

Designed for the most demanding network deployments.

KEY SYSTEM BENEFITS

- 600 Gbps of throughput for high-value DPI use cases in a compact 4RU platform
- Granular awareness for applications with superior accuracy using DRDL™
- Unsurpassed real-time visibility with LiveView™
- Flexible deployment options including support for asymmetric traffic through FlowSync™ and QueueSync™
- Carrier-class availability
- Chassis offers ability to add capacity with additional flow processing modules

PacketLogic™ 15000 Platform

High performance subscriber experience intelligence and policy enforcement for broadband networks

The PacketLogic 15000 is a 100GE-based system that enables network operators to gain insight into how their networks are performing and take action to improve the subscriber experience, with support for up to 600 Gbps of throughput in a single system, and multi-system performance scaling up to 10 Tbps.

Designed for the most demanding network deployments, the PL15000 platform offers the performance and capacity to handle up to 10 million subscribers delivering Subscriber Experience Intelligence and many different personalized services in a policy enforcement configuration. This enables massive network growth without sacrificing service creation flexibility—removing limitations for subscriber provisioning, policy interactions, policy enforcement, charging, application identification, analytics, and congestion management that have constrained network services and profitability.

The PL15000 platform can be configured to support various analytics and policy enforcement capabilities functioning as a PacketLogic Real-time Enforcer. It is ideally suited for the largest fixed, Cable MSO, and Mobile service provider network deployments supporting very large subscriber bases. The system supports multiple highavailability options, including internal N+1 redundancy, configuration synchronization, and clustering, for carrier-class availability.

SUPPORTING HIGH-VALUE USE CASES

Sandvine's PacketLogic software enables support for a full suite of network intelligence and policy enforcement use cases, including:

- Content-aware services
- Congestion management
- Traffic prioritization
- Application-layer shaping
- Statistics collection
- Volume-based shaping
- Application delivery networking via advanced traffic steering
- HTTP header enrichment

PACKETLOGIC™ 15000 PLATFORM



POWERFUL ENFORCEMENT CAPABILITIES

The PacketLogic 15000 platform is a turnkey hardware solution optimized to support Sandvine's PacketLogic Real-time Enforcer software, delivering unparalleled Subscriber Experience Intelligence with Policy Enforcement capabilities to enhance the subscriber experience.

- **REAL-TIME DYNAMIC LIVEVIEW QUERY ENGINE AND PACKETLOGIC CLIENT** enables sophisticated real-time forensics to manage Quality of Experience, Network Congestion, and Network Security issues.
- **DRDL™ (DATASTREAM RECOGNITION DEFINITION LANGUAGE)** processing to identify properties of individual session flows in real time, enabling operators to create and define services on-the-fly.
- **A FULL SUITE OF POLICY ENFORCEMENT CAPABILITIES** including content-aware services, congestion management, application layer shaping and volume-based shaping, mirroring, and captive portals.
- **POLICY-BASED TRAFFIC MANAGEMENT CAPABILITIES**, including asymmetric traffic control, traffic shaping and filtering, traffic flow classification and prioritization, traffic monitoring and packet re-write.
- **ADVANCED PACKET QUEUING**, including parallel queuing to enable more flexible traffic management policies which ensure predictable delay and jitter enabling operators to meet their customers' QoE expectations.
- **STATISTICS GATHERING** for individual flows to enable real-time and historical reporting, including real-time Quality of Experience (QoE) updates.
- **CONTENT INTELLIGENCE** enables network operators, cloud providers, and high-speed enterprises to combine the policy management capabilities of PacketLogic with industry-leading URL content categorization functionality.
- **HTTP HEADER ENRICHMENT** leveraging PacketLogic's stateful awareness and subscriber awareness.
- **ADVANCED TRAFFIC STEERING** that combines PacketLogic Real-time Enforcer capabilities with Application Delivery Networking functionality to provide a single Application Delivery Controller solution with unmatched performance and scalability, enabling service chaining with subscriber, service plan, charging, and Layer 7 awareness.
- **EVENT BASED TRIGGERS** that automatically change policy in response to specified real-time network traffic conditions by dynamically enabling DoS/DDoS connection limits, traffic shaping or filtering.
- **BGP INTEGRATION** enables Peering and CDN visibility, including QoE metrics Support for Origin-AS and Transit analysis.

