

## CHRONOLINK CHR5000

## **Carrier Class Outdoor Base Station External Antenna**

High performances and quality level

Chronolink CHR5000 series consists of highly professional Base stations, whose high performance and indisputable reliability, making it ideal for performing Carrier Class-type wireless networks.

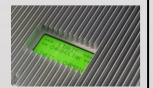


Chronolink systems include 1, 2 or 4 dual band radio modules, in compliance with 802.11a/b/g/n international standards.

Thanks to the use of external dual polarity MiMo antennas, each "N" type single radio module, allows signal connection up to 300Mbps.

Following table shows all Chronolink versions

Model	Radio Nr.	Antenna	Data in.	Standard	Band	Data Rate
CHR5010	1	SISO external	LAN	802.11a/b/g/n	2,4 GHz / 5 GHz	150Mbps
CHR5020	2	SISO external	LAN	802.11a/b/g	2,4 GHz / 5 GHz	2 x 150Mbps
CHR5040	4	SISO external	LAN	802.11a/b/g	2,4 GHz / 5 GHz	4 x 150Mbps
CHR5010N	1	MIMO external	LAN	802.11a/b/g/n	2,4 GHz / 5 GHz	300Mbps
CHR5020N	2	MIMO external	LAN	802.11a/b/g/n	2,4 GHz / 5 GHz	2 x 300Mbps



**Flexibility** 

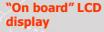
Each Chronolink products can be customized for the most diverse application scenarios by connecting different external antenna types (directive, sectorial, omnidirectional etc.).

Output power limitation allows the use of high-gain antennas while conforming to regulations on radiated energy levels.

Each radio module can be separately configured for Access Point, Bridge or Station operation; the modules are internally connected through IP routing. Chronolink products support a proprietary protocol for the creation and management of mesh networks.



Chronolink appliances allow comprehensive bandwidth management. Both the upstream bandwidth and the resources available to each client, can be monitored, prioritized and limited as required in order to attain the desired Quality of Service levels.



Chronolink is the only radiolan device featuring an on-board LCD interface for link performance monitoring. You can set up and maintain your Chronolink installation without using a computer or any other external instruments.



Small size, structural strength, modularity, actractive aestetich shapes, display "on board", ease of installation, make Chronolink CHR5000 the ideal for all Carrier Class networks wireless connections.

The shelf made entirely of aluminum with the exclusive front heatsink, provides full electromagnetic shielding and high resistance to environmental weathering.































## **Serie Chronolink CHR5000**

Chronolink CHR5000 series, represents the definitive solution to all Carrier Class wireless network requests. The newest solution integrated in the Chronolink equipment, make it easier all the life cycle phases of a wireless network: design, installation, start-up, maintenance.

Chronolink is the only RadioLAN equipment worldwide with LCD display on board which allow to install, test and manage the system without use an external device (laptop or other).

An efficient testing function, allows to solve the antenna alignment problem. Furthermore, from each site, is possible to check the signal level received on remote equipment. Installation and maintenance became smart and easy.

Frequency scan function, with relevant spectrum analysis , permits free channels identification during start-up phase.

Chronolink equipment are manageable through web interface or dedicate GUI, also via internet.

The equipment can store all the traffic logs regarding access and traffic connection. An FTP server and about 100MByte memory are housed on board to store files and data.

Connection and data security are guaranteed by a WEP key of 104 bit with WPA and WPA2 access control.

802.11n SISO standard complies, allows to reach data rates up to 150Mbps.

Time link worsening as well as latency problem, have been eliminated thanks to a dedicate firmware and hardware project.

Chronolink is the solution for the development of network dedicated to video, data and VoIP transmission.

Intelligent management of the signal's priority and of bandwidth allocation, allows to satisfy all the request in terms of Quality of Service QoS.

