PacketManager

Network Software that Consolidates Packet Processing Functionality for Telecom and Networking Applications



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PacketManager is an abstracted software package designed for telecom, networking, and security equipment to accelerate and enrich packet processing capabilities

Due to the exponential growth of data traffic, service operators need increased levels of switching and fast forwarding bandwidth to keep up with rapidly growing operational demands. ADLINK has developed its own network traffic management software, PacketManager, to allow customers to configure, manage and monitor ADLINK switches and processor blades.

Designed to support a range of hardware architectures, including x86, Cavium, Broadcom and Intel® Red Rock Canyon, ADLINK PacketManager provides a hardware abstraction layer (HAL), to make the differences in hardware between platforms transparent to the developer. In addition to HAL, ADLINK PacketManager also includes a variety of L2/L3 protocols, as well as flow handling routines that allow customers to develop their own applications for both data and control planes with less effort.

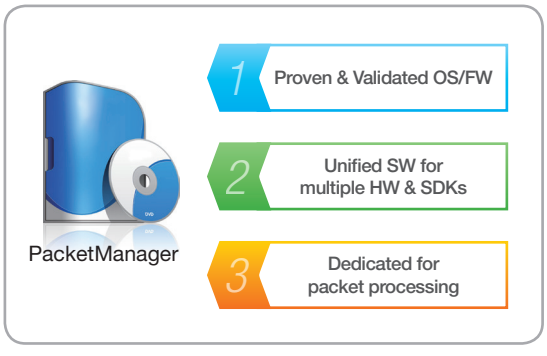
ADLINK PacketManager	Module	Description
Hardware Abstraction Layer	HAL	Abstracted APIs to support different hardware chipsets, including Intel, BCM and Cavium.
Data Plane (fast path modules)	Layer 2 Forwarding	Frame forwarding based on VLAN ID and destination MAC address
	Layer 3 Forwarding	Frame forwarding based on destination IP address
	Flow-based Forwarding	Frame forwarding based on flow informations, such as 5-tuple, 7-tuple and OpenFlow 13-tuple
	Flow Classifier	Packet classification based on input flow informations, such as 5-tuple or customized tuples, and subsequent actions(e.g. drop, mirror, load-balancing)
	Flow Analysis	Analysis of flow protcocols from incoming packets
	Content Inspection	Hardware offloading RegEx engine to inspect L4-L7 content.
	Access Control List	Input actions based on inport/5-tuple/mac/vlan/user-defined filters
	Quality of Service	Class of Service (CoS) queuing and mapping, IEEE 802.1 IP priority provisioning, IP Precedence, IP DSCP
	User-space Stack	Supports ARP/IPv4/IPv6/ICMP/UDP/TCP protocols and also socket layer for seamless migration of existing application from standard kernel to PacketManager
Control Plane (slow path modules)	Layer 2 Features	STP, MSTP, RSTP
		VLAN, VLAN Stacking (QINQ)
		LACP, CoS
	Layer 3 Features	IPv4, IPv6
		RIP, RIPng, OSPFv2, OSPFv3, BGP
		VRRP
		IGMP v3, snooping, proxy
Management Plane	CLI	User-friendly Command Line Interface, RPC API, SNMP MIBs for easy operateration, management, Integration
	API	
	SNMP	

- Unified Hardware Abstraction Layer to support Intel, Cavium and Broadcom chipsets
- Rich APIs for customers to develop their own software modules
- Full support for IPv4 and IPv6 routing
- Full support for flow-based classification, filtering, and policies such as load-balancing, mirroring
- Hardware offloading for data encryption and compression
- Protocols supported: STP, VLAN, LACP, IPv4, IPv6, RIP, OSPF, BGP, GTP

Supported Hardware

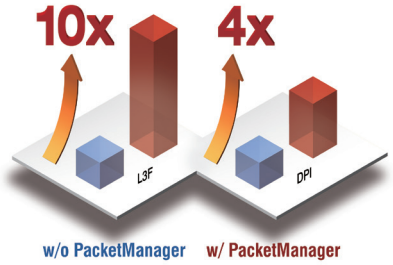
- AdvancedTCA IA, NPU and switch blades
- CompactPCI switch blade
- Network Appliance
- Extreme Outdoor Server





PacketManager accelerates packet processing and lets you configure, manage and monitor your systems

With PacketManager network software, ADLINK hardware products become Application-Ready Intelligent Platforms (ARiP) that provide increased in DPI performance and accelerated packet processing, as well as helping to reduce time-to-market.



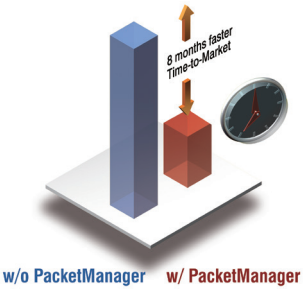
Industry-Leading Performance Enhancement

- More than **10x** increase in Layer 3 forwarding performance
- More than **4x** increase in DPI performance
- Performance scales linearly with the number of physical ports number and CPU threads



CAPEX & Resources Saved

- **10x** performance boost gives **10x** reduction in required hardware
- One-stop service including hardware and software
- Unified technical support interface for maintenance savings
- Systems cost savings



Faster Time-to-Market

- PacketManager accelerates your time-to-market by up to **8 months**
  - >> 2 engineer-months on hardware validation & benchmarking
  - >> 2 engineer-months on SDK familiarity before starting development
  - >> 4 engineer-months on basic features development
- Available resources for development using PacketManager
- Performance & benchmark data provided to reduce technical and schedule risks

** Note: Performance increases are in comparison to native Linux.*

Applications

ADLINK PacketManager can be easily used by customers to develop and deploy mainstream applications, especially for applications which require high performance packet processing ability and a wide range of protocol support, such as:

- L2/L3 switching/routing
- L4/L7 load balancing
- Deep Packet Inspection (DPI)
- Next-generation firewall, security gateway
- 3G/LTE/C-RAN network traffic offloader/accelerator
- Wi-Fi access point controller
- SDN/NFC solutions









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