



## OPNsense A10 Quad Core Rack Series

DEC2630, DEC2650, DEC2670



The **OPNsense A10 Quad Core Rack** secures your network with high-end features such as inline intrusion prevention, virtual private networking, two factor authentication, captive portal and filtering web proxy. The optional high availability setup ensures stable network performance with automatic failover and synchronised states, minimising disruption. **Keep your network secure and the good packets flowing.**



**3.300Mbps Throughput**  
**250.000 Packets per Second**



**327Mbps Inline High Speed**  
**Intrusion Prevention &**  
**SSL Finger Printing**



**Fast Filtering**  
**35.000 connections P/S**  
**Low Latency ~1.6mS (with**  
**CoDel & Traffic Shaper)**



**Hardware Assisted Encryption**  
**600Mbps IPsec (AES256GCM16)**



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



**128GB SSD**  
**Offering Sufficient Space for**  
**Logging & Reporting**



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

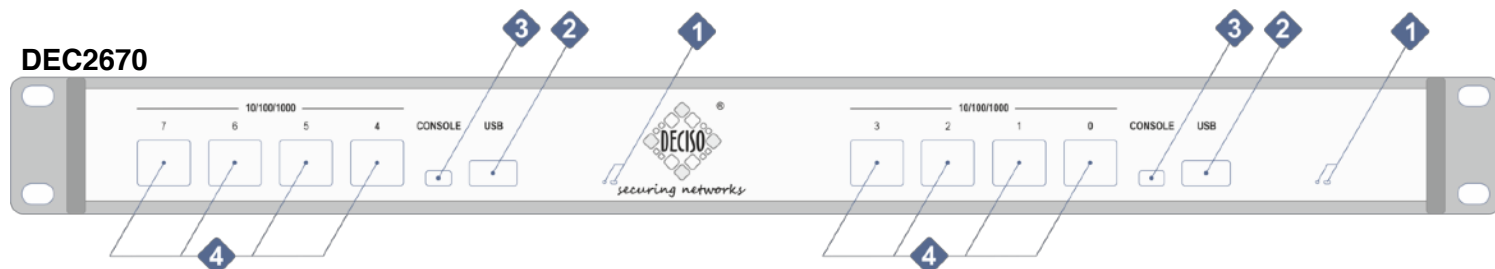
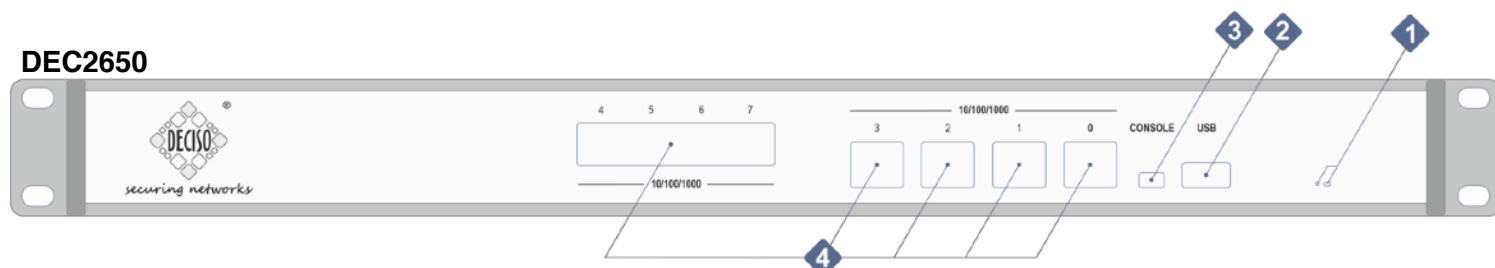
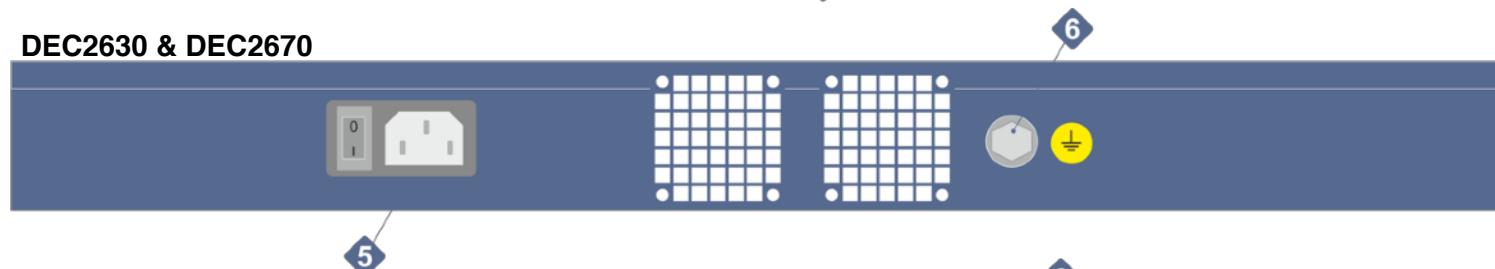
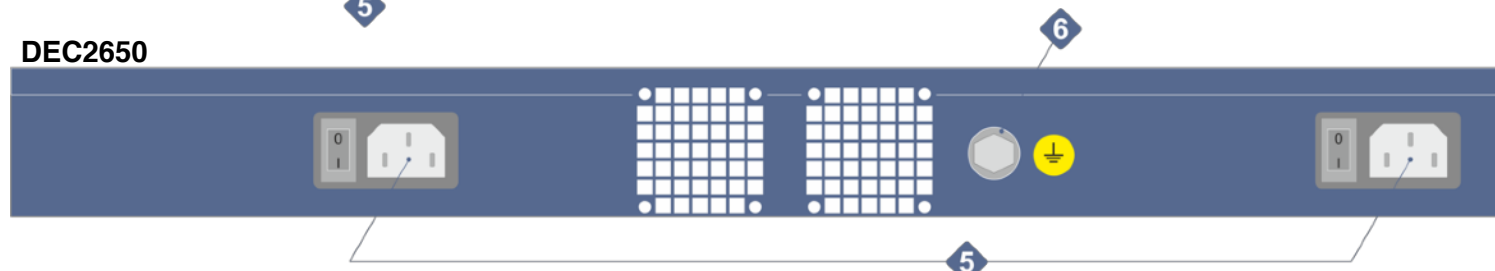
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®

