



BAYSHORE NETWORKS

INDUSTRIAL AND IT NETWORK SECURITY



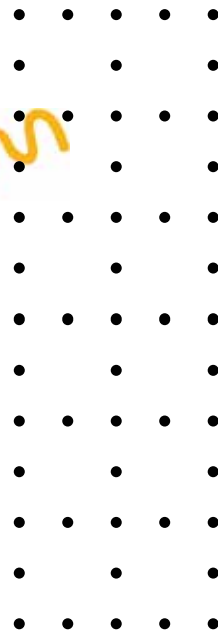
Support for OPC DA, A&E, and UA, plus Modbus/TCP, file transfers, and tcp/udp sockets



NetWall BSG™

BILATERAL SECURITY GATEWAY FOR IT AND OT

Datasheet



Process control networks and their critical assets are usually isolated from other networks in an effort to protect them from cyberattack and to protect the sensitive data they contain. Extracting useful data in a controlled fashion from a protected network can prove to be a challenge.

Usually, rules are added to an existing firewall, or a next generation firewall (NGFW) is put into place to facilitate the data transfer. However, any firewall can ultimately be compromised. NetWall was designed to resolve your data extraction needs while at the same time protecting your networks in a way that firewalls never can.



THE SOLUTION

NetWall security gateway for IT and OT is a high-speed, hardware and software solution that enforces data replication in only one direction for Unidirectional mode but allows data to be returned back as a reply in Bilateral mode.

It creates a secure network segment when installed, shielding and isolating critical assets and sensitive networks from cyberattack and misuse.

At the same time, NetWall supports real-time file and data replication outside the electronic perimeter to corporate business systems such as ERP, MES, PLM, PIM and others.

NetWall can securely transfer control system data, logfiles, database records and other pertinent data to IT data centers, security operations centers (SOCs) and cloud-based data storage.

NetWall's OPC UA support means that popular SCADA systems which use OPC UA as one of their core transport options, such as Inductive Automation's IGNITION platform, can now be replicated unilaterally between server nodes, with full fidelity of the entire schema and zero risk of controls being inserted from the destination network.

NetWall Bilateral Security Gateway incorporates all the features of the Unidirectional version as well as the ability to receive data from selected sources on the untrusted network. A TCP connection is initiated from the trusted network to a source (such as Microsoft SQL Server) on the untrusted network using the NetWall Bilateral Security Gateway. The source may respond with data back to the initiator. However, no connection can be initiated from the untrusted network back to the trusted network.

Key Features & Benefits for Corporate IT

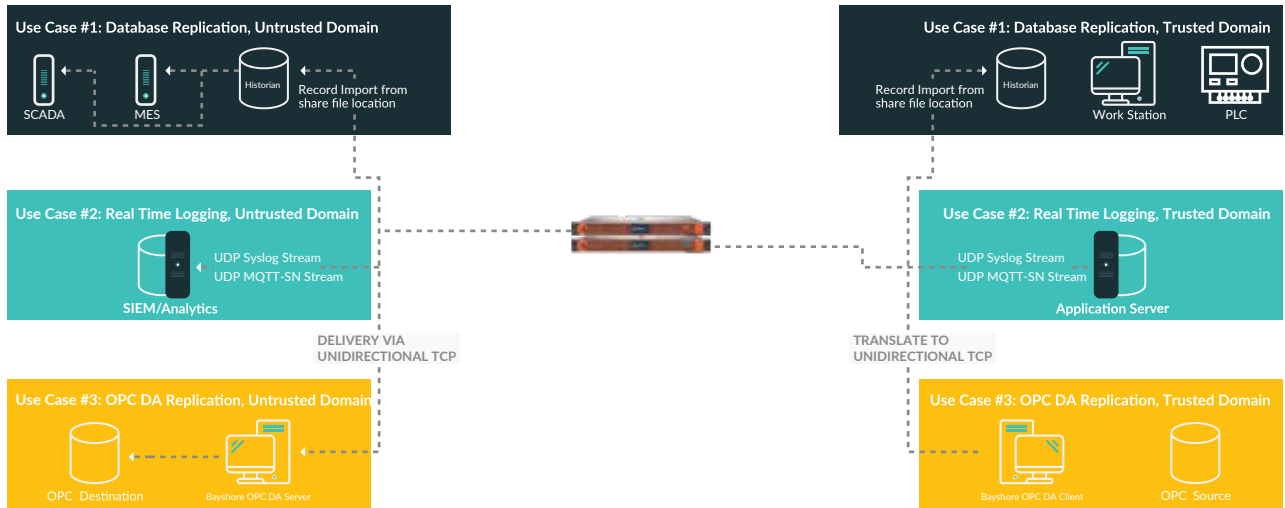
- ▶ *Creates an isolated, trusted network segment with a verifiable electronic security perimeter*
- ▶ *Ensures that malware or unauthorized probing and reconnaissance efforts have no chance of entering the segment*
- ▶ *Provides high-speed throughput to replicate data to the external destination segment*
- ▶ *Assures guaranteed delivery without consuming available bandwidth*
- ▶ *Can grow with needs via software licensing*
- ▶ *Delivers budget-friendly lower cost, averaging ~60% less than competing solutions*