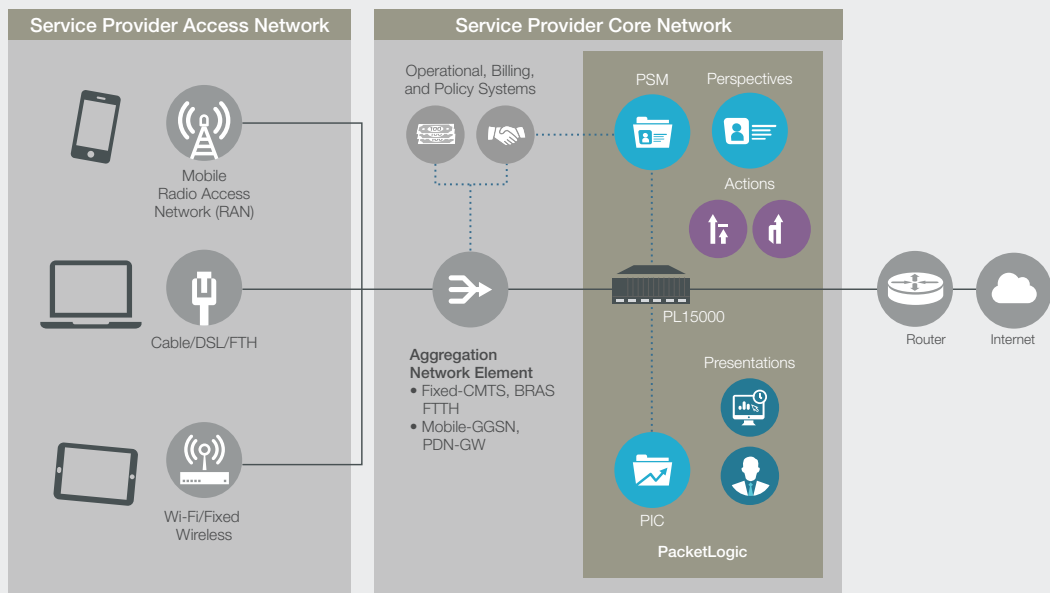
NETWORK INTEGRATION

The PL15000 tightly integrates with other PacketLogic software within the operator's core network to deliver analytics and enforcement solutions.

- **ACTIONS** are run directly on the PL15000 to perform intelligent policy enforcement. Congestion Management, Filtering, and Traffic Steering. In a mobile policy environment, the PL15000 acts as a 3GPP Policy and Charging Enforcement Function (PCEF)
- **PERSPECTIVES** integration to support powerful intelligent policy enforcement at the different subscriber, location, or other Perspective levels. The PL15000 gleans subscriber information during login to dynamically create policies, traffic control, or service packages for each user on the network. Other Perspectives enable fine-grained visibility and control for individual locations, content types, devices, etc.
- **INSIGHTS** to provide rich intelligence and analytics visualization for networks, subscribers, devices, and application performance. The network intelligence gathered by deployed PL15000s enables operators to make informed business decisions on network conditions, congestion management, and innovative new services.

Figure 1

**TYPICAL
PACKETLOGIC
DEPLOYMENT**



PL15000 SPECIFICATIONS



Connections	240,000,000 ¹
Connections/sec	4,800,000 ¹
Throughput	Up to 600 Gbps ¹ , Modular in steps of 50G from 50 to 600 (12 modules)
Subscribers	10,000,000 ¹
Management Interfaces	2 x 1GE RJ45 (Admin1/Admin 2) 4x10GE SFP+ (Aux1-4) 4x10GE SFP+ (ELVA1a,1b,2a,2b) 1x40GE QSFP (ELVA3)
Max # of Channels	24 x 10GE SFP+ SR/LR/ER (48-Ports) or 3 x 100GE LR4/SR10 CFP2 (6-Ports)
Physical Interfaces	10 Gbase-SR, 10 Gbase-LR, 10 Gbase-ER, 100GE CFP2 LR4/SR10
Console Port	RJ-45 Console
Redundancy	Bypass, Internal Modules, FlowSync
Bandwidth Licensing	1 Gbps, 10Gbps and 100Gbps increments
Network Intelligence	Intelligence Center
Subscriber Management	Subscriber Manager
Hardware	4RU chassis; 19" rack mounted
Components	Systems Management Module (SM); Flow Processing Module (FP)
Size	Width: 448mm/17.64" (bottom), 429mm/16.89" (top) Height: 178mm/7.01" Depth: 700mm/27.56"
Weight	183 lbs / 83 kg
Power	Max Power Consumption: 3200 W DC Power specification Input Voltage: 48V: -40 VDC to -60 VDC nominal Input Current (Max): 66 Amps @ -48 VDC (each feed 16.5A) Redundancy: 2+2 @ -48V DC AC Power specification Input Voltage: 100 VAC to 240 VAC nominal Input Current (Max): 29 Amps @ 110VAC (each feed 15A) 13 Amps @ 240VAC (each feed 6.5A) Redundancy: (2+2) @ 200 VAC (3+1) @ 100 VAC
Environmentals	Operating temperature: 0°C to 35°C; Storage temperature: -20°C to 80°C; Operating humidity: 5% to 95% (non- condensing)

¹ Depending on configuration/features used

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ABOUT SANDVINE

Sandvine helps organizations run world-class networks with Active Network Intelligence, leveraging machine learning analytics and closed-loop automation to identify and adapt to network behavior in real-time. With Sandvine, organizations have the power of a highly automated platform from a single vendor that delivers a deep understanding of their network data to drive faster, better decisions. For more information, visit sandvine.com or follow Sandvine on Twitter at [@Sandvine](https://twitter.com/Sandvine).



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