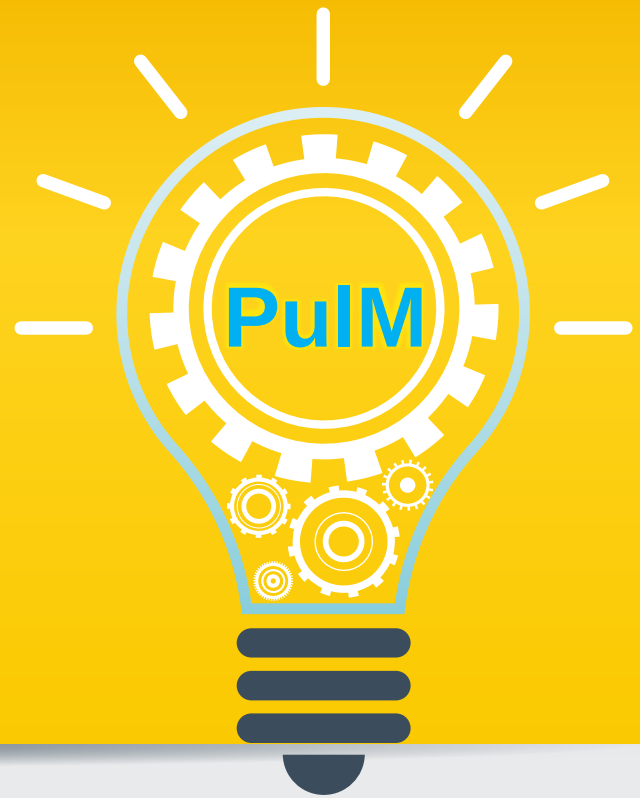
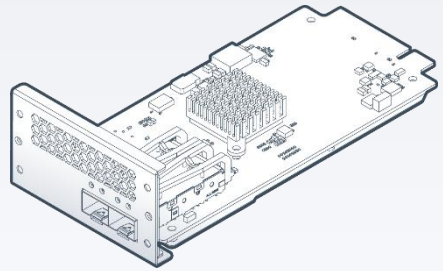
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Speed up SDN & NFV Solutions

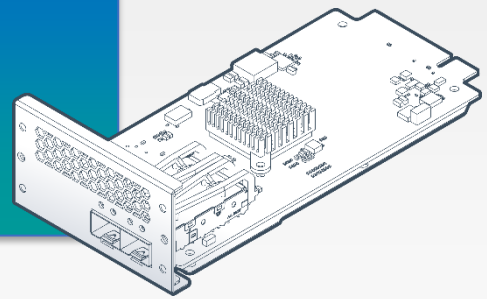
Smart NIC - PulM Series Selection Guide



Why You Need Smart NIC?

SMART NIC

- Reduce CPU Workload
- Optimize Network Computing Efficiency
- Shorten Network Data Path



- Overloading of Cloud Data Service Center
- The Plethora of Network Services to Decrease CPU Working Efficiency

Traffic Explosion of Data Center

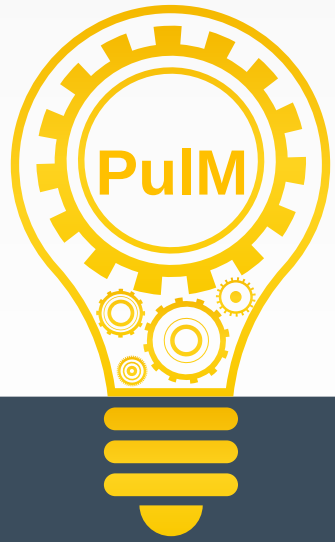
SDN (Software-Defined Networking)

NFV (Network Function Virtualization)

PulM

Features of Smart NIC

- Reduce CPU Workload
- Accelerate SDN & Virtual Functions
- Detect & Manage Network Traffic



IEI Smart NIC – the PuIM Series

Diverse Brand of NIC Platform → Four Major Brands

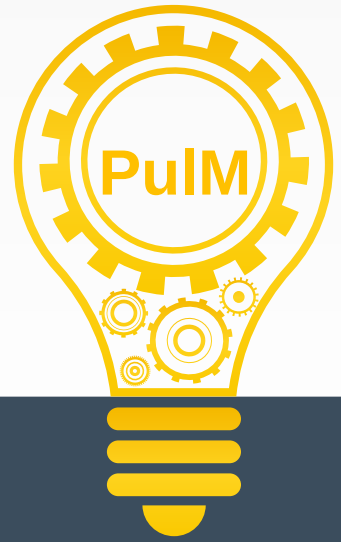
Uninterrupted Data Transmission → Bypass Function

