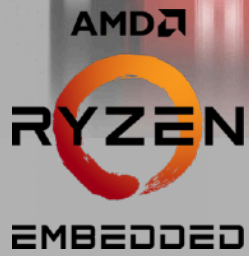


## OPNsense® Rack Security Appliance DEC2700 Series



- 10 Gbps FIREWALL
- 1.2 Gbps IPsec VPN
- 256 Gb STORAGE
- 8 Gb DDR4 RAM
- 40 db(A) LOW NOISE

### AMD Ryzen™ Embedded Performance.

Rack mountable appliance, the full package at an affordable price.  
Exceptional performance for businesses & enterprises.



10Gbps Throughput  
830 Kilo Packets per Second



Guard Web Access  
Filtering (SSL) Proxy  
Captive Portal with Voucher support



~1Gbps Inline Intrusion Prevention



256GB SSD  
Offering Sufficient Space for  
Logging & Reporting



Low Latency  
~150 uS



System wide two-factor  
authentication.  
Compatible with Google  
Authenticator.



Hardware Assisted Encryption  
1.2Gbps IPsec (AES256GCM16)

Securing Networks™

DEC2700 SERIES

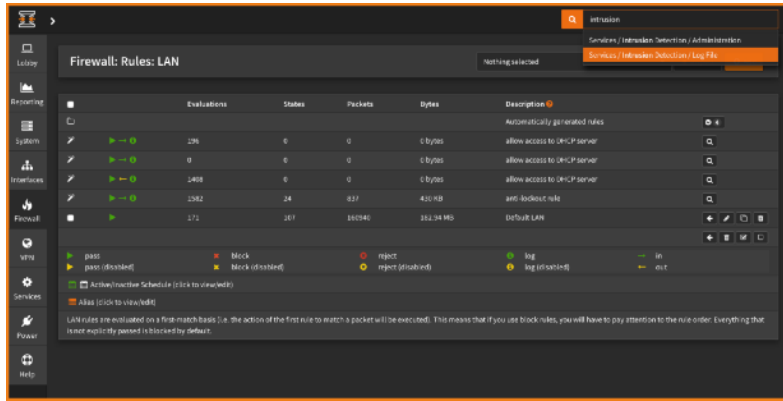


## Bundled with a free year OPNsense® Business Edition

- ✓ Commercial firmware repository
- ✓ Free GeoIP database
- ✓ Official OPNsense Open Virtualization Image
- ✓ Free professional plugins (OPNcentral, Proxy Access)
- ✓ Free E-Book ( English & German )



**Securing Networks™**



OPNsense<sup>®</sup> Secure Your Network With Ease<sup>™</sup>

OPNsense is Deciso's fast growing open source firewall and security platform released under an Open Source Initiative approved license. Its rich feature set is combined with the benefits of open and verifiable sources.

All features can be used from within the easy to use graphical interface, equipped with a build-in search feature for quick navigation. Protecting your network has never been this easy with features such as; the integrated intrusion prevention system and two-factor authentication for safely connecting mobile users.



### Businesses

Protect your business network and secure your connections. From the stateful inspection firewall to the inline intrusion detection & prevention system everything is included for free. Use the traffic shaper to enhance network performance.



### Schools

Limit and share available bandwidth evenly amongst students and utilize the category based web filtering to filter unwanted traffic such as adult content and malicious websites. It is easy to setup as no additional plugins nor packages are required.



### Hotels

OPNsense offers a captive portal to control guest internet access for a limited duration. Vouchers can easily be created via the graphical user interface.



### On the road

Even on the road OPNsense is a great asset to your business as it offers OpenVPN and IPSec VPN solution with road warrior support and two-factor authentication. The easy client exporter make configuring your OpenVPN SSL client setup a breeze.



### Remote Offices / Branches & SOHO

The integrated site to site VPN (IPsec or SSL VPN) can be used to create a secure network connection to and from your remote offices. Enjoy the easy configuration and online searchable documentation with simple how-to type of articles to get you started, quickly. Pluggable support is offered for ZeroTier, Tinc as well as Wireguard.

