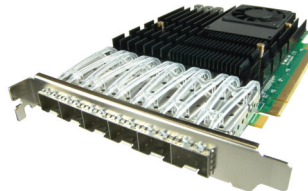# Multi-Port 10 Gigabit Ethernet Network Adapters

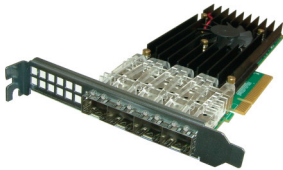## Maximum 10G Ethernet Performance with PCI Express Gen3

HotLava System's multi-port 10 gigabit Ethernet NIC enables today's most powerful servers to deliver the maximum aggregate throughput from a single PCI Expres slot. High port density makes it ideal for space constrained network appliances and servers.

Tambora 120G6S-G3
6x10GbE
PCI Express Gen3, x8
54 Gbps

Tambora 120G6S
6x10GbE
PCI Express Gen2, x16
54 Gbps

Tambora 80G4S-G3
4x10GbE, Low-profile
PCI Express Gen3, x8
40 Gbps

Tambora 40G2S
2x10GbE, Low-profile
PCI Express Gen2, x8
20 Gbps

Highlights

- Two, four or six 10GbE SFP+ ports in one standard plug-in adapter
- Up to 54 Gbps of unidirectional bandwidth
- PCIe Gen3 (8GT/s), x8 lanes
- SFP+ Interfaces
- 10GBASE-SR, LR, ER, ZR, CR
- DWDM, CWDM, TwinAx DA
- FCoE
- iSCSI

Benefits

- Maximum throughput from a single PCIe slot
- Wire speed with jumbo frames
- Achieves greater productivity from virtualized servers
- Eliminates the network I/O bottleneck
- Requires only one PCIe slot
- Provides high speed ports for network intensive applications
- Provides high speed ports for High Availability applications
- Provides high speed ports for Backup and Redundancy applications
- Load balances across multiple CPU cores
- 65nm geometry minimizes power consumption and maximizes performance
- SFP+ interfaces allow for hot swappable optical or TwinAx DA copper cables

Features

- 3rd generation 10GbE Intel 82599ES controllers
- Intel I/O Acceleration Technology (I/OAT)
- Virtual Machine Device queues (VMDq)
- Virtual Machine Device Connect (VMDc)
- MSI-X support
- Dual buffers per port, 160KB Transmit, 512KB Receive
- Optimized queues, 128 Transmit, 128 Receive
- Receive Side Scaling (for Windows)
- Scaleable I/O (for Linux)
- SR-IOV
- VXLAN
- VMware NetQueue

Product Specifications

Media Type
  10GBASE-SR
  10GBASE-LR
  10GBASE-CR
    (Direct Attached/twinax)
  Active Optical Cable
  DWDM
  CWDM

Status LEDs
  Link Active, Link Activity

Product Name	Tambora 120G6S-G3	Tambora 120G6S	Tambora 80G4S-G3	Tambora 40G4S
Number of ports	6	6	4	2
Slot Type	x8, PCI-e Gen3 (8GT/s)	x16, PCI-e Gen2 (5GT/s)	x8, PCI-e Gen3 (8GT/s)	x8, PCI-e Gen2 (5GT/s)
Media Connector	SFP+	SFP+	SFP+	SFP+
Form Factor	Std Height, 6.60 in x 4.33 in	Std Height, 6.60 in x 4.33 in	Low-profile, 6.60 in x 2.73 in	Low-profile, 6.60 in x 2.73 in
Power Consumption	25W	25W	20W	9W

Operating System Support

Windows Server 2003, 2008, 2012
Windows Web Server 2008, 2012
Windows Vista, 7, 8
Linux 2.6.x
MikroTik RouterOS 5.x
FreeBSD

VMWare ESX
XenServer
Solaris
Apple OS X (by Small Tree Communications)

Features

Three or two Intel 82599 Ethernet Controllers

Dual On-chip Buffers
  160KB Transmit / Port
  512KB Receive / Port

Optimized queues
  128 Transmit
  128 Receive

Switch Fault Tolerance
Adaptive Load Balancing
Interrupt Moderation
Adapter Fault Tolerance
Receive Side Scaling (for Windows)
Scaleable I/O (for Linux)
LinkSec support
Adapter Fault Tolerance
Direct Cache Access (DCA)
IPsec Offload (Windows 2008 Server)
SR-IOV
VMware NetQueue

TCP and UDP Checksum Offload
TCP Segmentation Offload
802.3ad Link Aggregation
802.1p Class of Services
802.1q VLAN Tagging
Intel I/OAT
Virtual Machine Device queues (VMDq)
Virtual Machine Device Connect(VMDc)
VLAN support with VLAN tag insertion, stripping and packet filtering for up to 4096 VLAN tags
Jumbo Frames up to 15.5 KBytes
VMware VXLAN

Environmental

Operating Temp	0 to 55 °C with 100 LFM airflow
Storage Temp	-40 to 70 °C
Operating Humidity	5 to 85% non-condensing
Storage Humidity	0 to 85% non-condensing
RoHS 6 Complaint	Yes
Hardware certifications	FCC A, CE, VCCI, EN300-386

Applications

Network Security Appliance

Unified Threat Management
Multi-purpose Gateway / Router
High Availability / Redundancy
Load Balancing
Software Defined Networking

Server

Link Aggregation
High Availability / Redundancy
Backup Networks
Software Defined Storage - Virtual SAN

Virtual Server

Higher Network Bandwidth
Redundancy / Backup
Multiple Dedicated VM Ports

Virtual Switch

Hypervisor bypass with VMDirectPath I/O

Switch Bypass

Connect directly to the server without the need for an Ethernet switch.

Video over IP

Surveillance
IPTV
Automatic Optical Inspection

Traffic Generator

Maximize Bandwidth and Connectivity

Ordering Information

Product Name	Part Number
Tambora 120G6S-G3	6ST3830A1F1
Tambora 120G6S	6ST2A30A2F1
Tambora 80G4S-G3	4ST3830A1
Tambora 40G2S	2ST2830A1