

SparkWave GE Microwave link for high capacity Gigabit Ethernet



Applications:

- Backbone networks for packet service providers
- Cellular/WiMAX backhaul networks
- Fixed wireless networks
- Enterprise/corporate campus/business park LAN extension
- Replace carrier leased lines, eliminate expensive recurring costs
- Wireless IP/Ethernet Video Streaming/Surveillance
- Access networks for Enterprises
- Multi-service private wireless networks for energy, traffic, utilities operators.

SparkWave GE is a high-performance, easy-to-use split-mount, point-to-point wireless microwave RF radio link that is designed for high capacity Gigabit Ethernet applications.

Operating frequency ranges from 5 to 38 GHz, modulation up to QAM256 and bandwidth up to 56 MHz can assure effective, flexible and scalable connections even for very long distances and/or for very high capacities.

Beside Ethernet interface up to 8 E1 interfaces could be configured. This enables smooth transition from TDM mode to packet transmission mode.

SparkWave GE provides interconnection between remote LAN segments at very high speed and utilizes Gigabit Ethernet protocols with very low latency.

SparkWave GE is ideal solution for network operators who require high-capacity GE transmission in combination with some legacy TDM.

SparkWave GE is designed to provide high-capacity wireless IP connectivity for the most demanding networks including triple play applications, mobile and fixed wireless technologies such as UMTS, 3G, 4G, WiMAX, Wi-Fi, Edge and more...

Features:

- Split-mount or optional all-indoor architecture.
- Frequency bands: 5, 6, 7, 8, 11, 13, 15, 18, 23, 38 GHz
- Modulation up to QAM256
- Bandwidth up to 56MHz
- Bitrate up to 400Mb/s
- SFP for GE interface optical/electrical
- Ethernet 10/100/1000 electrical interface
- Up to 8 E1 interfaces
- Indoor unit 1U high
- Redundant power feeding

SPARKWAVE

digital microwave radio





SparkWave GE



Benefits:

- Quick and easy deployment and operation
- Software-defined architecture, for easy adaptation to changing conditions and future needs.
- Easily upgrade throughput as you need it, with no hardware replacements
- Forward Error Correction technique LDPC (Low Density Parity Code) increases the link system gain
- Effective management integration using Java Web Start GUI and SNMP protocol transported by an embedded IP/OSPF telemanagement network.
- Compact solutions improves place and energy efficiency that can help lower operating expenses
- Easy migration from TDM to IP or all-IP backbone/backhaul.
- Low OPEX/CAPEX.

Technical data

Frequency Bands		5 GHz	6 GHz	6 GHz	7 GHz	8 GHz	11GHz
	Op. Freq. Range (GHz)	4.4-5.0	5.9-6.4	6.4-7.1	7.1-7.9	7.7-8.5	10.7-11.7
	RF Ch. Spacing (MHz)	28/56, 40	29.65/59.3	40	28/56	28/56, 29.65/59.3	40
		13 GHz	15 GHz	18 GHz	23 GHz	26 GHz	38 GHz
	Op. Freq. Range (GHz)	12.7-13.3	14.4-15.35	17.7-19.7	21.2-23.6	24.25-26.5	37-39.5
	RF Ch. Spacing (MHz)	28/56	28/56	27.5-55	28/56	28/56	28/56
RF Parameters		Frequency	5-8 GHz	11-15 GHz	18-26 GHz	38 GHz	
	Tx Power (dBm)	QAM128	22/26	20	18	10	
		QAM256	21/25	19	17	9	
	Rx Sensitivity (dBm)	QAM128/28 MHz	-70	-69	-68	-67	
		QAM256/28 MHz	-67	-66	-66	-64	
		QAM128/40 MHz	-68	-67	-66	-65	
		QAM256/56 MHz	-63	-62	-61	-60	
	Frequency stability	± 10 ppm					
	Frequency setting step	0.25 MHz					
	ATPC output power adjusting range	20 dB in 1 dB step					
Throughput		bandwidth	56 MHz	40 MHz	28 MHz		
	Bitrate (Mbit/s)	QAM256	360		180		
		QAM128			160		
Payload	PDH interface	up to 8xE1 G.703 point 6, 2,048 kbit/s					
	Ethernet interface	electrical 10/100/1000BaseT RJ45 optical 1000Base-SX/LX SFP module					
Management	Protocols	SNMP, CLI, Telnet					
	Interfaces	10/100/1000BaseT, RS-232					
	Data Communications Network	Embedded service channel and OSPF router					
Environmental	Operation climatic conditions	IDU: -5°-+40°C/8%-100% ETSI EN 300 019 class 3.1E ODU: -33°-+50° C/5%-95% ETSI EN 300 019 class 4.1					
	Storage/transport conditions	ETSI EN 300 019 class 1.1/class 2.3					
	EMC compatibility	ETSI 301 489-4					
Power	Power Supply	-40 V to -58 V (option: -36 V to -72 V)					
	Power consumption	IDU: <25 W; ODU: <30 W (typicaly), <45 W (high power option)					
Mechanical	Dimensions (HxWxD)	IDU: 45x442x240 mm ODU: 200x150x80 mm/F305x120 mm					
	Weight	IDU: <2,5 kg; ODU: <6 kg					