### Stateful firewall

- Filter by
  - Source
  - Destination
  - Protocol
  - Port
  - OS (OSFP)
- Limit simultaneous connections on a per rule base
- Log matching traffic on a per rule bases
- Policy Based Routing
- Packet Normalisation
- Option to disable filter for pure router mode

### Policy organization

- Alias Support
  - IP addresses
  - Port ranges
  - Domain names (FQDN)
- Interface Groups
  - Create security zones with equal rules
- Rule Category
  - Easy access rule sets

### Granular control state table

- Adjustable state table size
- On a per rule bases
  - Limit simultaneous client connection
  - Limit states per host
  - Limit new connections per second
  - Define state timeout
  - Define state type
- State types
  - Keep
  - Sloppy
  - Modulate
  - Synproxy
  - None
- Optimisation options
  - Normal
  - High latency
  - Aggressive
  - Conservative

### Authentication

- External Servers
  - LDAP
  - Radius
- Integrated Servers
  - Local User Manager
  - Vouchers / Tickets
  - FreeRadius (Plugin)

### Authorization

- User Interface
  - Local User Manager

### Accounting

- FreeRadius (Plugin & External)
- Vouchers / Tickets

### 2-Factor Authentication

- Supports TOTP
- Google Authenticator
- Supported services:
  - Captive Portal
  - Proxy
  - VPN

- GUI
- SSH / Console

### Certificates

- Certificate Authority
  - Create or Import CA's
  - Create or Import Certificates
- Let's Encrypt (Plugin)
  - Automated (Trusted) CA

### 802.1Q VLAN support

- max 4096 VLAN's

### Link Aggregation & Failover

- Failover
- Load Balance
- Round Robin
- Cisco Ether Channel (FEC)
- 802.3ad LACP

### Other Interface types

- Bridged interfaces
- Generic Tunnel Interface (GIF)
- Generic Routing Encapsulation

### Network Address Translation

- Port forwarding
- 1:1 of ip's & subnets
- Outbound NAT
- NAT Reflection

### Traffic Shaping

- Limit bandwidth
- Share bandwidth
- Prioritize traffic
- Rule based matching
  - Protocol
  - Source
  - Destination
  - Port
  - Direction

### IGMP Proxy

- For multicast routing

### Universal Plug & Play

- Fully supported

### Dynamic DNS

- Selectable form a list
- Custom
- RFC 2136 support

### DNS Forwarder

- Host Overrides
- Domain Overrides

### DNS Server

- Host Overrides
  - A records
  - MX records

- Access Lists

### DNS Filter

- Supports OpenDNS

### DHCP Server

- IPv4 & IPv6
- Relay Support
- BOOTP options

### Multi WAN

- Load balancing
- Failover
- Aliases

### Load Balancer

- Balance incoming traffic over multiple servers

### Network Time Server

- Hardware devices
  - GPS
  - Pulse Per Second

### Intrusion Detection & Prevention

- Inline Prevention

- Integrated rulesets
  - SSL Blacklists
  - Feodo Tracker
  - Emerging Threats ETOpen
- SSL Fingerprinting
- Auto rule update using configurable cron

### Captive Portal

- Typical Applications
  - Guest Network
  - Bring Your Own Device (BYOD)
  - Hotel & Camping Wifi Access
  - Template Management
  - Multiple Zones

- Authenticators
  - All available authenticators
  - None (Splash Screen Only)

- Voucher Manager
  - Multiple Voucher Databases
  - Export vouchers to CSV

- Timeouts & Welcome Back

- Bandwidth Management
  - Use Traffic Shaper

- Portal bypass

- MAC and IP whitelisting

- Real Time Reporting
  - Live top IP bandwidth usage
  - Active Sessions
  - Time left
  - Rest API

### Virtual Private Networks

- IPsec
  - Site to Site
  - Road Warrior
- WireGuard (Plugin)
  - Site to Site
  - Road Warrior
- OpenVPN
  - Site to Site
  - Road Warrior
  - Easy client configuration exporter

- Tinc (Plugin)
  - Full mesh routing

- ZeroTier (Plugin)
  - VPN, SDN & SD-WAN

### High Availability

- Automatic hardware failover
- Synchronized state table
- Configuration synchronisation

### Caching Proxy

- Multi interface
- Transparent Mode
- Support SSL Bump
- SSL Domain only (easy filtering)
- Access Control Lists
- Blacklists

- Category Based Web-filter

- Traffic Management

- Auto sync for remote blacklists

- ICAP (supports virus scan engine)

### Virus scanning (via plugins)

- External engine support (ICAP)
- ClamAV (Plugin / C-ICAP)

### Reverse Proxy

- HAProxy - Load balancer (Plugin)

### Online Identity Protection

- Tor - Anonymity online (Plugin)

### Backup & Restore

- History & Diff support

- File Backup
- Cloud Backup
- Git Backup

### SNMP

- Monitor & Traps

### Diagnostics

- Filter reload status
- Firewall Info (pfInfo)
- Top Users (pfTop)
- Firewall Tables
  - Aliases
  - Bogons

- Current Open Sockets

- Show All States

- State Reset

- State Summary

- Wake on LAN

- ARP Table

- DNS Lookup

- NDP Table

- Ping

- Packet Capture

- Test Port

- Trace route

### Monitoring

- Zabbix Agent (Plugin)