Key Features and Benefits for Operations Technology (OT)

- ▶ *Prevents disruption to plant operations through isolating critical assets and processes*
- ▶ *Automates the delivery of key plant data securely to outside, untrusted destinations for business intelligence, analytics and decision-support*
- ▶ *Increases protection of OT assets without increasing workload for plant teams*
- ▶ *Provides network information to corporate IT one-way for analysis and integration without impacting operations*



NetWall REFERENCE DEPLOYMENT ARCHITECTURE

Simplified Use Cases for NetWall



TECHNICAL SPECIFICATIONS

PRODUCT DESCRIPTION

Type	 NetWallBSG™ BILATERAL SECURITY GATEWAY FOR IT AND OT	
NetWall Small (50 mbit/sec)	Part # NWABL-SM	
NetWall Medium (100 mbit/sec)	Part # NWABL-MD	
NetWall Large (1 gb/sec)	Part # NWABL-LG	
Description	Bilateral security gateway (hardware and software) - product comes as a pair of systems, 2 19" 1U Rack Mounted servers (2U total), So PowerEdge 240 systems. Includes PCIe cards and data link cable Includes PCIe, security dongles and management console. Product is delivered "appliance style" with software preconfigured and loaded onto the systems. Field upgradable by software licensing.	
Platform	Dell PowerEdge 240 (or equivalent)	
CPU	Xeon E-2224 CPU @ 3.4GHz	
RAM	8GB DDR4	
Storage	1TB SATA, 7200 RPM	
Server-to-Server Communication	1 x PCI Express Gen 2 card (in each server) and 1m PCIe serial cable connecting both servers	

ADDITIONAL INCLUDED INTERFACES

USB Interface	1 USB socket on each platform to connect approved USB storage device
Network Interface	2 10/100/1000 Mbps Network Interface Controller (NIC) ports
PCIe card	Each NetWall component server has a system with PCIe card and they are connected via an included data link cable.

SOFTWARE

OS	Hardened Debian / GNU Linux OS	
Management Console	Bayshore NetWall Management Console	Windows 7 SP1 or higher
Diagnostics	LEDs (power, mode, fault, etc)	
Secure Management	Security Dongles	
Event Logging	NetWall reports all events and errors to a filterable Windows event log	

OPERATOR APPLICATION SUPPORT	
Server Replications	Native support for real time OPC DA, OPC AE, Modbus, OPC UA, and others
Database Export Replications	Oracle, MySQL, MS SQL, Aspentech IP21 and more
File Transfers	Native unidirectional file transfer via Windows or FTP shares
Unidirectional TCP or UDP Sockets	Syslog, SNMP Traps, MQTT-SN, UDP streaming video, other UDP-based IoT applications
PERFORMANCE	
Data transfer rate	License defined: 50 mbit/sec, 100mb/sec, and 1 gigabit/sec Field upgradeable by software license
Concurrent sessions	Unlimited, subject to max overall throughput defined by license
Redundancy	Coming feature
POWER	
Power Supply	250W
Voltage	100-240VAC, auto ranging
Power Consumption	300W per NetWall system
AMBIENT CONDITIONS	
Temperature	Storage: -40 to +149 deg F / -40 to +65 deg C Operating: +50 to +95 deg F / 10 to 35 deg C
Humidity	Storage: 5 - 95% Relative Humidity Operating: 10 to 80% Relative Humidity
APPROVALS	
Declaration of Conformity	CE, FCC, EN 61131, C-Tick, EN 60950
IEC-62443 Certification	Approved, 62443-4-1; SVV-1, SVV-2, SVV-3a, SVV-3b, SVV-3c, SVV-4, SVV-5
Common Criteria and FIPS	Scheduled and being prepared for formal submission
RELIABILITY	
MTBF	87,648 hours for System overall (10 yrs) SATA
Warranty	See Support, Warranty is included
CONSTRUCTION	
Dimensions (WxHxD) (2 units)	W:19in / 482.6mm x H: 3.5"(2U) / 88.89mm x D: 22.6in / 584.2mm
Weight	2 units @ 27lb / 12.2kg each
Mounting	2 x 1U Rack Mounted
ANNUAL SUPPORT MAINTENANCE	
Part # NWSM-Support	NetWall Small Annual Support, Year 2 & beyond, incl support/updates/HW warranty
Part # NWMD-Support	NetWall Medium Annual Support, Year 2 & beyond, incl support/updates/HW warranty
Part # NWLG-Support	NetWall Large Annual Support, Year 2 & beyond, incl support/updates/HW warranty



BAYSHORE