



UXC1000

UXC1000 is a four-port optical fiber network adapter with PCI Express v3.0 x8 bus interface developed by **UnixCloud Technology (Shenzhen) Co., Ltd.** on the basis of the RNP N10 solution of the Mutron controller. This adapter can be compatible with both PCIe x16 and PCIe v2.1.

This Ethernet fiber optic network card with independent intellectual property rights launched by **UnixCloud Technology (Shenzhen) Co., Ltd.** is also a network card with reconfigurable processor technology and high security, which supports different access of 10G and 1G. speed, with fully integrated 10 Gigabit Ethernet Media Access Control (MAC) module and Physical Layer (PHY) module.

UXC1000 supports IP/TCP, IP/UDP checksum offloading, and also supports MAC\VLAN\TCP_SYN and other packet filtering and

redirection of these packets, and supports both FC and PFC in terms of data traffic support. It is widely used in a variety of network applications, and is used in servers, network security equipment, embedded and other network equipment. The main controller used by the network card has independent intellectual property rights and independent controllability, which is of great significance for breaking foreign monopoly and ensuring national information security.

The controller used by UXC1000 is a domestic independent controller, which belongs to the domestic main control product and has independent controllability. Including data transmission, data network bandwidth, average transmission delay, actual small packet transmission rate and other indicators have reached the industry level.

Specifications	
Controller	Mucse RNP N10
Media	Fiber
Fiber type	10GBASE-SR,10GBASE-LR,10GBASE-Cu 1GBASE-SR,1GBASE-LR,LGBASE-Cu
Baffle Height	Full-height & half-height bracket
Power	9.5W

Connector	4 * 10G SFP+
PCIE Bus Type	PCle v3.0 x8, with PCle x16
Data rate	10Gbps
Power Supple	PCIE

Technical Parameter	
Power (Ethernet)	YES
Protocol Support	IEEE 802.3ae 10 Gigabit Ethernet over fiber IEEE 802.3z Gigabit Ethernet IEEE 802.3x Full Duplex and flow control IEEE 802.1AS IEEE 802.1Q VLAN IEEE 802.3AD IEEE 802.3ad IEEE 802.3az – Energy Efficient Ethernet (EEE) IEEE 802.1P IEEE 802.3ac
PXE Support	No
DPDK Support	No
WoL Support	NO
iSCSI Support	No
Jumbo Frame	YES
IPsec\MACSec	Yes
Jumbo Frames Max	9.6KB
Virtualization Function	VEB/VLAN/QINQ/VXLAN/NVRGE

Operating	
Operate Temperature	0 °C to 70 °C (32 °F to 158 °F)
Storage Temperature	-40 °C to 85 °C (-40 °F to 185 °F)
Storage Humidity	Max: 90% non-condensing relative humidity at 35°C
Certification	FCC, CE, RoHS

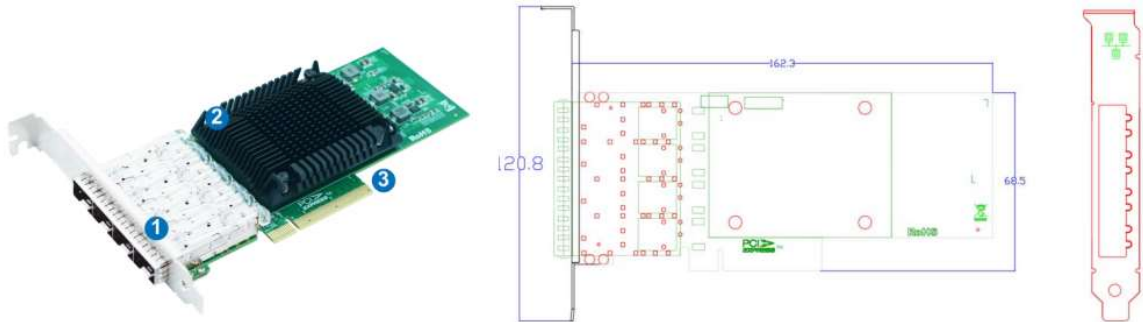
Packaging	
Product Size (mm)	162.3 * 68.5 * 21
Dimensions (mm)	**
2U/3U Bezel	*1
Installation Guide	*1
Warranty Card	*1
Gross Weight (g)	248

OS Support

*CentOS / RHEL 7.1 ~ 8.5

*Ubuntu 18.04.5 LTS/20.01.3

Product Organization and Layout



1. 4*10G SFP+ Connector
2. Radiator
3. PCIE V3.0 X8 Bus Interface

PS: The picture is for reference,the actual object shall prevail.