- Monit (Plugin)
  - Proactive System Monitoring

### Enhanced Reporting

- Network Flow Analyzer 'Insight'

- Fully Integrated

- Detailed Aggregation

- Graphical Representation

- Clickable and Searchable

- CVS Exporter

- System Health

- Round Robin Data

- Selection & Zoom

- Exportable

- Traffic Graph

- Live Traffic Monitoring

### Network Monitoring

- Netflow Exporter

- Version 5 & version 9

- Local for 'Insight'

### Firmware

- Support Virtual Installs
  - VMware tools (Plugin)
  - Xen Guest Utilities (Plugin)

- Easy Upgrade

- Reboot warning for base upgrades

- SSL Flavour selectable

- OpenSSL

- LibreSSL

- Selectable Package Mirror

- Reinstall Single Package

- Lock Package (prevents upgrade)

- Audit Feature

- Check installed packages for known security vulnerabilities

- Plugin Support

### REST API

- ACL support

### Online Documentation

- Free & Searchable

DEC2752

DEC2770



## Software

Preinstalled software	OPNsense®	OPNsense®
License	Open Source + 1 year free Business Edition	Open Source + 1 year free Business Edition

## Hardware Specifications

SFP+ Ports [10Gbps]	2	2
2.5 GbE RJ45 Ports [ 100/1000/2500Mbps ]	3	7
USB 3.0 Ports	1	1
Console Port	1	1
Internal Storage	256GB M.2. Solid State Flash	256GB M.2. Solid State Flash
Memory	8GB DDR4	8GB DDR4
CPU Cores	4 (max frequency 2.2Ghz)	4 (max frequency 2.2Ghz)
Virtual Interfaces (802.1q VLANs) <sup>1</sup>	4093	4093

## System Performance

Firewall Throughput	10Gbps	10Gbps
Firewall Packets Per Second	830Kpps	830Kpps
Firewall Port to Port Throughput	8.5Gbps	8.5Gbps
Firewall Port to Port Packets Per Second	719000	719000
Concurrent Sessions	7000000	7000000
Firewall Latency (average)	150us	150us
Firewall Policies (Recommended Maximum) <sup>1</sup>	10000	10000
IPsec VPN Throughput (AES256GCM16)	1.2Gbps	1.2Gbps
IPsec VPN Packet Per Second (AES256GCM16)	107Kpps	107Kpps
OpenVPN SSL Throughput (AES256GCM16)	500Mbps	500Mbps
OpenVPN Packet Per Second (AES256GCM16)	42Kpps	42Kpps
Threat Protection Throughput Packet Per Second	85Kpps	85Kpps
Threat Protection Throughput	~1Gpps	~1Gpps
High Availability with State Synchronisation	Requires Two	Requires Two

## Dimensions

Height x Width x Depth (mm)	43.65 (1U) x 482.6 (19") x 242 (214 excl. panel)	43.65 (1U) x 482.6 (19") x 242 (214 excl. panel)
Height x Width x Length (inches)	1.75 x 19 x 9.53 (8.43 excl. panel)	1.75 x 19 x 9.53 (8.43 excl. panel)
Form Factor	19" Rackmountable	19" Rackmountable
Weight (appliance only)	2.65Kg	2.75Kg

## Environment

Power Requirements	100-240VAC, 50-60Hz	100-240VAC, 50-60Hz
Maximum Current (AC)	0.8A	0.8A
Power Consumption (Typical)	15W	20W
Heat Dissipation (Typical)	51.2 BTU/hr	68.3 BTU/hr
Operating Temperature	0 to +45°C	0 to +45°C
Storage Temperature	-20 to +70°C	-20 to +70°C
Humidity	10-90% non-condensing	10-90% non-condensing

## Regulatory Compliance

FCC part 15 Class A, CE, Rohs

FCC part 15 Class A, CE, Rohs

<sup>1</sup> The user interface is designed for normal business usage, large rulesets, high number of users or interface assignments may be less practical.

Total Firewall Throughput is calculated based on system utilization and actual measured port-to-port performance (if both numbers are the same no measurement of system utilization was recorded and maximum theoretical throughput is likely to be higher). Maximum PPS is measured using 100 byte sized packages. All throughput numbers are based upon maximum packets per second multiplied by standard 1514byte frame size minus additional overhead where applicable. IPsec traffic is measured using AES256GCM16 via a routed tunnel. Latency is measured as an average over 60 seconds. IPS performance is measured using a the ET Open ruleset. Concurrent sessions are based upon memory available, where one state consumes 1KB of memory and 1GB of memory is reserved for system tasks.