**HARDWARE**

DUTCH QUALITY - MADE IN THE NETHERLANDS

**DEC2630****DEC2670****DEC2650****DEC2630 & DEC2670****DEC2650**

- |                       |                   |                      |
|-----------------------|-------------------|----------------------|
| <b>1</b> POWER SW/LED | <b>3</b> CONSOLE  | <b>5</b> POWER (C14) |
| <b>2</b> USB          | <b>4</b> RJ45 GbE | <b>6</b> GROUND      |

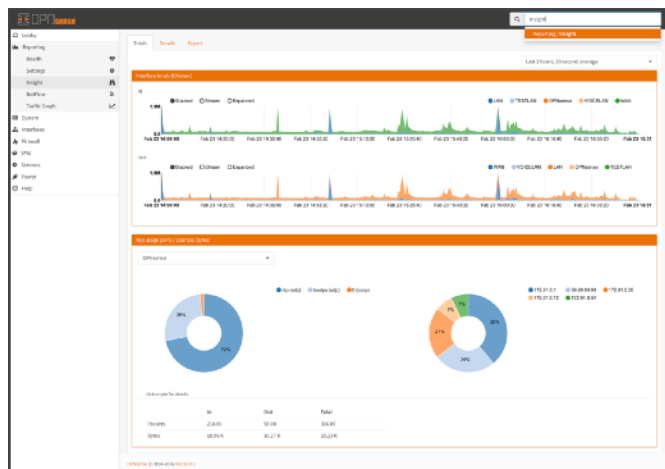
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**SOFTWARE**

VERSATILE - OPEN SOURCE - FULLY FEATURED



High-end Security Made Easy™

OPNsense is Deciso's fast growing open source firewall and security platform released under an Open Source Initiative approved license. It's 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, utilise the integrated intrusion prevention capable of blacklisting based on SSL fingerprints and the two-factor authentication for safely connecting mobile users.

Keep full insight on the traffic flowing through your firewall at all times, with its advanced Netflow capture, aggregate & reporting tool 'Insight'.

**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 and prioritise your voice over IP above other traffic. Backup your configuration to the cloud automatically, no need for manual backups.

**School networks**

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

**Hotels & Campings**

Hotels and campings usually utilise a captive portal to allow guests (paid) access to internet for a limited duration. Guests need to login using a voucher they can either buy or obtain for free at the reception. OPNsense has a build-in captive portal with voucher support and can easily create them on the fly.

**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 makes configuring your OpenVPN SSL client setup a breeze.

**Remote Offices & SOHO**

Utilise the integrated site to site VPN (IPsec or SSL VPN) 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.

