

NetLink F 5x10[®]

Taking PTP Wireless to a Higher Point of Efficiency

- Ethernet bridging & backhauling
- OFDM technology
- Outdoor radio with medium range
- Robust performance in non-line-of-sight-(NLOS) environments
- Simple installation and maintenance
- Multi level data security protection
- Unlicensed 5.x GHz bands



Product Highlights & Advantages

- Cost effective alternative to leased lines with fast ROI
- Optimal cost/performance ratio: highly cost efficient solution
- Robust outdoor architecture: ensures unprecedented range and reliability
- Superior OFDM radio - enables non-line-of-sight (NLOS) capabilities in dense urban environments
- Medium throughput - up to 10 Mbps
- Easy to install and adjust - full LED diagnostics, 10-LED bar display for antenna alignments, user-friendly management tool application
- Built-in remote diagnostics - minimize maintenance costs and downtime
- Supports dynamic frequency selection (DFS) and automatic transmit power control (ATPC)
- Automatic clear channel selection (ACCS) - Built-in spectrum analyzer that detects noise characteristics per channel with an option for automatic clearest channel selection



NetLink F 5x10 System Components

Base Unit (BU)

The BU is installed at one end of the PTP link and connects to a central server or to the Internet. The BU is composed of two parts, a universal indoor unit (IDU) and an outdoor unit (ODU). By combining the radio and the modem in the outdoor unit, NetLink F 5x10 offers a true outdoor device with no power loss associated with expensive and lossy indoor/outdoor cable. The outdoor unit is available only with an integrated antenna.

Remote Bridge (RB)

The RB is placed at the far end of the PTP link, connecting the end user to the centrally located BU. It is also composed of two parts, an identical universal indoor unit, like the one used in the BU, and an outdoor unit that is available only with the integrated antenna.

BU NetLink F	Connects directly to the 10/100 Base-T Ethernet backbone and links it to the central network point
RB NetLink F	Connects directly to the 10/100 Base-T Ethernet LAN and links the remote Ethernet LAN to the central point via the Base Unit, servicing up to 1024 stations.

Specifications

Radio

Frequency	5.470-5.725 GHz 5.725-5.875 GHz								
Radio type	OFDM, TDD								
Channel bandwidth	20 MHz (40 MHz in turbo mode)								
Central frequency resolution	10 MHz space								
Output power (at antenna port)	Up to 21 dBm (dependent upon regulation)								
Modulation	BPSK, QPSK, 16QAM, 64QAM								
Sensitivity, typical (dBm at antenna port)	Modulation	1	2	3	4	5	6	7	8
	Level (20 MHz)	-89	-88	-86	-84	-81	-77	-73	-71
									-Modulation Level combines modulation scheme and coding gain. -When using 40 MHz (turbo mode) sensitivity is reduced by 3 dB
Antenna	BU and RB 5 GHz				20 dBi, 14° horizontal x 14° vertical, flat				
	Integrated antenna				EN 302 085, Class TS 1,2,3,4,5 compliant				

Data Communication

Standard compliance	IEEE 802.3 CSMA/CD
VLAN support	Based on 802.1q, Q-in-Q support (802.3ad)
Security	a. Association protocol - ESSID
	b. WEP 128, AES 128 (FIPS - 197 - licensed upgrade on NLF XX108 only)
	c. IP level filtering for user addresses or protocols
	d. Access direction and IP address filtering for management

Configuration and Management

Management options	Via Telnet SNMP based configuration utility Configuration upload/download
Remote management access	From wired LAN, wireless link
Management access protection	a. Multi-level password
	b. Configuration of remote access direction (from Ethernet only, from wireless link only or from both sides)
	c. Configuration of IP addresses of authorized stations
Allocation of IP parameters	Configurable or automatic (DHCP client)
Software upgrade and configuration up/download	FTP/TFTP download
SNMP agent	SNMP V1 Client, MIB II, Bridge MIB, Private NetLink F MIB

Electrical Characteristics-RB and BU

Power consumption	25W	
Input power	AC, 100-240 VAC, 50-60 MHz (DC 10.5-32 UDC with OPS-DC add-on module)	
Indoor - outdoor cable	CAT-5 shielded, 90m max	
Indicators	Indoor unit	Power, Link and Ethernet LEDs
	Outdoor Unit	Status, Ethernet and W-Link LEDs SNR 10 LEDs bar indicator (RB only)
Connector	Data	RJ-45
	AC Power	3 pin AC power plug (indoor unit only)

Physical and Environmental

Dimensions - RB and BU	Indoor unit	16 x 9 x 6 cm (0.55 kg)
	Outdoor unit with integrated antenna in 5 GHz	21 x 21 x 5.4 cm (1.25 kg)
Operating temperature	Outdoor unit	-40°C to 55°C
	Indoor unit	0°C to 40°C
Operating humidity	Outdoor unit	5%-95% non condensing, weather protected
	Indoor unit	5%-95% non condensing

Standards and Regulations

Radio	FCC part 15.247, ETSI: EN 301 753, EN 301 893 (1.3.1), EN 300 440-1/2, EN 300 328	
EMC	FCC part 15 class B, ETSI: EN 301 489-1	
Safety	UL 60950-1, EN 60950-1	
Lightning protection	EN 61000-4-5, Class 3 (2kV)	
Environmental	Operation	ETS 300 019 part 2-3 class 3.2 E for indoor unit
		ETS 300 019 part 2-4 class 4.1 E for outdoor unit
	Transportation	ETS 300 019-2-2 class 2.3
Storage	ETS 300 019-2-1 class 1.2 E	



www.netronics-networks.com

Netronics Technologies Inc.
600-15 Allstate Parkway
Markham, Ontario, L3R 5B4,
Canada
Tel: + 1 (905) 415 4585
Fax: + 1 (416) 352 5720

Middle East Office
P.O.Box 29650, Dubai, U.A.E
Tel: + (9714) 319 92 64
Fax: + (9714) 319 92 65