Wide Range of Bandwidth → 1GbE to 100GbE



Diverse Brand of NIC Platform

Offload Function		Mellanox	Intel	BROADCOM	AQUANTIA
CPU Offload	LSO	Y	Y	Y	Y
	TSO	Y	Y	Y	
	RSS	Y	Y	Y	Y
	HDS	Y		Y	Y
	MSI-X	Y	Y	Y	Y
Storage Offload	IWARP		Y		
	iSER	Y	Y	Y	
	VEPA		Y	Y	
	NFS RDMA	Y	Y	Y	
	uDAPL	Y		Y	
Virtualization Support	VxLAN	Y	Y	Y	
	NetQueue	Y		Y	
	GENEVE	Y		Y	
	IEEE 802.1Qbg	Y	Y	Y	
	SR-IOV	Y	Y	Y	



Wide Range of Bandwidth

100GbE

PuIM-100Gxxx
100GbE SFP

Coming soon

25GbE

PuIM-25G2SF-MLX (Mellanox)
ConnectX-LX4
Dual ports 25GbE SFP28



10GbE

PuIM-10G4SF-XL710
XL710
Quad ports 10GbE SFP+



PuIM-10G4SF-MLX
ConnectX-LX4
Quad ports 10GbE SFP+



PuIM-10G4T (Aquantia)
AQC107
Quad ports 10GbE RJ-45



PuIM-10G4SF-XL710-BP
XL710
Fiber LC (SR&LR)



PuIM-1G4T I211
Quad ports 1GbE RJ-45



PuIM-1G4T I211
Quad ports 1GbE RJ-45
2 pairs bypass



PuIM-1G8T
BCM5720
Eight ports 1GbE RJ-45



PuIM-1G4T-I350
1GbE RJ-45
2 pair bypass



1GbE

PuIM-1G8T-I350
1GbE RJ-45
4 pair bypass (by sku)



