Remote access to industrial control systems is high risk: stolen passwords and two-factor devices introduce vulnerabilities to control systems. In addition, when a firewall is hacked, attackers gain direct access to critical systems, while third-party personnel threaten reliable operations when remote changes are made outside of a site’s change control procedures. The Waterfall Secure Bypass Module provides physical protection for emergency and other remote support mechanisms, and gives the industrial site physical control over enabling the frequency and duration of remote access.

**Protecting industrial sites worldwide since 2007**

- Rails
- Oil & Gas
- Power
- Manufacturing
- Water
- Facilities

**PHYSICAL CONTROL**
over the frequency and duration of remote access

**REDUCES ERRORS & OMISSIONS**
built-in timer automatically disconnects remote access and restores unidirectional state

**SECURE & DISCIPLINED REMOTE ACCESS**
for unidirectionally-protected sites

**PHYSICAL PROTECTION**
from vulnerabilities inherent to software-based VPN and other remote access technologies

**On-site control of remote access**

**Shield remote access from attacks**
Waterfall's Secure Bypass Module is deployed in parallel with Unidirectional Security Gateways. While the module is not engaged, the Gateways provide 100% protection from external online attacks. When activated, the Secure Bypass Module enables time-limited bi-directional connectivity to a unidirectionally-protected network for plant emergencies and scheduled changes as well as vendor, IT, internal support and other remote access needs.

When remote connectivity is enabled, the Secure Bypass Module electrically connects remote-access equipment to an external network. The SBP Module can be activated with a physical button or key, on a timer, or by a signal from the protected network. A timer in the Module automatically disconnects the remote-access equipment again after a preset interval. While the Secure Bypass Module is engaged, the Unidirectional Gateway continues to operate without interruption.

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**Theory of Operation**

**UNIDIRECTIONAL CONNECTIVITY WITH TEMPORARY REMOTE ACCESS**

1. **CONNECT**
   - the industrial network safely to the IT network

2. **PROTECT**
   - the industrial network with hardware enforced technology

3. **ACTIVATE**
   - bi-directional communications temporarily

4. **ACCESS**
   - the industrial network remotely

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**ABOUT WATERFALL SECURITY**

Waterfall Security Solutions is the OT security company, producing a family of Unidirectional Gateway technologies and products that enable enterprise-wide visibility for operations, with disciplined control. Waterfall products represent an evolutionary alternative to firewalls. The company’s growing list of customers includes national infrastructures, power plants, nuclear plants, off and on shore 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, please contact info@waterfall-security.com

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