

## NIC-3210PF | USB3.0 Gigabit Ethernet Fiber Network Interface Card - Datasheet



### USB3.0 Gigabit Ethernet Fiber Network Interface Card, Realtek RTL8153-CG Chipset 1000Base-SX MM Fiber NIC, Single SC Port.

The NIC-3210PF is a USB 3.0 fiber optic adapter widely used in high-end applications. Unlike standard mini NICs with plastic enclosures, the NIC-3210PF features a unique aluminum shell that ensures the high performance of the USB 3.0 fiber NIC while offering a distinct and sophisticated appearance. The device can be positioned either upright or horizontally, making it a versatile addition to any workspace. Its aluminum casing provides superior thermal dissipation, overcoming the limitations of plastic shells. This ensures the NIC-3210PF maintains exceptional reliability and stability, earning its reputation as a market classic.



The NIC-3210PF addresses challenges posed by traditional integrated computers, where fiber access is typically achieved only through fiber transceivers (converting light signals to electronic signals). Compufox offers an optimal design featuring a small, pluggable slot that is compatible with all SFP gigabit modules. By exchanging SFP modules, users can adapt to a wide range of networking environments, maximizing the versatility of their setup. Under USB 3.0, the NIC-3210PF supports transmission rates of up to 1000 Mbps, meeting the demands of high-bandwidth data transfer.

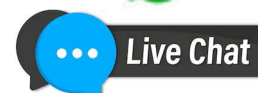
Based on the Realtek RTL8153-CG 1000M Ethernet controller, the NIC-3210PF integrates an IEEE 802.3u-compliant Media Access Controller (MAC), a USB 3.0 bus controller, and embedded memory. Utilizing advanced DSP and mixed-mode signal technologies, it provides high-speed transmission over CAT 5 UTP cables or CAT 3 UTP (10 Mbps only) cables. The NIC-3210PF implements robust features like Crossover Detection, Auto-Correction, polarity correction, adaptive equalization, cross-talk cancellation, echo cancellation, timing recovery, and error correction, ensuring reliable data transmission and reception.

The NIC-3210PF features USB 3.0, which offers greater bandwidth and enhanced protocols for faster data exchange between the host and device. Additionally, USB 3.0 provides advanced power management capabilities for better energy efficiency.

The NIC-3210PF supports Advanced Configuration and Power Interface (ACPI) - power management for modern operating systems that are capable of Operating System-directed Power Management (OSPM) - for efficient power management. It also supports remote wake-up features, including AMD Magic Packet and Microsoft Wake-Up Frame, in both ACPI and Advanced Power Management (APM) environments.

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The NIC-3210PF supports Microsoft Wake Packet Detection (WPD), providing Wake-Up Frame information to the OS, e.g., PatternID, Original PacketSize, Saved PacketSize, Saved Packet Offset, etc., helping prevent unauthorized or unwanted wake-ups of sleeping computers.

Additionally, the NIC-3210PF supports Protocol Offload, offloading common protocols to the NIC hardware to reduce unnecessary wake-ups and minimize power consumption. It can offload ARP (IPv4) and NS (IPv6) protocols while in the D3 power-saving state.

The NIC-3210PF also complies with the ECMA (European Computer Manufacturers Association) proxy for sleeping hosts standard.

The NIC-3210PF Supports IEEE 802.3az-2010, also known as Energy Efficient Ethernet (EEE). The IEEE 802.3az-2010 operates with the IEEE 802.3 Media Access Control (MAC) Sublayer to support operation in Low Power Idle mode. When the Ethernet network is in low link utilization, EEE allows systems on both sides of the link to save power.

Fully compliant with Microsoft NDIS5, NDIS6 (IPv4, IPv6, TCP, UDP) checksum features, the NIC-3210PF also supports IEEE 802 IP Layer 2 priority encoding and IEEE 802.1Q Virtual Bridged Local Area Networks (VLAN). These features help reduce CPU utilization and improve performance, particularly when operating on network servers.

The NIC-3210PF is ideal for various market segments and emerging applications, including desktops, mobile devices, workstations, servers, communication platforms, docking stations, and embedded applications.

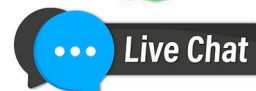
## Features

- Fiber Port supports 1000Mbase-SX/LX standard
- Supports USB 3.0, 2.0, and 1.1
- Supports LPM (Link Power Management)
- Supports pair swap/polarity/skew correction
- Crossover Detection & Auto-Correction
- Supports Wake-On-LAN and "RealWoW" (Wake-On-WAN) Technology
- Supports power down/link down power saving
- Transmit/Receive on-chip buffer support
- Supports hardware CRC (Cyclic Redundancy Check) function

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- Microsoft NDIS5, NDIS6 Checksum Offload (IPv4, IPv6, TCP, UDP) and Segmentation Task-offload (Large send v1 and Large send v2) support
- Supports jumbo frame to 9K bytes
- Supports Full Duplex flow control (IEEE 802.3x)
- Fully compliant with IEEE 802.3 and IEEE 802.3u
- Supports IEEE 802.1P Layer 2 Priority Encoding
- Supports IEEE 802.1Q VLAN tagging
- Supports IEEE 802.3az-2010 (EEE)

### Operating System

- windows xp 32bit/64bit
- windows vista 32bit/64bit
- windows 7 32bit/64bit
- windows 8 and 8.1 32bit/64bit
- linux

