Cyber security is a major concern for power utilities to ensure the integrity of the power grid. ABB’s new multi-port industrial firewall comes with added redundancy options and faster link speeds for enhanced network security in industrial environments.

Maximized security for LAN and WAN communication
Within ABB’s AFS family of switches, routers and firewalls the new AFF660/AFF665 provides enhanced security features which make it the ideal solution for communication networks with high-speed routing requirements.

AFF660/AFF665 comes with high performance option over GbE WAN connections combined with enhanced security solutions which comply with utility and industrial standards. A range of up to 6 ports offer flexible communication with high link speeds over Fast Ethernet and Gigabit, which saves space and costs. Various redundancy options, combined with faster link speeds, provide enhanced network security with a minimum of network downtime. Thanks to the robust design and high operating temperature range AFF660/AFF665 is ideally suited for industrial environments. Furthermore, AFF660/AFF665 is compliant to the IEEE 1686 cyber security standard.

Main features
- Multiport firewall: 4 ports for FE and 2 ports for GbE connections (GbE only available for AFF665)
- Robust design for optimum performance in industrial environments
- Stateful inspection firewall with flexible rule generation
- L3 routing functionality (static, OSPF)
- Router redundancy for minimized downtime
- Increased router throughput and performance
- Wirespeed packet filtering using Access Control List (ACL), rate limiters and ingress protection (DoS)
- Network address translation for:
  - NAT 1:1
  - Double-NAT
  - Masquerading NAT
  - Destination NAT and Hairpin NAT
- Simple intrusion detection
- Small form factor pluggable (SFP) support for fiber optic and twisted pair gigabit cables
- Virtual Private Network (VPN)
## Technical data

### General

**Description**
Industrial firewall, router, transparent (bridging)

**Port type and quantity**
4 x 10/100BASE-TX, TP-cable, RJ45-socket, Autocrossing, Autonegotiation, Autopolarity
2x GbE, SFP port (only AFF665)

**Statefull insepction firewall**
Firewall rules (incoming/outgoing, management), IP masquerading, 1:1 NAT, Double-NAT, Masquerading NAT, Destination NAT, Hairpin NAT, DoS Protection, Access Control Lists (ACLs)

### Interfaces

**V.24 interface**
1 x RJ11 socket (serial interface for device configuration)

**USB interface**
1 x USB socket (to connect Configuration Recovery Adapter CRA)

**SD interface**
1 x SD socket (to connect Configuration Recovery Adapter CRA-SD)

### Requirements

**Power supply/signaling contact**
For dual low voltage (YY) Power supply: 2 x plug-in terminal block 2-pin
For dual high voltage (ZZ) Power Supply: 2 x plug-in terminal block 3-pin
For single high voltage (ZE) Power Supply: 1 x plug-in terminal block 3-pin

**Power consumption**
max. 19 W

**Operating voltage**
2 x 24/36/48 V DC (18 – 60 V DC), or 1 x 60/110/125/220/250 V DC (48 V – 320 V DC), 2 x 60/110/125/220/250 V DC (48 V – 320 V DC) and 110/120/220/230 V AC (88 – 265 V AC)

### Software

**Management**
SNMPv3, SSH2/SFTP, HTTPS, V.24 CLI, SNMPv1/2, AFS Finder, AFS View, FOXMAN UN, FOX View

**Diagnostics**
LEDs (Power, Link Status, Data, Status, CRA, RM), Signal Contact (max. 1A, max. 60VDC or 30VAC SELV), Log File, Syslog, Configuration check RMON (Statistic), SFP diagnostics (temperature, optical transmit and receive power), trap for changes and configuration saves, Counter for ACL Rules

**Configuration**
Command Line Interface (CLI), web interface, Configuration Recovery Adapter (CRA, CRA-SD), AFS Finder, AFS View, FOXMAN UN, FOX View

**Other services**
NTP, VLAN support (IEEE 802.1Q), rate limiter

**Redundancy functions**
VRRP (Virtual Router Redundancy Protocol)

**Protocols**
VPN (IPsec), Serial, HTTPS, SSH, SNMP V1/ V2/ V3, LLDP

### Mechanical stability

**IEC 60068-2-27 Shock**
15 g, 11 ms duration, 18 shocks

**IEC 60068-2-6 Vibration**
1 mm, 2 Hz – 13.2 Hz; 0.7g, 13.2 Hz – 100 Hz

### Construction

**Weight**
1.2 to 1.5 kg

**Mounting**
DIN rail 35 mm

**Protection class**
IP20

**Dimensions (WxHxD)**
Temperature Standard (N): 90 x 164 x 120 mm
Temperature Extended (P, Z): 98 x 164 x 120 mm

### Ambient conditions

**Operating temperature**
Standard temperature range: 0° C to +60° C
Extended temperature range: -40° C to +70° C

**Relative humidity**
10% to 95%

**Storage/transport temperature**
-40° C to +85° C

For more information please contact:

**ABB Switzerland Ltd.**
**Power Systems**
Bruggerstrasse 72
5400 Baden, Switzerland
Phone: +41 58 585 77 44
Fax: +41 58 585 55 77
E-Mail: communication.networks@ch.abb.com

[www.abb.com/communicationnetworks](http://www.abb.com/communicationnetworks)