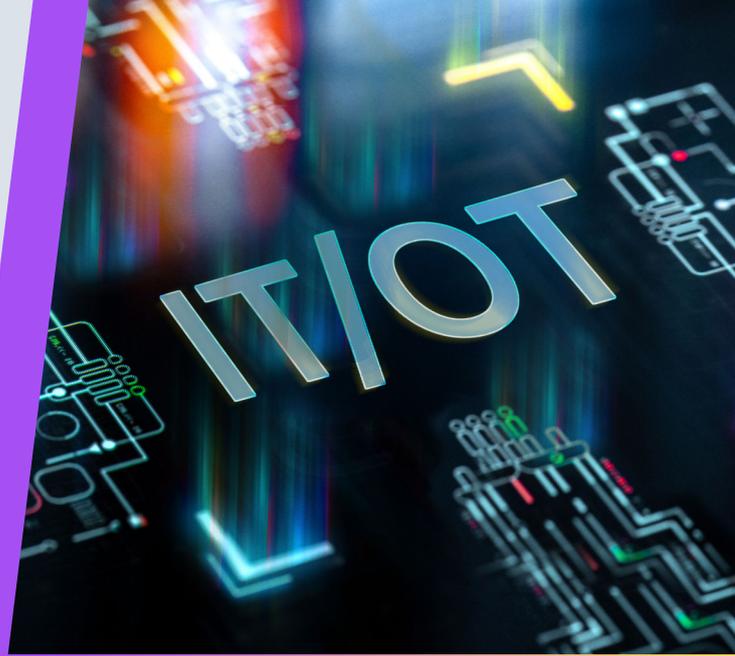


Belden Virtual Firewall

Deploy anywhere—protect anything

Product Bulletin



Deploy 360° cybersecurity wherever you need it—as a hardware-agnostic solution in your data center. Deliver deep packet inspection (DPI), intrusion prevention and protocol awareness to protect industrial environments.

- **Expose elusive OT network threats** with multi-layer traffic analysis that detects what traditional firewalls miss.
- **Stay ahead of evolving regulations** with built-in enforcement controls and automatic firmware updates that ensure compliance.
- **Lower total cost of ownership** with a single hardware-agnostic cybersecurity solution and flexible licensing tiers.



Belden Virtual Firewall deploys wherever you need protection—in your data center, on edge devices or within virtualized infrastructure. Built with Belden OS, it integrates seamlessly with your broader industrial security architecture.

Key Features

- **Quick deployment** on VMware or Microsoft Hyper-V or QEMU/KVM; installs in minutes without dedicated hardware.
- **Advanced Layer 7 inspection**, including identity awareness, application awareness and industrial protocol awareness for OT networks.
- **High-throughput architecture** optimized for industrial traffic patterns without sacrificing inspection depth.
- **Deep Packet Inspection (DPI)** enforces popular industrial communication protocols.
- **Stateful inspection firewall** for improved security decisions regarding data traffic between networks.
- **Intrusion detection and prevention** monitors data traffic for anomalies and malicious patterns, alerts users and SOCs, and triggers actions.
- **Centralized management** of firewalls can be initiated remotely and at scale.
- **Built with Belden OS** enabling end-to-end security, unified visibility, and policy-based enforcement.
- **Belden OS seamlessly integrates** various Belden products, ensuring consistent management and threat intelligence sharing.
- **Designed for compliance** with IEC 62443-4-2 SL-1 and SL-2, and the EU Cyber Resilience Act.

Your benefits

Industrial networks face increasing cyber threats as OT and IT environments converge. Traditional firewalls can't effectively handle emerging cyber threats and OT uptime requirements.

The Virtual Firewall provides next-generation capabilities, including Deep Packet Inspection (DPI) for industrial protocols, real-time intrusion prevention and application-aware filtering that protects without disrupting operations.

Deploy the Belden Virtual Firewall in your data center or on ruggedized hardware. Unified management gives you centralized control across your security infrastructure, while flexible licensing lets you scale protection as your needs evolve.

Applications

Built with Belden OS, the Belden Virtual Firewall delivers advanced capabilities to safeguard critical infrastructure across industrial OT and IT environments. Its virtual format provides deployment flexibility—run it as a hardware-agnostic solution in your data center or on your 19-inch rack hardware for power substation applications.

Markets

The Belden Virtual Firewall provides mission-critical protection for industrial organizations with sophisticated, virtualized operations. It defends against cyber threats while maintaining the network uptime that OT environments demand.

Target industries include energy, automotive manufacturing and discrete manufacturing, where IT/OT convergence creates new attack surfaces.

Built with security-by-design principles, the Belden Virtual Firewall ensures compliance with IEC 62443-4-2, EU CRA, FCC and CE requirements—preparing your infrastructure for evolving regulatory standards.

Choose the license tier that matches your security requirements:

- **Essential:** firewall protection with accelerated throughput, full VPN functionality and edge computing; ideal for machine builders.
- **Advanced:** adds DPI, high-availability features, antivirus protection and web filtering.
- **Pro:** complete functionality, including dynamic routing, intrusion prevention, an additional web application firewall (WAF) and identity awareness.



Belden Virtual Firewall

Technical Information	
Product Description	
Type	TBF-800V
Supported Hypervisor	VMWare, HyperV, QEMU/KVM
Description	Belden Industrial Firewall Virtual Machine
Minimum Hardware Requirements	
CPU	2 x CPUs
Memory	4 GB
Storage	16 GB
Recommended Hardware Requirements	
CPU	4 x CPUs
Memory	8 GB
Storage	64 GB
Software	
Firmware	Belden OS
Environment	Intrusion Detection & Prevention (IDS/IPS) Web Application Firewall (WAF) Deep Packet Inspection (AMP, DNP3, EtherNet/IP, IEC 61850 GOOSE, IEC104, Modbus TCP, OPC, Siemens S7 and S7 Plus) Anti-Malware Web Filtering / Blacklisting Stateful Packet Inspection Firewall (Packet Filtering, Port Filtering) Firewall Learning Mode Access Control Lists Certification Management Let's Encrypt Support Network Objects Application Control eXpress Data Path
VPN	IPsec (IKE v2), OpenVPN, WireGuard, WebVPN
Routing	Layer 3, Layer 2 Bridging Network Address Translation (NAT), SNAT, DNAT, BiNAT
Dynamic Routing	OSPF, BGP
Interfaces	Web UI, CLI, REST API, NETCONF, RESTCONF
Authentication	Identity Awareness (User Identification) 802.1x Authentication Multi-Factor Authentication (MFA) Password Quality Detection Captive Portal
Support Tools	Logging Ping, ARPing, Traceroute, Top, Iftop, TCPDump, LLDP, Filemanager, Factory Defaults, Backup & Restore, Restart
Protocols	IPv4, IPv6, NTP, VRRP, SNMPv3, PPPoE, DHCP, DNS, DynDNS, SSH, SSL
Identity Provider (IdP) Support	RADIUS, LDAP
Application Support & Mgmt.	Docker Container
Management	Web-based admin dashboard, expandable with widgets High-availability (Configuration Synchronisation, Status Synchronisation, VRRP Virtual IPs), VLAN Bash, Python Script Support HiDiscovery SNMPv3 CRON Jobs UPnP & NAT-PMP Setup Wizard
License Model	Editions: ESSENTIAL, ADVANCED, PRO Free 30 days PRO Edition Test License Software Subscriptions (3 years included, renewals: 1, 3, 5, 10 years)

NOTE: These are the prominent technical specifications. For complete technical specifications visit: www.belden.com



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