Application Scenarios

The LREC, LRES, LREG, LREM series network card products independently developed by **UnixCloud Technology (Shenzhen) Co., Ltd.** are multi-purpose Ethernet products, which can reduce the burden on the host and CPU while processing network data, and improve the stability of the server. A variety of network card products can meet a variety of different applications and meet the diverse application needs of customers.

1. Industrial automation

- Industrial cameras for component defect detection and triggering.
- Quality monitoring of the production process, and rapid realization of process automation.

2. Data center

- Help businesses scale up servers and NAS.
- Fast data transfer and synchronization between data centers.
- Unify LAN, SAN and cluster networks to save network costs.

3. Network storage

- Deploy high-performance NAS and Ethernet-based IP SAN to help customers implement shared storage systems for file and block-level services.

4. Cloud computing

- NIC virtualization capabilities maximize cloud scale and utilization.

- No need to tune the Ethernet network to run InfiniBand HPC and FC applications.

- Differentiated services through QoS traffic management.

5. High performance computing

- Realize high-speed transmission of cluster network, LAN network and SAN through high-bandwidth, ultra-low-latency Ethernet network to meet the requirements of high-performance computing.

6. Virtual environment

- Intel Virtualization Technology can effectively reduce the number of I/O bottlenecks and improve the overall performance of the server. •

- VMDq technology improves the data processing efficiency of the I/O controller by offloading functions.

- VMDc technology helps virtual machines approach the performance of the host through direct interconnection, realizes the scalability of virtual machines, and also provides flexibility for the migration of virtual machines between physical servers.

7. Fiber to the desktop office

- Avoid external electromagnetic interference EMI and radio frequency interference through the optical fiber office network. RFI can support longer distance, higher bandwidth transmission, and higher efficiency.

- Optical fiber transmission is small in size, light in weight, low in price, and high in transmitted signal quality.

- Use fiber-to-the-desk in the security department, with good security and confidentiality.

8. Unified network environment

- Carrying LAN and SAN over Ethernet technology consolidates previously dispersed network resources, simplifies infrastructure such as I/O adapters and cables, and reduces management and operational costs.

9. Flexible network layout

- With NPAR, a single physical Ethernet interface can be divided into four partitions or virtual interfaces, either of which can run TCP/IP or iSCSI. SR-IOV can also be deployed on any virtual interface to manage network resources flexibly and efficiently.

10. Monitoring of wild animals and plants

- In the field, high and low temperature resistant Ethernet technology remote network transmission, remote real-time detection of animal and plant status, reducing management and operating costs.

11. Communication base station

- Industrial cameras monitor the environment and alarms in real time and trigger them at any time.
- Handle large-capacity communication data services.

12. Smart (safe) city

- Create a need for image monitoring data transmission taking into account disaster early warning, safety production monitoring and other aspects.
- Control the real-time dynamics of public security in complex places through the real-time image data monitoring system, and at the same time, its large-capacity video data data provide the basis for event processing.

13. Internet cafes (Internet cafes)

- A large amount of data is sent back to the server from the desktop host, which requires stable upstream and downstream transmission quality.

14. Robot project

- The robot performs real-time monitoring of the environment and alarms and triggers actions.
- Big data processing business.

15. Machine Learning

- Distributed computing cluster design applications, optimize communication delay, and improve the efficiency of the entire computing process.

16. Slip ring operating system

- Work stably on the system, and transmit data to the background server for processing through optical fiber slip rings and Ethernet slip

rings. Signals are passed between the target scanner and the base, which rotates 360 degrees, through a fiber optic swivel connector.

About UnixCloud

UnixCloud(shenzhen) Technology co.,LTD has nearly 20 years of experience in product development, manufacturing and sales.

UnixCloud is the official authorized distributor of Moore Threads, aiming at the computing power demand of artificial intelligence development, focusing on the field of edge computing, and providing the industry with edge computing products and solutions that meet various AI needs.

At the same time, **UnixCloud** launched the 10G network card business, providing four-port and two-port 10G optical fiber network cards based on the Mucse-based network controller N10.

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