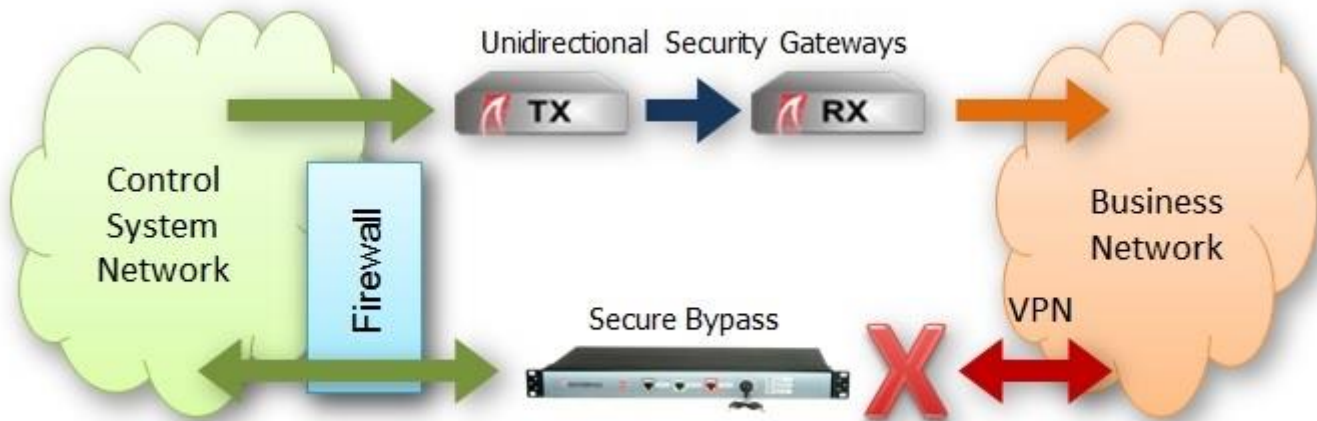
Waterfall's Secure Bypass is often deployed in parallel with Unidirectional Security Gateways. While the Secure Bypass is not active, the gateways provide 100% protection from online attacks from external networks. Since the Secure Bypass is generally deployed between a control network firewall and the corporate network, when the Secure Bypass is activated, a temporary connection to a control system firewall is enabled.

Together, Unidirectional Security Gateways and a Secure Bypass module render "Advanced Persistent Threat" type attacks ineffective, because of the very limited windows during which APT actors can exercise manual remote control.

## Benefits

Secure Bypass is used routinely for remote vendor support and emergency remote support. When problems arise on a control system network, the Secure Bypass is activated and remote personnel can gain access to the control network firewall, temporarily. The Secure Bypass eliminates wiring errors. The hardware timer in the Secure Bypass unit eliminates the risk of forgetting to disable the emergency two way connection when the emergency or support problem has been resolved.

Secure Bypass enables central engineering teams to access control system networks from time to time to apply security updates, anti-virus signature updates, and other routine changes and maintenance.



*A typical Secure Bypass configuration, in parallel with Unidirectional Security gateways*

The Secure Bypass allows operations teams to apply discipline to network changes initiated by external IT or engineering resources. Access to plant networks need only be enabled when appropriate Engineering Change Control and other operations procedures and reviews are complete. Random access to operations resources are prohibited by the Secure Bypass hardware, even by well-meaning external personnel with administrative permissions and passwords.

Deployment of Secure Bypass in parallel with Unidirectional Security Gateways results in dramatically simplified and more secure control network firewalls. In such deployments, plant data is transmitted to corporate networks through the 100% secure Unidirectional Gateways communications channel. What remains configured in the industrial network firewall is a limited number of remote VPN and other kinds of connections. This simplified firewall configuration is easier and less costly to maintain, to audit, to test and to assess than are the very complex conventional firewall configurations, with many kinds of allowed connections configured.

### Highlighted Features

The Secure Bypass module is configured through a dedicated port. The connection and disconnection of networks through Secure Bypass is carried out via a hardware relay. When the networks are disconnected, there is no way a distant adversary can force the Secure Bypass unit to connect its networks. When connected, there is no attack a distant adversary can launch which can prevent the Secure Bypass controller from disconnecting the networks after a pre-set period.

Activation of the Secure Bypass can be via a manual key on the front panel, or via a signal to a serial port. An optional notifications software package can notify appropriate authorities when the Secure Bypass opens or closes. The Secure Bypass supports both 100Mbps and 1Gbps network connections.

### Specifications

<b>Network Interfaces:</b> 10/100/1000 Base-T	<b>Dimensions:</b> 19" x 1U x 10" 482 x 43.5 x 253 mm	<b>Temperature:</b> Operating: 32°-122° F / 0°-50° C Storage: 14°-158° F / -10°-70° C	<b>Humidity Range:</b> 0-95% at 113° F/ 45° C non-condensing
<b>Weight:</b> 3.86 lbs./ 1.75 Kg			

**USA** V: +1 (703) 840-5452  
F: +1 (703) 840-5401

**International** V: +972 3-900-3700  
F: +972 3-900-3707

**Information:** info@waterfall-security.com  
**Sales:** sales@waterfall-security.com

Intellectual property notice: Waterfall's products are covered by U.S. Patents 7,649,452, 8,223,205, and by other pending patent applications in the US and other countries. "Waterfall", the Waterfall Logo, "Stronger than Firewalls", and "One Way to Connect" are trademarks of Waterfall Security Solutions Ltd. All other trademarks mentioned above are the property of their respective owners. Waterfall Security reserves the right to change the content at any time without notice. Waterfall Security makes no commitment to update content and assumes no responsibility for any mistakes in this document. Proprietary Information – Copyright © 2016 Waterfall Security Solutions Ltd. All Rights Reserved.