Key Features

➡ **Purpose-built to scale OpenFlow* implementations leveraging high-performance TCAM**

➡ **First system to partition and optimize the number of TCAM entries required for flow rules**

➡ **First open switch for open networks leveraging hardware-agnostic operating system**

➡ **Fully non-blocking fabric with ultra-low latency**

Pica8 P-3297

- 48 x 10/100/1000BASE-T RJ45 port base unit, with four 10 GbE SFP+ uplinks
- Cost-effective 1 GbE / OpenFlow aggregation

Overview

Pica8's purpose-built open switches are ideal for cloud data centers that require flexibility and adaptability. Pica8™ open switches seamlessly integrate with today's data center applications on traditional network architectures, while allowing the exploration of new software defined networking (SDN) technologies, such as OpenFlow.

Pica8 white box switches run PicOS™, an open network operating system (OS) that runs standards-based Layer 2 / Layer 3 protocols with industry-leading OpenFlow 1.3 / Open-vSwitch (OVS) 2.0 integration. OVS runs as a process within PicOS, and provides the OpenFlow interface for external programmability. PicOS utilizes proven high-performance hardware to deliver wire speed through a switching fabric capacity of 176 Gbps.

Leverage Pica8's operating system - PicOS - for two powerful modes of operation

	Layer 2 / Layer 3 Mode	Open vSwitch (OVS) Mode
OPEN	• Switching platform using a Debian Linux network operating system • Programmable and customize by leveraging vast high-quality Linux tools	• Industry-leading OpenFlow 1.3 support through Open vSwitch (OvS) 2.0 integration • Leverage production-ready OVS switches for your CloudStack / OpenStack projects
FLEXIBLE	• High-performance Layer 2 / Layer 3 switching platform for both IPv4 and IPv6 networks, seamlessly integrating into existing architectures • Tune the fabric to meet your application needs, selectable store-and-forward or cut-through switching modes for ultra-low latency	• Interoperable with multiple Open Source OpenFlow controllers such as Ryu, Floodlight, NOX, and Trema • Leverage different controllers and reference architectures
ADAPTIVE	• PicOS a multiprocess OS, ensures each process has independent memory space, thread control, and interrupt handling for improved feature scaling	• Seamlessly add new protocols to PicOS, a multiprocess OS • Investment protection as your application needs change

* Only OpenFlow features available in hardware are supported, to ensure optimum performance

PRODUCT REFERENCE GUIDE

PICA8 — OPEN NETWORKING

	P-3297
Performance	
Switch Fabric Capacity (Gbps)	176
Forwarding Capacity (Mpps)	132
Forwarding Options	Store-and-Forward / Cut-Through
Packet Buffer Memory (MB)	4
Latency (ns)	1 µs (64 Byte Frames)
System Memory (GB)	2
SD/CF Memory (GB)	8
CPU / ASIC	P2020 / Trident+
Ports	
48-Port Base Unit	10/100/1000BASE-T
Uplink Options	4 x 1 GbE (SFP) or 4 x 10 GbE (SFP+)
SFP+ / QSFP+ Options	SR, LR, LRM, CR4
Console Port	1 x RJ45 Serial
Management Port	1 x 10/100/1000BASE-T
Layer 2 / Layer 3 Features	
Maximum MAC Addresses	32K
Maximum VLANs	4,094
Link Aggregation (Groups/Ports)	24 / 8
Jumbo Frames (Bytes)	9,216
Maximum Routes	12,000
MPLS Labels	8,000
Spanning Tree	STP/RSTP/MSTP
IPv4 Routing	RIP, OSPFv2/ECMP, BGP-4/ECMP, Static
IPv6 Routing	RIPng, OSPFv3, Static
Multicast Routing	PIM-SM, IGMP, IGMP Snooping
OpenFlow Support	
Large TCAM	Yes
Open vSwitch	v2.0
MPLS over OVS	Yes
GRE Tunneling	Yes
Physical & Environmental Specifications	
Size (Inches)	1.73 (H) x 17.3 (L) x 17.0 (D)
Weight (lbs)	15.85
MTBF (Hours)	196,356
Air Flow	Front to Back / Back to Front
Hot-Swappable Redundant Power	Yes
Power Draw (Watts)	120
Input Voltage / Frequency	100 - 240 VAC / 47 - 63 Hz
Operating Temperature	32 - 113 °F (0 - 45 °C)
Operating Humidity	95% Maximum Relative Humidity
LEDs	Port Status (Green), Activity Status (Blinking)
Regulatory Compliance	
Emissions	FCC, CE, VCCI-A, CCC, KCC, BSMI
Safety	UL, CE
RoHS	Yes