MobiRake radio OFDM TDD TDMA - SW-VHF-UHF-SHF
Conçu pour des liaisons Ethernet à longue distance NLOS, non a vue et en Haute Mobilité

Boundless mobility and variety for mobile Video / Data / Voice Transmission
Mobilité illimitée, choix d'usages pour Vidéo mobile / Données / Transmission de la Voix

MobiRake VSU (Vehicle Subscriber unit) provides LOS (Line of sight) and NLOS (Near/ NonLine of sight) solutions for mobile Video / Data/ Voice transmit applications. Specially be having perfect No LOS operation in the UHF bands.

MobiRake VSU (l'unité d'Abonné de Véhicule) assure des connexions LOS (à vue optique) et NLOS (Non à vue Optique) pour la Vidéo mobile / les Données / la VOIP c'est un produit particulièrement adapté aux usages NLOS dans les bandes UHF.

Highly output power OFDM TDMA technology gives the ability for near/nonline of sight deployment, and support long distance and high capacity wireless mobile data solution.

La haute puissance émise et la technologie OFDM TDMA permet le déploiement d'un réseau mobile ou fixe en mode non a vue.

MobiRake utilizes Time Division Duplex technology allowing operation on a single channel. The Ethernet products are primarily designed to provide standard Ethernet interface with robust aluminum alloy indoor unit.

Mobirake utilise la technologie du Duplex répartit dans le temps, dans un canal radio unique. Ces produits Ethernet radio sont principalement conçu pour fournir un interface Ethernet conforme au standards, le tout dans un robuste boitier en aluminium .
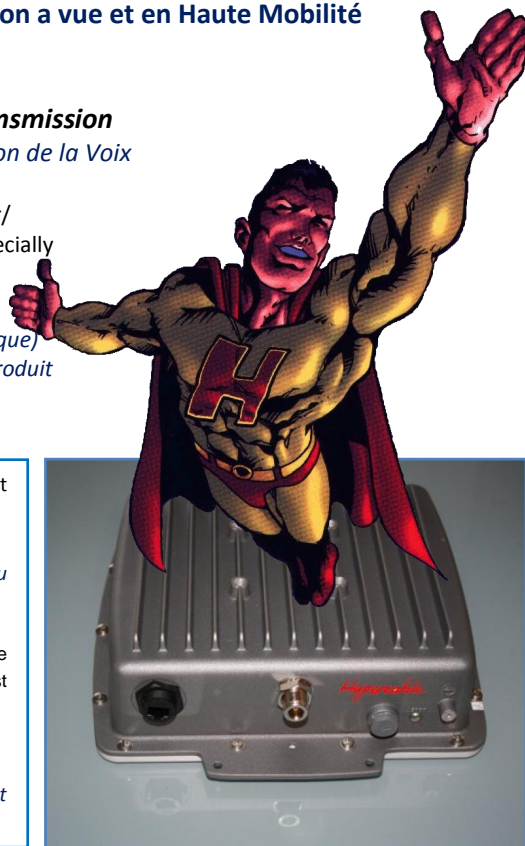
CPE d'abonné fixe et BTS AP

Product Highlights :

- ■ **Boundless mobility and variety**
- ■ Various frequency options provide both LOS and NLOS solutions to achieve the real mobilityanytime, anywhere. To collocate with proper backhaul, MobiRake VSU series can extend the network to where vehicle can arrive without concerning the limitations of cable deployment for internet access or any kind of Ethernet data transmission.
- ■ **Effective spectrum utility**
- ■ Channel BW of the Aether VSU series can be adjusted by software (5/10/20/40MHz for optional), which allows more non overlapping channels in practical deployment that provides better flexibility in deploying the network.
- ■ **Time Division Multiple Access technique**
- ■ TDMA tech can avoid the packets collision and send the packets more efficient and stable to improve the capacity and quality of data transmission in long distance or NLOS (Near/ NonLine of sight) situation.
- ■ **Security**
- ■ WEP 64 / 128 / 152 bits, 802.1x Authentication (EAP), MAC access control, disable broadcast the SSID, client isolation, WPAPSK, WPATKIP encryption and WPA2 (AES128bits) build the highest security mechanism to prevent the malicious attacking from the internet.