PuIM-1G4SF-I350
1GbE SFP



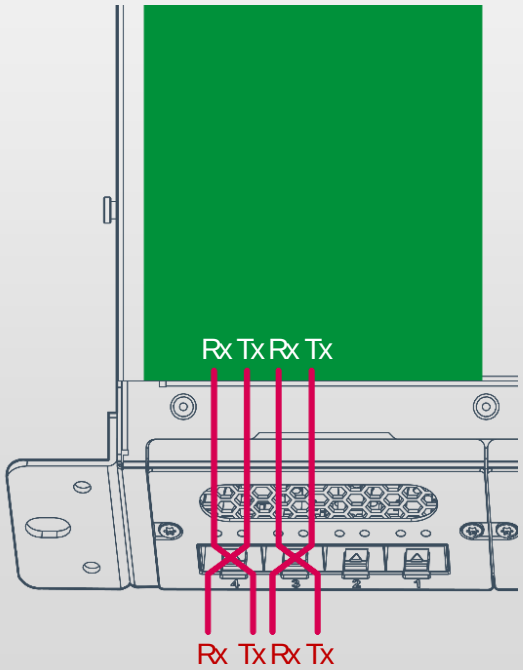
PuIM-1G8SF-I350
1GbE SFP



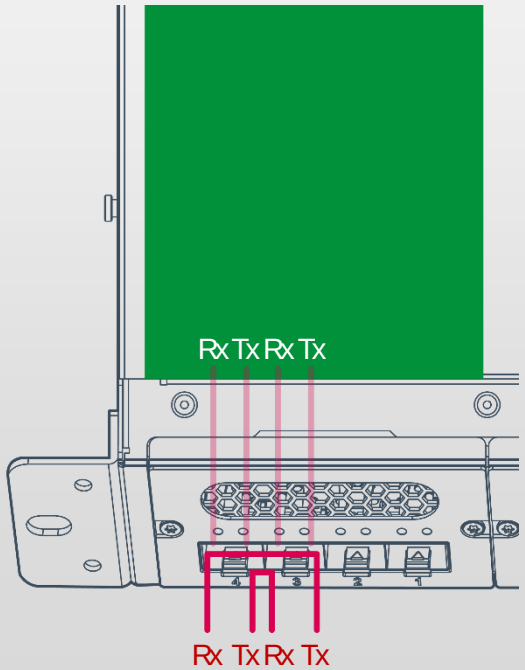
Uninterrupted Data Transmission –

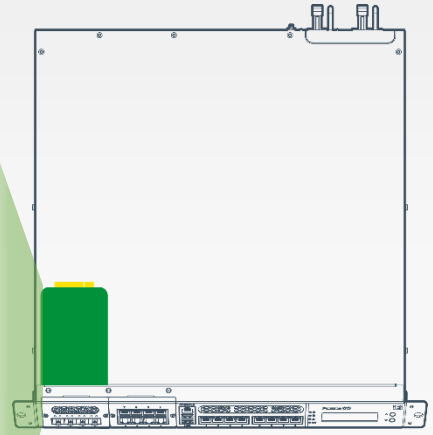
Bypass Function

General State



Power Failure or Shutdown





PuIM

Uninterrupted Data Transmission –

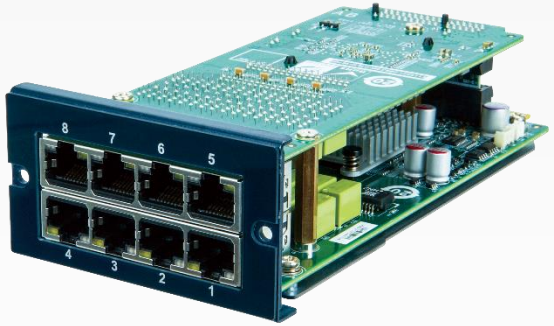
Bypass Function



PuIM-1G4T-I211-BP



PuIM-1G4T-I350-BP



PuIM-1G8T-I350-BP



PuIM-10G4SF-XL710-BP

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Comprehensive
PUZZLE Network Appliance

