UNIVERGE™ BF 210/24 PoE Switch

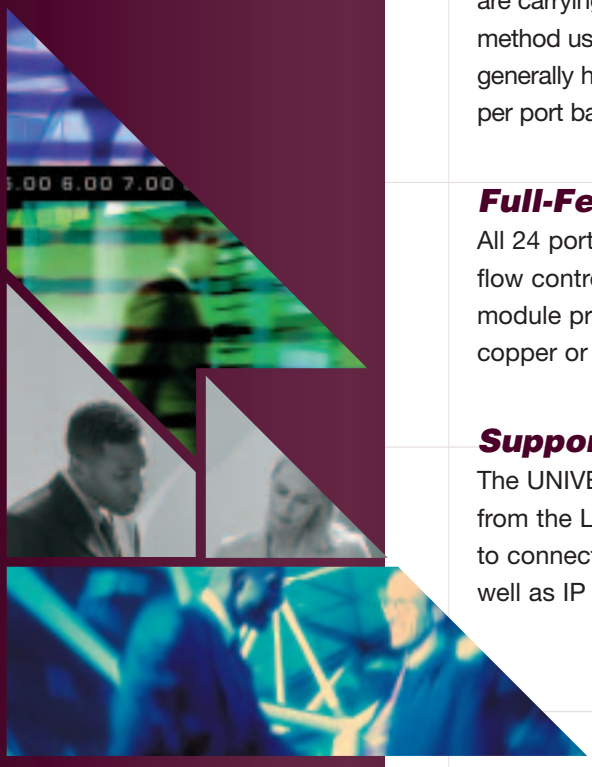
Complete IP Telephony Power Solution

The UNIVERGE BF 210/24 PoE Switch provides a complete power solution for IP telephony terminals and wireless Access Points. The layer 2 LAN switch offers Power over Ethernet (PoE) for up to 24 devices by utilizing standard Ethernet cabling. This power distribution method enables centralized UPS backup and eliminates the need for AC adapter at each terminal.

BF 210/24

Many telecommunications analysts agree that one of the early market "inhibitors" to the adoption of Voice over IP in the LAN was the ability to provide power to the telephone set. In traditional, circuit-switched telephony, phone sets receive the -48VDC required for operation from the PBX itself. Yet the traditional Ethernet switches providing the infrastructure for LAN IP telephony were not designed to provide this power, necessitating the use of "external" devices.

To solve this problem, NEC has developed the BF 210/24 PoE Switch that supports two Power over Ethernet (PoE) standards, the IEEE 802.3af standard and the NEC proprietary standard. This insures investment protection for IP phones that only support the NEC standard. The BF 210/24 PoE Switch also offers two alternatives for providing PoE Power. The in-line signal pair method uses pins 1, 2, 3 and 6, the same pairs that are carrying the voice and data traffic to and from the IP Terminal devices. The spare pair method uses pins 4, 5, 7 and 8, which are found in most traditional Ethernet cabling but generally have been unused. These methods are selectable for the BF 210/24 PoE on a per port basis through the unit's software management system.



Full-Featured Layer 2 Switch

All 24 ports can auto-negotiate between 10/100 mbps, half duplex or full duplex with flow control provided for half & full duplex operation. An optional front panel slide-in module provides two slots for high speed up-links supporting Gigabit Ethernet over copper or fiber (GBIC).

Supporting IP Telephones, Access Points & PCs

The UNIVERGE BF 210/24 PoE actually "discovers" LAN devices requiring power from the LAN before the -48VDC us applied to the circuit. This provides the flexibility to connect non-telephony (non-powered) LAN devices (such as PCs) to the switch as well as IP telephones and Wireless Access Points.

