

PRODUCT BROCHURE

FLIP 

SAFE SCHEDULED UPDATES TO INDUSTRIAL PROCESSES

Many industrial control systems require regular updates of anti-virus signatures, batch production orders and other items. Every path for such updates through a firewall though, introduces attack opportunities, since all firewalls are software and all software can be hacked or misconfigured. The Waterfall FLIP is a type of Unidirectional Gateway whose orientation can be reversed, enabling disciplined scheduled updates without the vulnerabilities firewalls always introduce.

Industrial customers report that robust unidirectional IT/OT integration reduces risks of unplanned shutdowns, equipment damage and safety risks, reducing costs and simplifying safety, security & compliance programs.

**REAL-TIME MONITORING
WITH DISCIPLINED UPDATES**

disciplined, scheduled updates to unidirectionally-protected networks

**STRONGER
THAN FIREWALLS**

hardware-enforced protection that never forwards network traffic



**SERVER REPLICATION
FOR SEAMLESS INTEGRATION**

IT and industrial clients access replica servers normally and interactively

**EXTENSIVE
INDUSTRIAL SUPPORT**

100+ Waterfall connectors for replicating industrial servers and devices

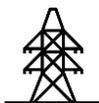
Protecting industrial sites worldwide since 2007



Rails



Oil & Gas



Power



Manufacturing



Water



Pharma

Safe IT/OT integration

enabling safe upgrades and updates

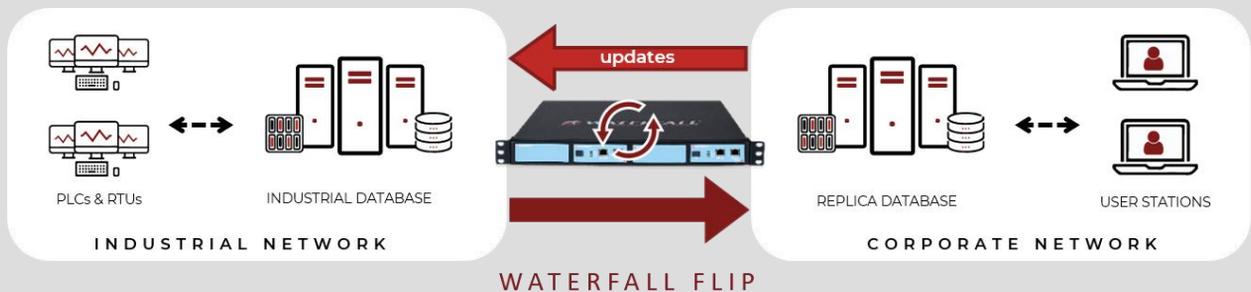
Theory of Operation

The FLIP is a combination of hardware and software. The hardware includes a TX Module, containing a fiber-optic transmitter/laser, and an RX Module, containing an optical receiver, but no laser. A short fiber-optic cable connects the two hardware Modules. The FLIP is therefore able to transmit information in only one direction at a time. While the FLIP hardware transmits information from a source network to a destination network, that hardware is physically incapable of transmitting any information back from the destination network into the source network. Hardware orientation reversals are triggered by dedicated hardware on a schedule, or by manual activation from the front panel of the FLIP Module.

The FLIP software replicates servers and emulates devices. Clients and users on each network access the replicas as if they were the originals, making the FLIP a plug-and-play replacement for software firewalls. Unlike firewalls, the FLIP is not a router and is incapable of forwarding network traffic or network attacks.

WATERFALL FLIP IN 4 STEPS

- 1**
CONNECT
 the industrial network safely to the IT network
- 2**
PROTECT
 the industrial network with hardware enforced technology
- 3**
REPLICATE
 operational servers to the IT network in real-time
- 4**
REVERSE
 gateway orientation periodically for safe updates of OT systems



Simplifies Compliance

- » **ICS Security Standards:** ANSSI, IEC 62443, NERC CIP
- » **Best Practices:** DHS Defense in Depth. DHS Seven Steps to Improve ICS Security
- » **Security Frameworks:** NIST Cybersecurity Framework, IIC Cybersecurity Framework

ABOUT WATERFALL SECURITY

Waterfall Security Solutions is the global leader in industrial cybersecurity technology. Waterfall products, based on innovative Unidirectional Security Gateway technology, represent an evolutionary alternative to firewalls. The company's expanding array of customers includes national infrastructures, power plants, rails, nuclear plants, onshore and offshore oil and gas facilities, refineries, manufacturing plants, utility companies, and many more. Deployed throughout North America, Europe, the Middle East and Asia, Waterfall products support the widest range of leading industrial remote monitoring platforms, applications, databases and protocols in the market. For more information, visit www.waterfall-security.com

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