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## SOFTWARE FEATURE OVERVIEW

### 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 organisation

- 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)

### Authorisation

- User Interface
  - Local User Manager

### Accounting

- FreeRadius (Plugin & External)
- Vouchers / Tickets

### 2-Factor Authentication

- Supports TOTP
- Google Authenticator
- Support 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
- 802.1ad QinQ

### Network Address Translation

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

### Traffic Shaping

- Limit bandwidth
- Share bandwidth
- Prioritise 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
  - Geolite2 Country IP
  - 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
- OpenVPN
  - Site to Site
  - Road Warrior
  - Easy client configuration exporter

- Tinc (Plugin)
  - Full mesh routing
- ZeroTier (Plugin)
  - VPN, SDN & SD-WAN

- PPTP (Legacy)

- LT2P (Legacy)

### High Availability

- Automatic hardware failover
- Synchronised 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

- 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

### 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 Analyser '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

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## SPECIFICATIONS

### PERFORMANCE & FEATURES

	DEC2630	DEC2650	DEC2670
<b>Hardware Specifications</b>			
GbE RJ45 Ports [ 10/100/1000Mbps ]	4	8	2 x 4
USB Ports	1	1	2 x 1
Console Port	1	1	2 x 1
Internal Storage	128GB	128GB	2 x 128GB
Memory	4GB DDR3	4GB DDR3	2x 4GB DDR3
CPU Cores	4 (1.6Ghz)	4 (1.6Ghz)	2 x 4 (1.6Ghz)
Virtual Interfaces (802.1q VLANs) <sup>1</sup>	4093	4093	4093
<b>System Performance</b>			
Firewall Throughput	3300 Mbps	3300 Mbps	3300 Mbps
Firewall Packets Per Second	250000	250000	250000
Firewall Port to Port Throughput	941Mbps	941Mbps	941Mbps
Firewall Port to Port Packets Per Second	122000	122000	122000
Concurrent Sessions	3000000	3000000	3000000
New Connections Per Second	35000	35000	35000
Firewall Latency (RRUL test average)	1.6ms	1.6ms	1.6ms
Traffic Shaper Throughput	2000Mbps	2000Mbps	2000Mbps
Traffic Shaper Packets Per Second	240000	240000	240000
Firewall Policies (Recommended Maximum) <sup>1</sup>	10000	10000	10000
IPsec VPN Throughput (single tunnel)	600	600	600
SSL VPN Throughput (single tunnel)	170Mbps	170Mbps	170Mbps
Threat Protection Throughput (IPS)	327Mbps	327Mbps	327Mbps
High Availability with State Synchronisation	Requires Two	Requires Two	Yes, External Sync
<b>Dimensions</b>			
Height x Width x Length (mm)	44 x 485 x 335	44 x 485 x 335	44 x 485 x 335
Height x Width x Length (inches)	1.74 x 19 x 13.2	1.74 x 19 x 13.2	1.74 x 19 x 13.2
Form Factor	Rack Mount 1U	Rack Mount 1U	Rack Mount 1U
Weight (Kg)	3,75	3,85	4,90
<b>Environment</b>			
Power Requirements	100-240VAC, 50-60Hz	100-240VAC, 50-60Hz	100-240VAC, 50-60Hz
Maximum Current	0.8A	0.8A	0.8A (2 x)
Power Consumption (Typical)	20W	25W	20W (2 x)
Heat Dissipation	85 BTU/hr	85 BTU/hr	170 BTU/hr
Operating Temperature	0 to +45°C	0 to +45°C	0 to +45°C
Storage Temperature	-20 to +70°C	-20 to +70°C	-20 to +70°C
Humidity	10-90% non-condensing	10-90% non-condensing	10-90% non-condensing
<b>Regulatory Compliance</b>			
	FCC part 15 Class A, CE, Rohs	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.

All measurements are based upon TCP traffic unless stated otherwise. Total Firewall Throughput is calculated based on system utilisation and port-to-port performance test in full duplex. Maximum PPS is measured using 216 byte packets. Latency is Measured using the Real Time Response Under Load test with active Traffic Shaper - shaping up to line speed - and the CoDel scheduling algorithm. IPS performance is measured using a http simulation with random sized small (400-800 bytes) send packages and 1K-8K response packages with 150 simultaneous emulated users and 21000 rules enabled. SSL VPN is measured using AES256GCM16+SHA512 and total throughput is calculated based on system load. Concurrent sessions are based upon memory available, where one state consumes 1KB of memory and 1GB of memory is reserved for system tasks.

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