Empowered by Innovation NEC

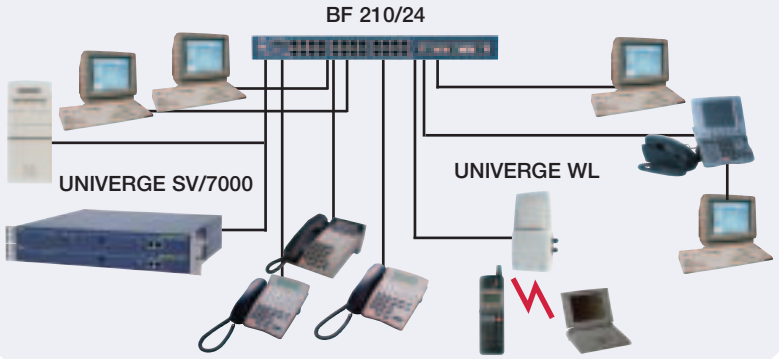
UNIVERGE BF 210/24 PoE Switch

Complete IP Telephony Power Solution

Overview

- Up to 24 10/100 mpbs ports and two Gigabit Ethernet ports; Port Mirroring Support
- Full and Half duplex for all 10 Mbps, 100 Mbps and 1,000 Mbps connections
- 8.8 Gbps (bi-directional) non-blocking switch fabric architecture
- Store and Forward Switching technique
- 802.1Q Tagged VLAN Support; up to 255 VLANs per device (VID = 1-4094)
- GVRP Support (GARP VLAN Registration Protocol) for Dynamic VLAN Registration
- In-line Power over Ethernet (PoE) or Ethernet "Spare Pair" power
- Investment Protection with PoE support for IEEE 802.3af or NEC Proprietary Protocol
- Port Trunking: Up to six Trunk groups of up to 8 ports with IEEE 802.3ad support
- 802.1D/W Rapid Spanning Tree Protocol Support
- QoS 802.1p based or port-based priority support and 4 levels of priority queues
- IGMP Snooping Support
- Layer 2 Multicast: GMRP (GARP Multicast Registration Protocol)
- Broadcast and Multicast Storm Control
- Security with Access Lists & IEEE 802.1x Port-based Access Control
- Front Panel RS-232 port for diagnostics, setup and management
- Web and Command-Line Management Interface
- SNMPv3, SNMP, RMON and Syslog Support

Layer 2 LAN Switch with In-Line Power over Ethernet



BF 210/24 PoE Technical Specifications

Interfaces	10BASE-T, 100BASE-TX 1000BASE-T, or GBIC	Bridging & Mirroring	Spanning Tree Protocol: IEEE 802.1d/w (Rapid) Port Mirroring: Single/Multiple Mirroring
Flow Control	Half Duplex: Collision-based Full Duplex: IEEE 802.3x	Management	Web, Command Line (CLI) Console or TELNET
PoE	IEEE 802.3af or NEC In-line or Spare Pair Method -48 VDC, 13500 mW/port max 15.4W/Port, min 0.5W	SNMP (v1/v2/v3)	- Bridge MIB (RFC 1493) - MIB-II (RFC 1213) - RMON 4 Groups (RFC 1757) - 802.1q/802.1p (RFC 2674) - Entry MIB (RFC 2737) - IF-MIB (RFC 2233) - Ether-Like (RFC 2358) - 802.3af MIB
VLAN	Tag-based or port-based; Overlapped Support Max. 255 (VID=1-4094)	Power	Voltage: 100V~240V Frequency: 50/60 Hz Consumption: 326W (max 500W)
Link Aggregation	- Max 6 Trunks (8 ports/Group) - IEEE 802.3ad (LACP)	Humidity (non-condensing)	Operating: 20~90% Storage: 10~95%
QoS	- 4-Level Queues, 802.1p or port-based - Bandwidth Control - Broadcast Storm Control	Temperature	Operating: 0~40 ˚C / 32~104ºF Storage: -20~65 ˚C / -4~149ºF
Security	IEEE 802.1x Port Based Access Control, Layer 2 or 3 Access Lists	Physical	Dimensions (mm): 441 W x 418 D x 44 H Dimensions (in): 19.36 W x 16.45 D x 1.73 H Weight: 6.5 Kg / 14.33lbs.

To find out more about the BF 210/24 or to inquire about NEC's powerful and versatile data networking solutions, visit our website at www.necunifiedsolutions.com

Empowered by Innovation NEC