Technical Characteristics	CHR5010	CHR5020	CHR5040	CHR5010N	CHR5020N		
Nr. radio module	1	2	4	1	2		
Frequency	2,400 – 2,483 GHz			5,470 – 5,725 GHz			
IEEE standards	802.11a,b,g,h,n Hiperlan2						
Modulation	DSSS (DBPSK, DQPSK, CCK) OFDM (BPSK, QPSK, 16-QAM, 64-QAM)						
Channel Bandwidth	5MHz - 10MHZ - 20MHz - 2 x 20MHz						
Channel Management	Manual - Automatic - DFS - Radar Free						
Antenna Type	Extenal (50 ohm N Female connector)						
Maximum Output Power	+ 18dBm						
Tx Power Adjustment	From -2 dBm up to +18 dBm step 1 dB						
	2,4GHz		5,6GHz	2,4GHz	5,6GHz		
	-95 dBm @ 1 Mbp	os -90 d	dBm @ 6 Mbps	-93dBm @ MCS0 20MHz	-96dBm @ MCS0 20M		
RX Sensitivity	-90 dBm @ 6 Mbr	os -81 d	dBm @ 24 Mbps	-91dBm @ MCS0 40MHz	-91dBm @ MCS0 40M		
	-90 dBm @ 11 Mbr	os -76 d	dBm @ 36 Mbps	-77dBm @MCS7 20MHz	-76dBm @MCS7 20MI		
	-73 dBm @ 54 Mpk	os -73 (	dBm @ 54 Mpbs	-74dBm @ MCS7 40MHz	-73dBm @ MCS7 40M		
Wireless Mode	Access Point, Bridge, Repeater, WDS, Station, Hot Spot, Virtual A.P.						
MIMO Standard	N.A. 2 x 2						
Data Encryption	WEP 64/128 bit; WPA, WPA2, TKIP, AES-CCM-TKIP, PSK/EAP, Mac Filtering, IP Filtering, Radius Server, Proprietary WDS, Firev Integrato						
Ethernet Standards	10/100 Base-T — Auto MDI/X — std.802.3 10/100/1000 Gigabit Auto-MDI/X-std. 80						
		000.1		C L L MAN L L	AU10-MDI/ A-SIG. 602.3		
VLAN Support		802.10	q - Multiple VLAN inte	erface – Inter VLAN routing	AUTO-IVIDI/ A-SIG. 602.5		
VPN Support	200 1 107 0 0		q - Multiple VLAN inte IPSEC, PPPoE, E	EoIP, PPTP, L2TP			
VPN Support QoS Support	802.1p - IPToS R	FC791 - CBQueuir	q - Multiple VLAN inte IPSEC, PPPoE, E ng - PCQ, RED, SFQ,	EoIP, PPTP, L2TP FIFO queue – CIR – MIR – peer-			
VPN Support	802.1p - IPToS R	FC791 - CBQueuir	q - Multiple VLAN inte IPSEC, PPPoE, E ng - PCQ, RED, SFQ,	EoIP, PPTP, L2TP			
VPN Support QoS Support	802.1p - IPToS R	FC791 - CBQueuir OSPF - I	g - Multiple VLAN inte IPSEC, PPPOE, E ng - PCQ, RED, SFQ, RIP - BGP - STP - RST	EoIP, PPTP, L2TP FIFO queue – CIR – MIR – peer-			
VPN Support QoS Support Network Routing	802.1p - IPToS R	FC791 - CBQueuir OSPF - I HWMP+ ,	a - Multiple VLAN inte IPSEC, PPPOE, E ng - PCQ, RED, SFQ, RIP - BGP - STP - RS proprietary layer 2 \	EoIP, PPTP, L2TP FIFO queue – CIR – MIR – peer- TP - NAT – MPLS – IPv6 - MME			
VPN Support QoS Support Network Routing Mesh	802.1p - IPToS R	FC791 - CBQueuir OSPF - I HWMP+ ,	P- Multiple VLAN into IPSEC, PPPOE, I ng - PCQ, RED, SFQ, RIP - BGP - STP - RSI proprietary layer 2 v felnet, SSH, FTP, Prop Power Over Etherne	EOIP, PPTP, L2TP  FIFO queue – CIR – MIR – peer- TP - NAT – MPLS – IPv6 - MME  wireless mesh routing protocol  rietary GUI, http, WEB  et (POE) Technology			