Essentiels :
- • Mode PTP et PMP - Débit utile en UHF de 8 a 16 Mbps par canal
- • Liaisons non a vue en UHF (sous sols, tunnels,)
- • Puissance émission de 5 watts

VSU Unité d'abonné mobile

Various Frequencies Fixed
Fréquences Diverses

375 – 420 MHz (5W)
440 – 510 MHz (5W)
870– 921 MHz (5W)
4400 – 4800 MHz (1W ou 5 W)
5000 – 5150 MHz (1W ou 5 W)
Others - *Autres*
Customized service between
Versions spéciales sur demande entre
30 -100 MHz (5W) & 300 MHz –6 GHz)

Public Safety *Sécurité Publique*

440 – 510 MHz (5W)
756 – 784 MHz (5W)
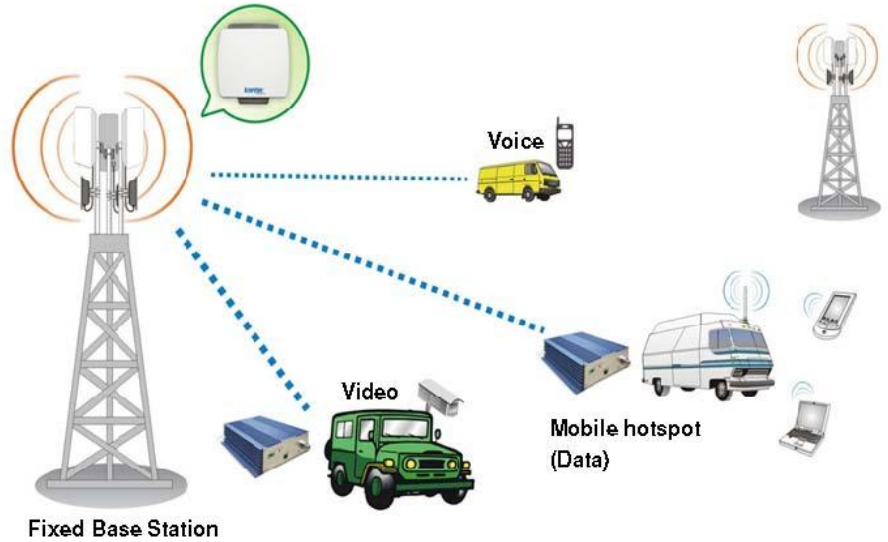4940 – 4990 MHz (5W)

Communication Infrastructure
Infrastructures de Télécommunications

440 – 510 MHz (5W)
825 – 845 MHz (5W)
870 – 890 MHz (5W)
3500 – 3700 MHz (1W ou 5 W)
5150 – 5350 MHz (1W ou 5 W)
5150 – 5850 MHz (1W ou 5 W)
5725 – 5850 MHz (1W ou 5 W)
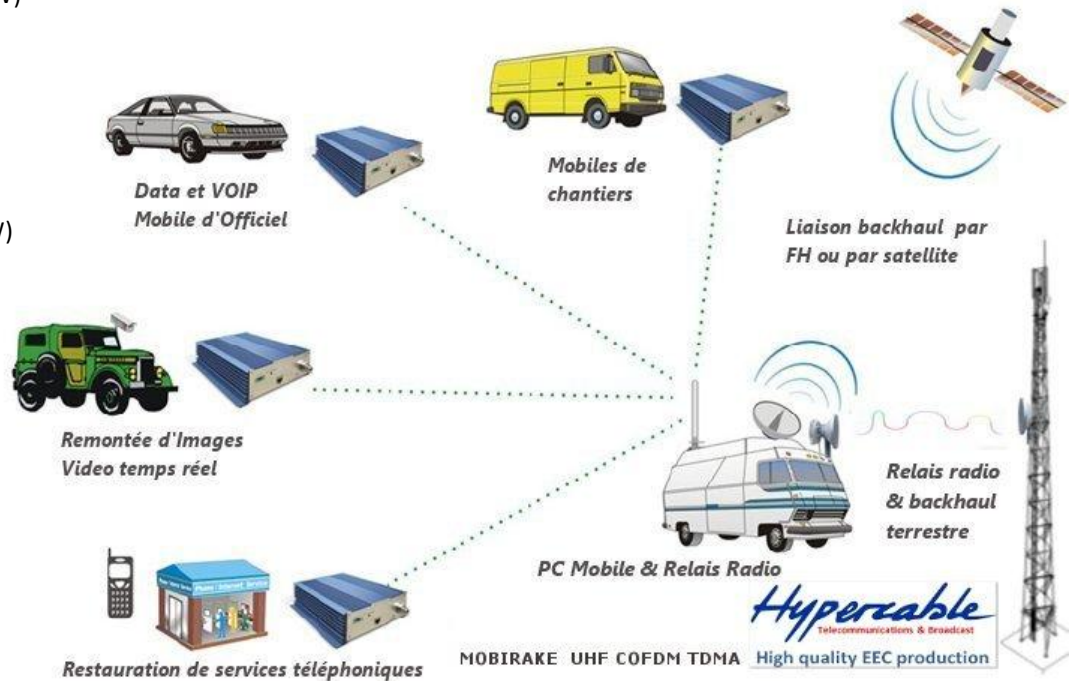
Bandes Amateur Radio
& Sécurité Civile

420 – 450 MHz (5W)
902 – 928 MHz (5W)
1250 – 1290 MHz (1W ou 5 W)

Base Station (Network extension) Military/Federal
Station de Base Fixe (extension de Réseau) Militaire/Police

Mobile Base Station (Fully mobility)
Station de Base Mobile (Mobilité intégrale)

Spécifications

RADIO	
Operating Channels	300 MHz – 6 GHz
Channel Bandwidth	Software selectable channel BW of 5, 10MHz for Bands (300/400/700/800 MHz)
	Software selectable channel BW of 5, 10,20 and 40MHz for other frequencies.

