

## Fair bandwidth usage among service subscribers

PacketController QoS solution can mitigate excessive bandwidth consumption by high-usage users, thereby promoting equitable and efficient utilization of network resources. By specifying source and destination IP addresses and leveraging Deep Packet Inspection (DPI) to identify application types, it becomes possible to impose limits on both uplink and downlink bandwidth, as well as the number of concurrent connections.

By leveraging Deep Packet Inspection (DPI), organizations can gain application-level visibility to classify over 3,000 applications across more than 40 categories. This provides granular insight into network traffic—including encrypted traffic—which is essential for enforcing effective policies. Analyzing these traffic trends facilitates strategic network planning, delivers deeper business intelligence, and supports enhanced compliance with Law Enforcement Agency (LEA) requirements, while also opening up opportunities for service monetization.

The PacketController AP200 is a 1RU dual-power appliance for 10G networks with available license at 3/5/10/15Gbps and provides a cost-effective yet powerful solution for medium size businesses and small ISPs.

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### Leveled Fairness Control

By restricting the bandwidth of high-usage subscribers during peak periods, telecommunications carriers can ensure fairer distribution of network resources, ultimately boosting customer satisfaction. Additionally, this approach allows for tiered control, enabling carriers to apply differentiated policies to various subscriber groups.

### Effective use of network resources

Facilitates optimal network utilization through granular control of aggregate traffic flows. This includes managing bandwidth, session counts, and packets per second for both upstream and downstream traffic.

### Application Identification and Control

Deep Packet Inspection technology offers comprehensive application awareness by identifying and visualizing applications currently running on the network, monitoring their operational status, and empowering administrators to enforce per-application bandwidth and communication policies.

### IPv4 to IPv6 Transition

Provides the measurement and management of IPv4 and IPv6 traffic simultaneously for operators of all access technologies.

### Carrier-Grade Performance

- 1GE, 10GE, 25GE, 40GE, 100GE and 400GE ports
- Up to 520Gbps on one single hardware appliance
- Up to 750M concurrent sessions on one single hardware appliance
- N+M Clustering to support 4TB throughput

## Bandwidth Management

- Rate limit on throughput, packet per second, connections
- Time based bandwidth management
- Monthly quota management
- DPI Management
- Web Filtering (GEO and Websites)
- High performance logging
- Subscriber Portal

## Networking

- Layer 2/Layer 3 support
- BGP+
- BGP Multi-path (ECMP)
- IS-IS v4/v6, OSPF v2/v3
- RIP v2/ng
- VLAN (802.1Q, QinQ)
- BFD
- Static routes & path monitoring
- Policy based routing (PBR)
- Link aggregation (802.1AX), LACP
- VXLAN
- NVGRE
- IPv4 NAT/NAPT
- IPv6 NPAT
- ACL
- Port mirroring

## Flexible Licensing

- "Pay-as-you-grow" license on hardware
- From 200Mbps to 520Gbps

## Extensibility

- N+M Clustering (Active-Standby, Active-Active)
- Multitenancy (Partition) Support
- Partition Support

## DDoS Protection

- Flood attack protection: SYN cookies, TCP/UDP/ICMP flood protection, DNS/HTTP flood protection
- Protocol attack protection: invalid packets, anomalous TCP flag combinations, packet size validation (ping of death)
- Resource attack protection: slowloris, slow POST, sockstress, fragmentation

## Management/Monitoring

- Dedicated management port (CLI, Telnet, SSH, WUI)
- Dedicated management routing table
- Dedicated control CPU
- SNMP v1/2/3
- RBAC with AAA (LDAP, Radius, TACACS+ support)
- 802.1ab LLDP
- sFlow/IPFIX/Netflow v9
- Syslog

## AP200 Hardware Platform Specification

Available License	
Throughput	3/5/10/15Gbps
Performance	
Throughput	15Gbps
Full TCP CPS	450K
Concurrent Sessions	64M
Rules	64K
Partitions	32
Hardware Specification	
Processor	1 x Intel 8-core CPU
Memory	16GB (Up to 64GB)
Storage	SSD (2 backup SSDs)
Hardware Acceleration	ASIC
Management Ports	Ethernet Management Port, RJ-45 Console Port
Default Network Interfaces	2 x 1GbE Copper Management
Pluggable Modules	Quad-Port 1GbE Copper 8 Port 1GbE Copper Quad-Port 1GbE Fiber 8 Port 1GbE Fiber Dual-Port 10GbE Fiber(SFP+) Quad-Port 10GbE Fiber(SFP+)
Dimensions	500mm (W) x 440mm (D) x 50mm (H)
Weight	10 kgs
Power Supply	Hot swap Dual Power Supply
Cooling Fan	Hot swap Fans
Rails	Sliding Rails
Operating Environment	Temperature: 0-40 °C (32-104 °F) Humidity: 5% to 95%

All PacketController Hardware Appliances support N+M active-standby/active-active clustering deployment.

The specifications, performance numbers are subject to change without notice, and may vary depending on configuration and environmental conditions.