VPN Support QoS Support Network Routing Mesh Management	802.1p - IPToS R	FC791 - CBQueuir OSPF - I HWMP+ ,	P- Multiple VLAN into IPSEC, PPPOE, I ng - PCQ, RED, SFQ, RIP - BGP - STP - RSI proprietary layer 2 v felnet, SSH, FTP, Prop Power Over Etherne	EOIP, PPTP, L2TP  FIFO queue – CIR – MIR – peer- TP - NAT – MPLS – IPv6 - MME  wireless mesh routing protocol  rietary GUI, http, WEB			
VPN Support QoS Support Network Routing Mesh Management Power Supply Type	802.1p - IPToS R	FC791 - CBQueuir OSPF - I HWMP+ ,	P-Multiple VLAN into IPSEC, PPPOE, I Ing - PCQ, RED, SFQ, RIP - BGP - STP - RSI proprietary layer 2 v Telnet, SSH, FTP, Prop Power Over Etherne 18 V dc	EOIP, PPTP, L2TP  FIFO queue – CIR – MIR – peer- TP - NAT – MPLS – IPv6 - MME  wireless mesh routing protocol  rietary GUI, http, WEB  et (POE) Technology			
VPN Support QoS Support Network Routing Mesh Management Power Supply Type Power Supply	802.1p - IPToS R	FC791 - CBQueuir OSPF - I HWMP+ ,	P-Multiple VLAN into IPSEC, PPPOE, I Ing - PCQ, RED, SFQ, RIP - BGP - STP - RSI proprietary layer 2 v Telnet, SSH, FTP, Prop Power Over Etherne 18 V dc	EOIP, PPTP, L2TP  FIFO queue – CIR – MIR – peer- TP - NAT – MPLS – IPv6 - MME  wireless mesh routing protocol  rietary GUI, http, WEB  et (POE) Technology  / 600 mA			
VPN Support QoS Support Network Routing Mesh Management Power Supply Type Power Supply Operating Temperature		FC791 - CBQueuir OSPF - I HWMP+ , I 3,1 Kg	Power Over Etherne 18 V dc - Aultiple VLAN interpretation of the properties of the	EOIP, PPTP, L2TP  FIFO queue – CIR – MIR – peer- TP - NAT – MPLS – IPv6 - MME  wireless mesh routing protocol  rietary GUI, http, WEB  et (POE) Technology  / 600 mA  / + 65°C	to-peer management		
VPN Support QoS Support Network Routing Mesh Management Power Supply Type Power Supply Operating Temperature Weight	3,0 Kg	FC791 - CBQueuir OSPF - I HWMP+ , I 3,1 Kg	Power Over Etherne  18 V dc  3.5 Kg  300 x 180 x 70	EOIP, PPTP, L2TP  FIFO queue – CIR – MIR – peer- TP - NAT – MPLS – IPv6 - MME  wireless mesh routing protocol  rietary GUI, http, WEB  et (POE) Technology  / 600 mA  / + 65°C  3,1 kG	to-peer management  3,5 Kg		
VPN Support QoS Support Network Routing Mesh Management Power Supply Type Power Supply Operating Temperature Weight Dimension mm (H x L x D)	3,0 Kg	FC791 - CBQueuir OSPF - I HWMP+ , I 3,1 Kg	Power Over Etherne  18 V dc  3.5 Kg  300 x 180 x 70  LCD E	EOIP, PPTP, L2TP  FIFO queue – CIR – MIR – peer- TP - NAT – MPLS – IPv6 - MME  wireless mesh routing protocol  rietary GUI, http, WEB  et (POE) Technology  / 600 mA  / + 65°C  3,1 kG  260 x 230 x 70	to-peer management  3,5 Kg		

