

# FibeAir<sup>®</sup> 4800

## System Specifications

### Introducing FibeAir<sup>®</sup> 4800

FibeAir 4800 product family is a carrier-class, low cost point-to-point wireless broadband system. It operates in the license-exempt 2.3 - 6 GHz bands and is suitable for service providers and enterprises that require immediate deployment and quick return on investment.

FibeAir 4800 product family carries Fast Ethernet and TDM services over sub 6GHz bands, effectively connecting voice and data over a single link. The system ensures low BER, as well as low latency and full compliance with E1/T1 interface jitter and wander requirements.

FibeAir 4800 enables direct connection of existing equipment, such as LANs and PBX systems, thus eliminating the need for additional external equipment.

Configuration	
Split-Mount Architecture	Outdoor unit (ODU), Indoor unit (IDU): IDU-E (Enterprise form-factor), IDU-C (Carrier form-factor)
IDU to ODU Interface	Outdoor CAT-5e cable; Maximum length of 100 m
All-Outdoor	POE (power over Ethernet)
All-Indoor	With N-Type connectors for external antenna
Radio	
Frequency	2.300-2.400 GHz, 2.400-2.485 GHz, 2.500-2.690 GHz, 4.940-4.990 GHz, 5.140-5.345 GHz, 5.490-5.730 GHz, 5.725-5.950 GHz, 5.805-6.020 GHz
Data Rate	Configurable up to 48 Mbps
Channel BW	5 MHz, 10 MHz, 20 MHz, configurable
Channel Setting Resolution	5 MHz
Duplex Technique	TDD
Modulation	OFDM- BPSK, QPSK, 16 QAM, 64 QAM
Transmit Power	Up to 18/23/27 dBm (configurable in 1dB steps). The max value is limited in accordance with standard regional regulations.
Received Dynamic Range	>60dB
Error Correction	FEC k=1/2, 2/3, 3/4
Encryption	AES 128
HSS	Hub site synchronization
ACS	Auto channel selection
Adaptive modulation	Automatic Rate adaptation
LAN Interface	
Type	10/100BaseT interface auto-negotiation
Number of ports	1,2
Framing Coding	IEEE 802.3U
Bridging	Self-learning up to 2047 MAC addresses IEEE 802.1
Traffic Handling	MAC layer bridging, self-learning
Data Latency	3 msec typical
Line Impedance	100Ω
VLAN Support	Transparent
VLAN Tagging	VLAN tagging for management traffic
Connector	Rj-45

# FibeAir® 4800



E1/T1 Interface	
Framing	Unframed (Transparent)
Number of ports	1, 2, 4
Compliance to standards	G.703, G.826
Timing	Independent Tx and Rx timing
Line Code	E1: HDB3; T1:AMI/B8ZS
Latency	Typical- 8 msec. configurable TDM delay 5 msec. to 20 msec
Impedance	E1: 120Ω, balanced, T1: 100Ω, balanced
Connector	RJ-45
Jitter & Wander	ITU-T G.823, G.824
Management	
Protocol	SNMP based
Element Management	4800 Link Manager
Network Management	PolyView (UNIX / WIN) or SNMPc based
Telnet	Telnet protocol support
Upgrade Capabilities	Local and remote software upgrade
Diagnostics	Local and remote loopbacks
Mechanical	
ODU Dimensions (including 1ft flat integrated antenna)	30.5 cm (H)x 30.5 cm (W)x 5.8 cm (D), Weight: 1.5 kg / 3.3 lb
ODU Dimensions (integrated antenna not included)	24.5 cm (H)x 13.5 cm (W)x 4.0 cm (D), Weight: 1.0 kg / 2.2 lb
IDU-E, IDU-R Dimensions	16.5 cm (H)x 23.6 cm (W)x 4.5 cm (D), Weight: 0.5 kg / 1.1 lb
IDU-C, All Indoor Dimensions	43 cm (H)x 29 cm (W)x 4.5 cm (D), Weight: 1.5 kg / 3.3 lb
Mounting	Pole or wall mounting

Electrical	
Power Input:	IDU-E: 110/220 VAC (50/60 Hz) or (-60) - (20) VDC, IDU-C: 110 VAC or 220 VAC (50/60 Hz) or -24 VDC or -48 VDC
Power Consumption	FibeAir 4800 with IDU-E: 10W max, FibeAir 4800 with IDU-C: 14W max

Environmental	
Outdoor Unit Enclosure	All-weather cases
ODU Temperatures	-35°C- 60°C/ -31°F- 140°F
IDU Temperatures	-5°C-45°C/ 23°F - 113° F
Humidity	Up to 90% non-condensing

Frequency	2.x GHz	4.x GHz	5.x GHz
Integrated Antenna 1ft			
Gain	16dBi	21dBi*	22dBi
Beam Width	20	9	9
Polarization	Linear	Linear	Linear
External Antenna 2ft			
Gain	24dBi	27dBi	28dBi
Beam Width	10 H/14 V	4.5	4.5
Polarization	Linear	Linear	Linear

Higher gain antennas are available upon request.  
 \*FibeAir 4849 is available with 1ft external antenna



## Standards & Regulations

Frequency	2.3 GHz	2.4 GHz	2.5 GHz	4.9 GHz	5.3 GHz	5.4 GHz	5.8 GHz	5.9 GHz	6 GHz
Radio Regulation									
FCC 47CFR		2.400-2.475 GHz part 15 Subparts B&C	2.500-2.690GHz Part 27	4.940-4.990 GHz Part 90 & Part 15 Subpart B	5.250-5.340 GHz Part 15 subpart E		5.730-5.845 GHz Part 15 Subparts B&C		
IC		2.400-2.475 GHz RSS-210			5.250-5.340 GHz RSS-210	5.510-5.730 GHz RSS-210 Supporting DFS	5.730-5.845 GHz RSS-210		
ETSI		2.400-2.485 GHz EN-300 328			5.170-5.330 GHz EN 301 893 supporting DFS	5.490-5.710 GHz EN 301 893 supporting DFS			
UK							5.725-5.845 GHz VNS 2107		
Australia		2.400-2.485 GHz AS/NZS 4771							
India							5.825-5.875 GHz WPC		
Unregulated	2.300-2.340 GHz	2.310-2.485 GHz			5.140-5.345 GHz	5.490-5.710 GHz		5.725-5.950 GHz	5.805-6.020 GHz
Safety	EN 60950, IEC 60950, UL 60950, CAN-CSA C22,2 60950								
EMC	EN 300 386, EN 301 489, EN 55022, EN 61000, EN 55024, AS/NZS CISPR 22, CAN/CSA-CEI/IEC CISPR 22-02, FCC 47CFR class B part 15 sub-part B								
Environment	IEC 60721 Class 4M5 IP67								

## Ceragon Networks Ltd.

Ceragon Networks Ltd. is a leading provider of high-capacity Carrier Ethernet and TDM wireless solutions for cellular and fixed wireless operators, enterprises and government organizations.

Ceragon's modular FibeAir product family is recognized as the gold standard for backhaul transmission and is the selection of choice for service providers. A scalable, future-proof solution for wireless transport of broadband services, FibeAir operates across multiple frequencies for Ethernet and SONET/SDH protocols, supporting the emerging needs of next-generation networks that are evolving to all-IP based services. It leads the market in IP backhaul, offering a unique, native Ethernet solution that provides efficient, robust connectivity.

Ceragon supports its growing base of more than 200 customers in 85 countries by operating an extensive sales network comprised of multiple offices and numerous partners located around the world. More information is available at [www.ceragon.com](http://www.ceragon.com)

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