

Wi20 Series Digital Microwave Radio

Wi20 FIDU 1.4 GHz Ethernet and 4 E1 Technical Specification



WI20 & HELIX, THE RIGHT DESIGN FOR LONG RANGE BACKHAUL, NOMAD AND MOBILE SOLUTION



INTRODUCTION

Wi20 1400 is the new next generation microwave radio system which is targeting growing demands for data transmission over microwave radio, combining the latest modem technology for high spectral efficiency, powerful FEC processing for increased receiver sensitivity and modern data interfaces as E1 and Ethernet.

As a result the primary traffic interface for Wi20 radio is **Fast Ethernet**. In addition, WI20 is capable to transport **E1 G.703** traffic for legacy connectivity or any other use.

As WI20 is capable to provide **up to 19.4 Mbps** of bit rate in **3.5 MHz channels** to all interfaces combined, it is a perfect solution for long distance communications needs at the same time providing reasonable capacity for years to come.

In addition to above, the system provided all up to date modern microwave radio features as powerful FEC, ATPC for improved installation density and ACM for capability to back down to lower capacity during bad weather conditions.

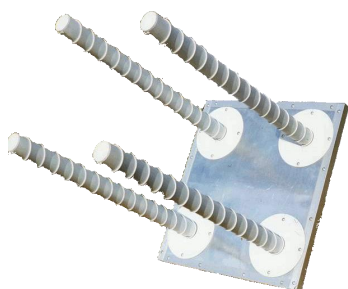
Hypercable OEM designer has employed most modern design solutions and components to create high performance compact radio with **low power consumption**.

Wi20 1400 is a perfect building block for any modern future proof wireless network, including mobile service providers, fixed data service operators, enterprise customers, municipal and governmental networks among others.



Wi20 1400 Front Panel

HIGH PERFORMANCES HELIX ANTENNAS



Quad Helix antenna array 22 dB gain



Single Helix, models from 6 up to 16 dB gain



Phantom Dual helix Mobile antenna 3 dB gain



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Wi20 1400 Full Indoor technical specification

General characteristics	WI20 1400
Frequency range	1350 – 1517 MHz According to CEPT T/R 13-01 Other frequency plans available upon request
Channel bandwidth (MHz)	0.5, 1, 1.75, 2, 3.5
Modulation	QPSK / 16APSK / 32APSK / 64QAM / 128QAM
Capacity	0.7 Mbps – 19.4 Mbps
Performance	
Guaranteed max power at QPSK (dBm)	+ 30
Adaptive Coding and Modulation (ACM)	Hitless
Protection switching	1+0, 1+1 (HSB, SD, FD; hitless, errorless, Tx <50ms)
Ethernet	
Ethernet switch	Gigabit Ethernet (10/100/1000 Mbps)
QoS, CoS	DiffServ (DSCP) 802.1p 4 queues with adjustable priorities, strict queues and Weighted Fair Queueing (WFQ)
Max VLAN with 802.1p QoS	up to 4096 concurrent VLANs
Max Ethernet frame size	9728 bytes
Ethernet Aggregation 802.3ad	Yes (2+0, 3+0, 4+0)
Spanning Tree	802.1d-1998 STP
Flow Control, 802.3x	Yes
Management	
Management ports	Ethernet VLAN or Separate Ethernet (RJ45)
Management	In-band or out-of-band
SNMP	SNMP traps, MIB, SNMP v1/v2c
EMS	Web based HTTP, Telnet, FTP, Serial
Performance graphs	Uptime, Rx level, Tx level, System temperature, Radial MSE, LDPC decoder stress, constellation diagram, equalizer graph
Ethernet performance	Per port Ethernet counters, Enhanced radio Ethernet statistics
Loopbacks	E1, modem, IF loopback
Ports	
Antenna	N-type Female
Ethernet	4xRJ-45 (data traffic, management port)
E1	4E1 (4xRJ-45)
RSL port, RSSI, BNC connector	Output voltage vs RSL: 0 to 5V vs -90 to -20dBm
Serial port for configuration	DB-9
Environmental requirements	
Stationary use	Climatic Class 3.1E compliant (ETSI ETS 300 019-1-3); weather protected locations

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Temperature range	-5° to +55°C
Mechanical data	
Dimensions: HxWxD, mm / weight, kg	88x482x230 / 3.8
DC Power distribution	
DC in (V)	-20 to -60
Max. Power consumption	Up to 25W
Management Features	
TSP/IP	WEB, SNMP, Telnet - local and remote
ASCII Terminal	Serial via DB-9
Monitoring	Via Telnet, WEB GUI, NMS, SNMP Manager