

FibeAir 1500P-AES

Encrypted High Capacity Wireless Connectivity

Secure Wireless Ethernet and Voice

Ceragon's solution is the first licensed carrier class high capacity wireless PTP radio link with integrated AES encryption, Fast Ethernet and TDM capabilities (FE + 8xDS1).

Ceragon's FibeAir 1500P-AES encrypted solution enables the highest level of information security over the wireless medium, without compromising link performance.

The encryption used is the AES (Advanced Encryption Standard) algorithm with 256-bit keys, in accordance with the FIPS 140-2 Level 2 security standard. Each link has a unique set of encryption keys, allowing encrypted wireless connectivity. The encryption module operation is based on encryption/ decryption processes using symmetric block cipher (AES algorithm) and asymmetric key establishment techniques (Diffie-Hellman Key Establishment). The system provides FIPS-validated operator authentication, secure key storage and management, and performs secure authentication.

Applications

- Department of Defense
- Federal and Local Government
- Healthcare
- Financial Institutions
- Enterprises, Private Networks

FibeAir 1500P-AES is implemented globally for various military projects, such as high capacity connectivity between static and mobile command centers, government video surveillance and border control, rapid field deployment on tripods for combat, portable backup for optical fibers and others.

End-to-End Network Management

Ceragon provides friendly yet powerful EMS & NMS tools, based on SNMP and Java code. Both applications run on Windows Unix.



Product Datasheet



Benefits:

- Point-to-point secure wireless connectivity
- Built-In AES 256-bit key encryption
- FIPS 140-2 Level 2 approved
- Licensed 6-38 GHz bands
- Fast Ethernet & 8xDS1 voice ports
- Wire-speed full-duplex Fast Ethernet
- Rugged, compact & light weight
- Quick & easy deployment
- Split-mount or all-indoor installations
- SNMP management

Product Datasheet



RF Specifications:

Band	6 GHz	7/8 GHz	11 GHz	13 GHz	15 GHz	18 GHz	23 GHz	24-26 GHz	28-29 GHz	31-32 GHz	38 GHz
Standards	ETSI; FCC		ETSI				ETSI; FCC				
Operating Frequency Range	5,925-6.425 6.425-7.1	7.1-8.5	7.1-8.5	12.75-13.25	14.5-15.35	17.7-19.7	21.2-23.6	24.25-26.5	27.5-29.5	31.8-33.4	37-38.4 38.6-40.37 39.5
Tx/Rx Spacing (MHz)	240, 252.04, 260, 266, 340, 300	119, 154, 161, 168, 182, 196, 245, 311.32	430, 490, 520, 530	266	315, 420, 490, 728	1010, 1120; 1560	1008, 1232; 1200	1008, 800, 1009, 900	1008, 350, 500	812	1000, 1260, 700
Frequency Stability	+0.001%										
Frequency Source	Synthesizer										
RF Channel Selection	Via NMS										
System Configurations	Non-Protected (1+0)										
Receiver Overload (BER=10)	Better than -20 dBm										
Unfaded BER	Less than 10-13										
Tx Range (Manual/ATPC)	Manual: -10 dBm to max Tx Power. Automatic: for ODU, up to 30 dB, for HP RFU, up to 20 dB										

116 Mbps, 32 QAM, Single Carrier

RF Channel Spacing (MHz) 32 QAM	28, 29, 29.65, 30, 25	28, 29, 29.65, 30	28, 29, 29.65, 30, 40	27.5, 28	27.5, 40	28, 50	28	28, 50	28	28,50
Tx Power (dBm) 32 QAM	24		23		21		20			19
HP Tx Power (dBm) 32 QAM (Split/All indoor)	33/33	30/33	26/29	-	-	-	-	-	-	-
Rx Sensitivity (BER=10-6) (dBm) 32 QA	-75			-74				-73		-72

Payload:

FE Port	8xDS1 Ports		
Throughput Capacity	100 Mbps wire speed, full duplex	Interface Type	DS1
Interface Type	10/100BaseT Fast Ethernet, Auto-negotiation, Full/Half duplex	Number of ports	8 per IDM
Latency	<470 µsec	Connector Type	SCSI 36-pin
Number of Ports	1	Framing	Unframed (full transparency)
Connector Type	RJ-45	Coding	AMI/B8ZS
Packet Size	Up to 1535 bytes	Line Impedance	100 ohm balanced
Compatible Standards	IEEE802.3, IEEE802.3u, IEEE802.3ac, IEEE802.1p, IPv6 & IPv4 framing support, DiffServ (RFC 2474)	Compatible Standards	ANSI T1.105, T1.102-1993, T1.231, Bellcore GR-253-core, TR-NWT-000499

Technical Specifications:

Auxiliary Channels	Environment		
Wayside Channel	Ethernet 10BaseT (64 Kbps)	Operating Temperature	ODU/RFU: -35°C to 55°C (31°F to 131°F), IDU: -5°C to 45°C (23°F to 113°F)
Engineering Order Wire	Audio channel (64 Kbps) G.711	Relative Humidity	ODU/RFU: up to 100% (all weather operation), IDU: up to 95% (non-condensing)
		Altitude	Up to 4,500 m (15,000 ft)

Power Input	Max System Power Consumption		
Standard Input	-48 VDC	ODU+IDU: 11-38 GHz	1+0= 65W
DC Input range	-40.5 to -72 VDC (up to -57 VDC for USA market)	ODU+IDU: 6-8 GHz	1+0= 80W
Optional Input	110-220 VAC	RFU+IDU: HP 6-11 GHz	1+0=105W

Mechanical	
ODU (11-38 GHz)	27 cm diameter x 14 cm depth (10.8" diameter x 4.5" depth), weight: 8 kg/18 lbs
ODU (6-8 GHz)	40.9 cm height x 28.6 width x 86 depth, weight: 8 kg/18 lbs
RFU (HP 6-11 GHz)	49 cm height x 14.4 cm width x 28 cm depth (19" x 6" x 11"), weight: 7 kg/16 lbs
IDU (1U)	4.4 cm height x 43.2 cm width x 24 cm depth (1.7" x 17" x 9.4"), weight: 5 kg/11 lbs
IDU-ODU/RFU Coaxial Cable	RG-223 (100 m/300 ft), Belden 9914/RG-8 (300 m/1000 ft) or equivalent, N-type connectors (male)

All values are typical. All specifications are subject to change without prior notification.

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