DATA SHEET

UNIDIRECTIONAL SECURITY GATEWAY
WF-500

Waterfall’s flagship Unidirectional Security Gateway WF-500 replaces firewalls in industrial network environments, providing absolute protection to control systems and industrial control networks from attacks emanating from external less-trusted networks.

Unidirectional Gateways contain both hardware and software components, and ensure data flow in one direction only, from the ICS network to the IT network, providing 100% protection from remote cyber threats.

UNIDIRECTIONAL SECURITY GATEWAY 1-2-3

1. GATHERS DATA
   TX Host: gathers data from industrial servers and devices in the ICS network.
   TX Module: a transmitter only containing a fiber-optic laser.
   Fiber optic cable: connects TX module to RX module, permitting data flow in one direction only and preventing data from entering back into the protected network.

2. TRANSMITS SAFELY
   RX Module: an optical receiver only.
   RX Host: replicates & emulates a wide array of industrial servers, devices, protocols and other systems on the IT network.

COMBINATION OF HARDWARE & SOFTWARE

OUR HARDWARE MAKES YOU SECURE

Our hardware makes you secure

1Gbps standard throughput, multi-Gbps with several TX/RX pairs
Optional HA configuration (high-availability)
Front panel cabinet connections for clear system visibility
Wide variety of COTS software connectors, no customization fees
Flexible connector hosting supporting all major OS

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### Technical Specifications

#### 100+ COTS Connectors

Waterfall connectors can run on customer supplied servers, virtual machines or Waterfall Host Modules. Waterfall connectors are supported on Windows, Linux, Solaris, AIX, VxWorks & other operating systems.

#### Historians & Industrial Applications
- Osisoft: PI System, PI Asset Framework, PI Backfill
- GE: iHistorian, iHistorian Backfill, OSM, Bently-Nevada System1, Proficy HMI
- Schneider-Electric: Instep eDNA, Wonderware Historian, Wonderware Historian Backfill, ClearSCADA
- Siemens: SIMATIC, WinCC, WinTS, SINAUT, Spectrum
- Emerson: Ovation, EDS, EMS
- Areva: PowerPlex, PowerTrax
- AspenTech IP.21, Rockwell FactoryTalk Historian, Honeywell Alarm Manager, Scientech RT/Time

#### IT Applications
- FireEye: TAP, Helix and Faas
- Log Files, SMTP, SNMP, Syslog, CA Unicenter, CA SIM
- HP Openview, IBM Tivoli, HP ArcSight, McAfee ESM, Splunk, QRadar
- MSMQ, IBM Websphere MQ, Active Message Queue, TIBCO
- SAP

#### Industrial Protocols
- OPC DA, A&E, HDA, HDA Backfill and UA
- Siemens S7, Modbus, Modbus Plus, DNP3, ICCP, IEC 60870-5-104, IEC 61850

#### Remote Access
- Remote Screen View
- Secure Bypass (SBP)

#### File Transfer
- Folder mirroring, Rsync, Local Folders
- FTP, FTPS, SFTP, TFTP, RCP, SMB, HTTPFS
- NFS, CIFS

#### Relational Databases
- Microsoft SQL Server, Oracle
- MySQL, PostgreSQL

#### Other Connectors
- UDP, TCP, NTP, Multicast Ethernet
- Video & audio streaming
- Anti-virus updater, WSUS updater, OPSWAT updater
- Remote printing

### Components

<table>
<thead>
<tr>
<th>Component</th>
<th>WF-500 TX</th>
<th>WF-500 RX</th>
<th>WF-500 HOST</th>
<th>WF-500 FLIP</th>
<th>WF-500 SBP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper Network Intf</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Fiber Network Intf</td>
<td>1</td>
<td>1</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Network Intf</td>
<td>1000 Mbps</td>
<td>1000 Mbps</td>
<td>10 / 100 / 1000 Mbps</td>
<td>1000 Mbps</td>
<td>10 / 100 / 1000 Mbps</td>
</tr>
<tr>
<td>Dimensions</td>
<td>18.6 x 4 x 26.5 cm</td>
<td>18.6 x 4 x 26.5 cm</td>
<td>18.6 x 4 x 26.5 cm</td>
<td>41.8 X 4 X 26.5 cm</td>
<td>18.6 x 4 x 26.5 cm</td>
</tr>
<tr>
<td>Weight</td>
<td>0.8 kg</td>
<td>0.8 kg</td>
<td>1.2 kg</td>
<td>1.8 kg</td>
<td>0.8 kg</td>
</tr>
<tr>
<td>Optional Serial Port</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>1</td>
<td>1</td>
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</table>

### Form Factors

<table>
<thead>
<tr>
<th>Component</th>
<th>WF-500 SCAB</th>
<th>WF-500 CCAB</th>
<th>WF-500 DIN RAIL</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>Standard Cabinet</td>
<td>Compact Cabinet</td>
<td>DIN Rail</td>
</tr>
<tr>
<td>Modular Capacity</td>
<td>2</td>
<td>4</td>
<td>n/a</td>
</tr>
<tr>
<td>Power Supply</td>
<td>2 per side (4)</td>
<td>2 per side (4)</td>
<td>2 per system</td>
</tr>
<tr>
<td>Dimensions</td>
<td>48.3 x 4.4 x 52 cm</td>
<td>48.3 x 4.4 x 76 cm</td>
<td>11.3 X 21.3 X 25 cm</td>
</tr>
<tr>
<td>Weight</td>
<td>2.5 kg</td>
<td>4 kg</td>
<td>3 kg</td>
</tr>
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</table>

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