Slot A



- PUZZLE-A001 Series
- PUZZLE-IN004 Series

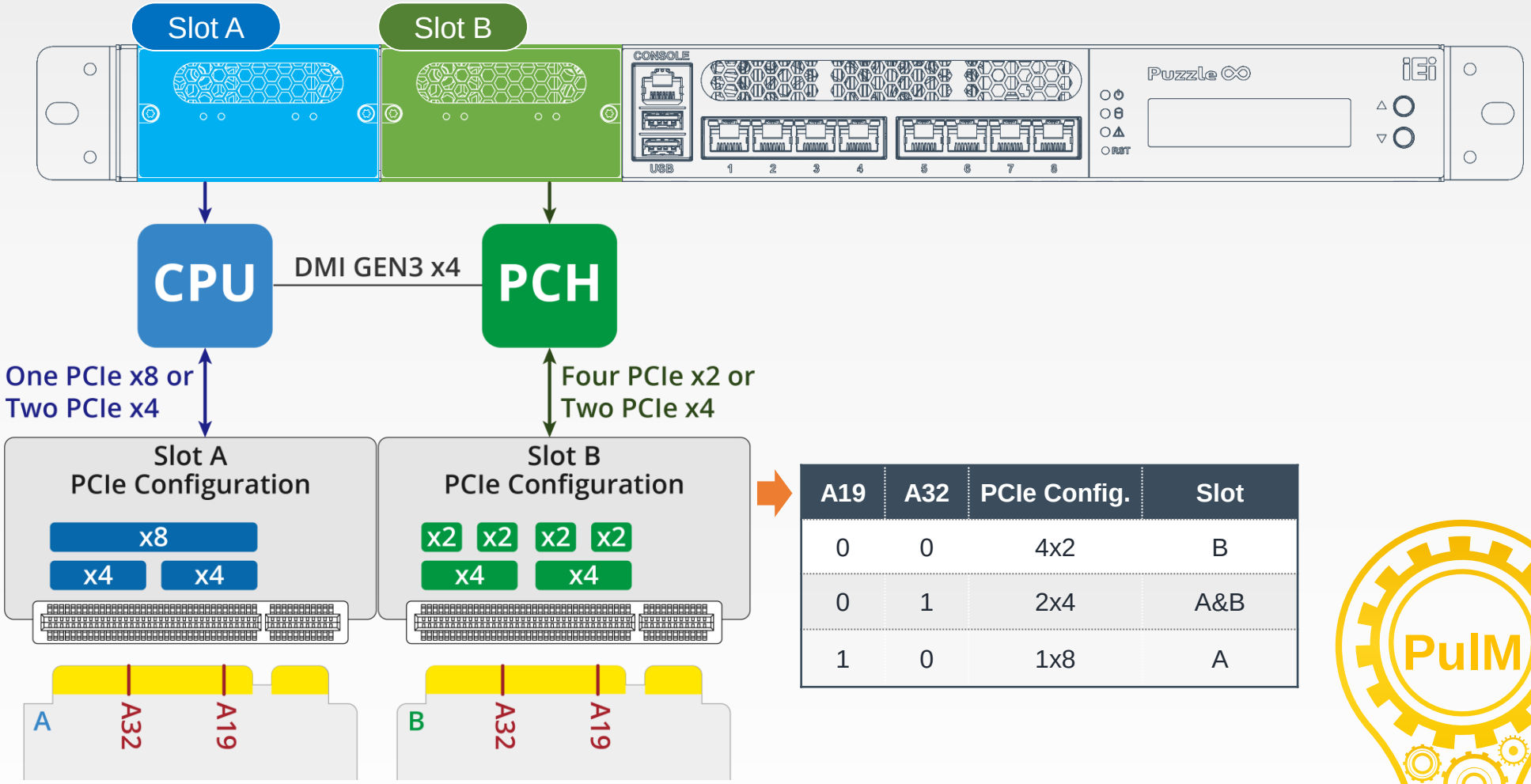
Slot A & Slot B



- PUZZLE-IN001 Series
- PUZZLE-IN001A Series

PuIM

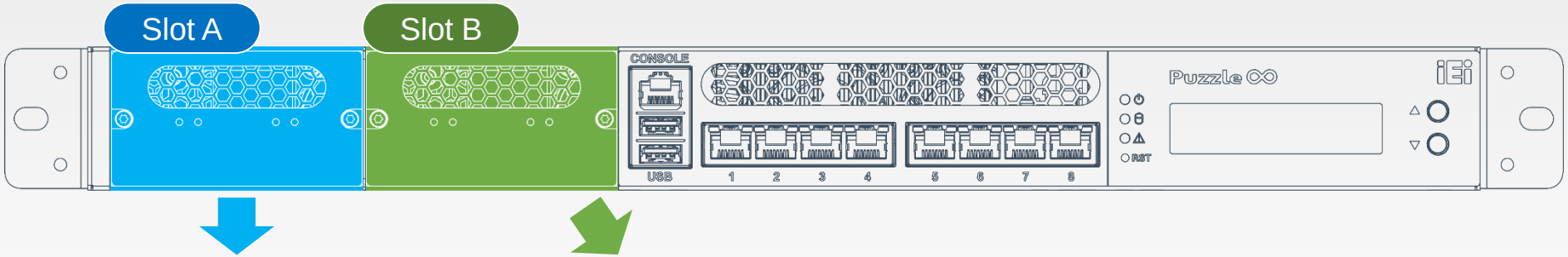
Features of Dual BIOS



A19	A32	PCIe Config.	Slot
0	0	4x2	B
0	1	2x4	A&B
1	0	1x8	A

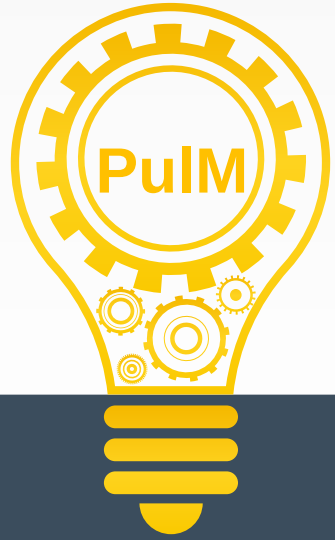
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Features of Dual BIOS



LAN module A ID (For Main Brd)	
PCIe CONF. Mode	SUPPORT Module
2x4	PulM-10G4SF-MLX PulM-1G4T-I350 PulM-1G8SF-I350 PulM-1G4SF-I350 PulM-2P1M PulM-M2-2S
1x8	PulM-25G2SF-MLX PulM-10G4SF-XL710 PulM-100G2SF-E810

LAN module B ID (For Main Brd)	
PCIe CONF. Mode	SUPPORT Module
4x2 (BIOS 1)	PulM-1G4T-I211 PulM-1G8T-BCM5720 PulM-10G4T-AQC107
2X4 (BIOS 2)	PulM-10G4SF-MLX PulM-1G4T-I350 PulM-1G8SF-I350 PulM-1G4SF-I350 PulM-2P1M PulM-M2-2S



Tips & Tricks

Smooth PulM Card Replacement

Shutdown State



S5

Under the shutdown state and the power cord is not unplugged.

After restarted, the system is not reset automatically, and fail to replace the new PulM card.



G3 (Mechanicaloff)

Under the shutdown state and the power cord is unplugged.

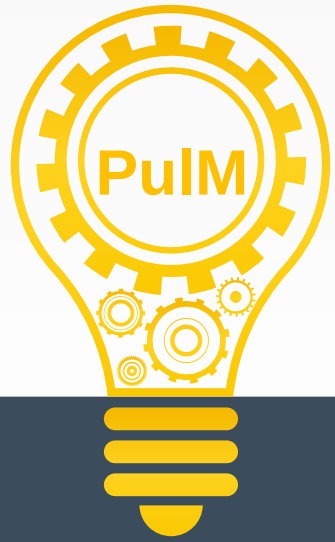
After restarted, the system is reset automatically, and the new PulM card can be replaced smoothly.



PulM Series Cards

Sharpening Your Network Applications

- Supporting Four Major Brands of NIC Platform
- Designed with 1GbE to 100GbE Bandwidth
- Bypass Function
- Easy Card Replacement under G3 State



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