Model:

IGC: Immunity Gateway Controller

Compact, Smart & Scalable

It is designed to deliver seamless connectivity, efficient performance, and future-ready expansion.

- 21.1Gbps Throughput
  5 Mega Packets per Second
- ~3.5Gbps
  Inline Intrusion Prevention
- Fast Filtering
  Up to 50.000 Connections per Second
- Hardware Assisted Encryption
  2.5Gbps 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
- Dual Power Supply
  Integrated non-interrupted automatic failover

Low noise level production below 42dB(A) with low power consumption.

PRODUCT **OVERVIEW**

The **IGC-M** is a high-performance rack security appliance designed for enterprises and datacenters. Rack-mountable and cost-effective, it delivers a complete package with exceptional speed, reliability, and advanced security features to meet demanding network needs.

NETWORK CONNECTIVITY

- Up to 8 network ports for versatile configurations
- 2× SFP+ (10Gbps)
- 6× RJ45 Ethernet (2.5Gbps)

POWERFUL MULTI-CORE SOC

- Equipped with a high-performance 16-core processor for demanding workloads
- Optimized for maximum throughput and enterprise-grade networking

AMPLE STORAGE & RAM

- 128 GB integrated storage for logging and advanced security features
- Scalable memory to support demanding applications and thousands of connected devices

LOW NOISE COOLING

- Advanced cooling design with low-noise fans and optimized air-ducts
- Noise levels below 42dB(A) while minimizing overall power consumption

DUAL POWER SUPPLY

- Integrated non-interrupted automatic failover
- High-efficiency 93% power supplies with MTBF of 2,472,000 hours (200+ years reliability)

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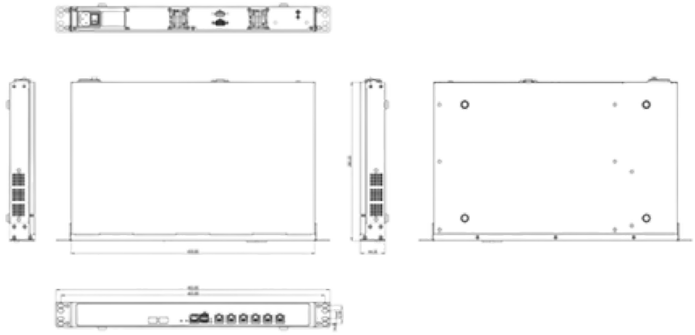
MECHANICAL **SPECIFICATIONS**



VERSTILE **SOFTWARE**

Intelligent, open source and fully integrated

Immunity Gateway Controller is a robust and scalable platform designed to deliver advanced firewalling and network security under a trusted architecture. Its powerful feature set combines high performance with transparency and reliability.

All capabilities are accessible through an intuitive graphical interface with built-in search for effortless navigation. Securing your network is simplified with features such as advanced intrusion prevention and strong two-factor authentication, ensuring safe and seamless access for all connected users.

INDUSTRY **WE SERVE**

Our gateway controllers are engineered to deliver high-performance networking solutions, ensuring secure, reliable, and efficient connectivity across diverse industries.

Businesses

Protect networks with firewall, intrusion prevention, and traffic shaping to boost performance.

Schools

Manage bandwidth and filter unwanted content easily with built-in web filtering, no extra plugins needed.

Hotels

Provide guest internet access with a captive portal and voucher system via a simple interface.

On the road

Secure mobile access with OpenVPN/IPSec VPN, two-factor authentication, and easy client setup.

Remote Offices / Branches & SOHO

Create secure site-to-site VPNs with IPsec or SSL, simple setup, and support for ZeroTier, Tinc, and 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, Agressive & Conservative

Authentication

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

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 & NoAuth (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 type 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 export
- Tinc (Plugin): Full mesh routing
- ZeroTier (Plugin): VPN, SDN & SD-WAN

High Availability

- Automatic hardware failover
- Synchronized state table
- Configuration synchronisation

Policy organization

- Multi Interface
- Transparent Mode
- Support SSL Bump
- SSL Domain Suffix (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

Diagnostics

- 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

PRODUCT **SPECIFICATIONS**

Detailed technical parameters defining the system performance, input/output ports, and mechanical & environmental characteristics of the controller.

HARDWARE SPECIFICATIONS

Component	Specification
SFP+ Ports [10Gbps] / SFP28 Ports [25Gbps]	2/2
GbE RJ45 Ports [100/1000/2500Mbps]	6
USB 3.0 Ports	1
Console Port	1
Internal Storage	1TB M.2 Solid State Flash
Memory	32GB DDR4
CPU Cores	12 (max frequency 3.1Ghz)
Virtual Interfaces (802.1q VLANS)†	4093

SYSTEM PERFORMANCE

Component	Specification
Firewall Throughput	21.1Gbps
Firewall Packets Per Second	1760Kpps
Firewall Port to Port Throughput	9Gbps
Concurrent Sessions	63000000
New Connections Per Second	50000
Firewall Latency (average)	100us
Firewall Policies (Recommended Maximum)	10000
IPsec VPN Throughput (AES256GCM16)	2.5Gbps
IPsec VPN Packet Per Second (AES256GCM16)	220Kpps
Threat Protection Throughput Packet Per Second	291Kpps
Threat Protection Throughput	~3.5Gbps
High Availability with State Synchronisation	Requires Two

DIMENSIONS

Component	Specification
Height x Width x Depth (mm)	43.8 (1U) x 482.6 (19") x 302 (274 excl. mount/handle)
Height x Width x Length (inches)	1.75 x 19 x 11.9 (10.8 excl. panel)
Form Factor	19" Rackmountable
Weight (appliance only)	4.85 kg (Variable as per Components)

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ENVIRONMENT

Component	Specification
Power Requirements	100–240VAC, 50–60Hz
Maximum Current (single PSU)	2.6A
Power Consumption (Typical – Maximum)	85W - 250W
Heat Dissipation	273 BTU/hr
Operating Temperature	0 to +45°C
Storage Temperature	–20 to +70°C
Humidity	10% to 90% non-condensing

*The user interface is designed for normal business usage, large rule sets, 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 maximum PPS and standard 1500 byte packets. Maximum PPS is measured using 500 byte packets. IPS performance is measured using ET Open and standard 1500 byte package size (using Suricata version 6.0.1/ Netmap version 14). SSL VPN is measured using AES256GCM16+SHA512. Concurrent sessions are based upon memory available, where one state consumes 1kB of memory and 1GB of memory is reserved for system tasks. Latency is measured as an average over 60 seconds.