

SparkWave SDR

HSP Compact



The SparkWave SDR HSP is intended for microwave transmission of PDH and Ethernet signals, operating in 7, 8, 13, 15, 18 and 23 GHz frequency range.

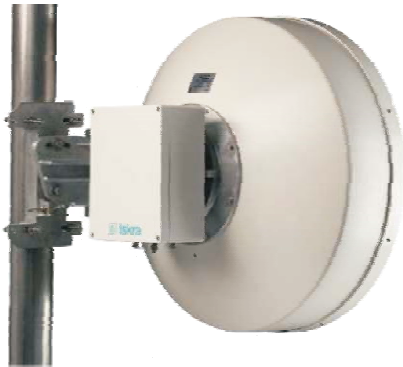
SPARKWAVE
digital microwave radio





SparkWave SDR

HSP Compact



Split Mount solution with High Speed PDH (HSP) IDU and compact ODU. Any combination of E1, E3 and Ethernet signals is possible. The upper transmission capacity limit is 152 Mb/s or 72xE1 equivalent. Various transmission modes from 4QAM to 128QAM with different error correction schemes enable signal transmission in various channel bandwidth from 3,5 MHz to 28 MHz according to customer demands. A management system with an SNMP agent and OSPF router is built into the unit. No additional equipment is needed except a standard personal computer with built-in web browser.

Technical data

Frequency plan		7 GHz	8 GHz	13 GHz	15 GHz	18 GHz	23 GHz
RF output power on antenna connector in dBm	4QAM	26/30	26/30	24	24	23	23
	16/32QAM	24/28	24/28	22	22	21	21
	64/128QAM	22/26	22/26	20	20	19	19
Channel spacing		3,5/7/14/28 MHz	3,5/7/14/28 MHz	3,5/7/14/28 MHz	3,5/7/14/28 MHz	13,75/27,5 MHz	3,5/7/14/28 MHz
Frequency stability		±5 ppm					
Frequency seeding step		0,25 MHz					
ATPC output power adjusting range		20 dB in 1 dB step					
Receiver threshold at antenna connector in dBm for BERR 10 ⁻⁶	Modulation/BW	3,5 MHz	7 MHz	14 MHz	28 MHz		
	4QAM		-86	-88			
	16QAM	-82	-86	-83	-80		
	32QAM	-85	-82	-78	-76		
	64QAM			-74			
128QAM			-72	-69			
Link protection modes		Hot Stand-By Space Diversity Frequency Diversity Hitless switch					
Transmission capacity, given by N x E1 without FEC	Modulation/BW	3,5 MHz	7 MHz	14 MHz	28 MHz		
	4QAM		4-5	7-11	15-22		
	16QAM	4	7-8	15-18	30-39		
	32QAM	4-5	9-11	19-24	40-50		
	64QAM			27			
128QAM			30-36	68-72			
* In the case of link protection 2U chassis is necessary * E3: every E3 occupies 17 x N (N is the number of equivalent E1 channels) * Ethernet: transmission capacity is: 2092 kb/s x N (N is the number of equivalent E1 channels)							
Traffic interface	PDH interface	E1 G.703 point 6, 2.048 kbit/s		E3 G.703 point 8 34.368 kbit/s			
	Ethernet interface	10Base-T/100 Base-Tx adaptive Compatibility IEEE 802.3 half duplex and full duplex IEEE 802.3 management statistics (RMON) IEEE 802.3u auto-negotiation Connector type RJ45, Automatic connection MDI/MDIX Number of interfaces on central module 2					
E1 wayside channel	ITU-T recommendations Bit rate (plesiochronous) Multiplexing principle	G.703 point 6 2.048 kbit/s RSOH and MSOH bytes					
Other interface	Management interface Service channel interface	10 Base-T/100 Base-TX adaptive 10 Base-T/100 Base-TX adaptive					
Mechanical/ Environmental	Operation climatic conditions (temp./humidity.)						
	IDU	-5-+45°C/8-100% ETSI EN 300 019 class 3.1E					
	ODU	-33°C-+50°C/5%-95% ETSI EN 300 019 class 4.1E					
	Storage/transport condit.	ETSI EN 300 019 class 1.1/class 2.3					
	EMC compatibility	ETSI 301 489-4					
	Power Supply	From 20V to 72V ETSI EN 300 132					
	Power consumption IDU	(1U/2U) <19W/<39W					
	Power consumption ODU	<25W					
	Dimensions in mm (HxWxD) IDU	(1U/2U) 45x442x240/86x442x240					
	Dimensions in mm (HxWxD) ODU	200x150x80/F305x120					
Weight IDU	(1U/2U) 3,17kg/<5,96kg						
Weight ODU	<6kg						

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