	Data Rte	Modulation	Tx Output pwr	Rx sensitivity
Output power and Rx Sensitivity *RX sensitivity: Packet Error Rate: 10%	2.3gHz / 4.9GHz			
	54Mbps@OFDM	64QAM	19(±1.5) dBm	-75 dBm
	36Mpbs@OFDM	16QAM	20(±1.5) dBm	-82dBm
	18Mbps@OFDM	QPSK	21(±1.5) dBm	-86 dBm
	6Mbps@OFDM	BPSK	21(±1.5) dBm	-90 dBm
	ISM Band / UNII Band (2.4GHz / 5GHz)			
	54Mbps@OFDM	64QAM	18(±1.5) dBm	-75 dBm
	36Mpbs@OFDM	16QAM	21(±1.5) dBm	-82dBm
	18Mbps@OFDM	QPSK	22(±1.5) dBm	-86 dBm
	6Mbps@OFDM	BPSK	23(±1.5) dBm	-90 dBm
	900MHz / 3.3GHz / 3.5GHz			
	54Mbps@OFDM	64QAM	20(±1.5) dBm	-75 dBm
	36Mpbs@OFDM	16QAM	21(±1.5) dBm	-82dBm
	18Mbps@OFDM	QPSK	22(±1.5) dBm	-86 dBm
	6Mbps@OFDM	BPSK	25(±1.5) dBm	-92 dBm
	300MHz / 400 MHz / 700MHz / 800MHz			
	54Mbps@OFDM	64QAM	33(±1.5) dBm	-90 dBm
	36Mpbs@OFDM	16QAM	33(±1.5) dBm	-98 dBm
	18Mbps@OFDM	QPSK	36(±1.5) dBm	-101 dBm
	6Mbps@OFDM	BPSK	37(±1.5) dBm	-103 dBm

Frequency Stability	±10 ppm
Modulation	OFDM-TDMA

INTERFACES	
RF (antenna) connector	N-type (Jack)
Ethernet	IEEE 802.3(10Base-T) / IEEE 802.3u(100Base-Tx)

MANAGEABLILITY	
Management and setup	Web-based configuration
Operating mode	Base station / CPE
SNMP agents	MIB ⅱ
Protocol	TCP/IP, IPX/SPX, NetBEUI
Operating System	Windows 98 / 2000 / NT / XP
Network Architecture	Point to point / Point to multi-point (Base station to CPE)
Bandwidth management	Define the upload stream ratio in Base station (20-80%)
DHCP supports	DHCP client
Other features	VLAN(IEEE 802.1Q); Spanning tree protocol (802.1d)

SECURITY	
Data Encryption	64/128/152 bits encryption
	WPA-PSK, WPA-TKIP, WPA2-AES 128bits
Authorization	MAC Address Access Filter
Advanced Security	Disable broadcast SSID
	Wireless Client Security Separation (Layer 2 Isolation)

ENVIRONMENT	
Operating Temperature	-30℃~55℃
Storage Temperature	-30℃~70℃
Humidity	95% non-condensing

POWER SUPPLY	
DC 10~30VDC	

PHYSICAL	
Dimension	230(L) ×198(W) ×60(H) ; mm
Weight	2.3 Kg

WRRANTY	
1 year	

ADVANCE	
Base Station Scanning	Site survey and RSSI signal level display
Watchdog	

Version terminal Radio Miniature Body Worn

Casque Radio Video Audio F/D Ethernet

Modèle tactique   Modéle civil

Camera, micro & écouteur de casque
full Duplex IP avec radio duplex MobiRake

Bande couverte: 2302 MHz ~ 2482 MHz

Largeur de canal: 5/10/20MHz selection par le software IHM

Fréquence centrale des 32 canaux:

2312, 2317, 2322, 2327, 2332, 2337, 2342, 2347, 2352, 2357, 2362, 2367, 2372, 2377, 2382, 2387, 2392, 2397, 2402, 2407, 2412, 2417…..
2472 MHz

Modulation: OFDM TDMA de BPSK à 64 QAM

Puissance : ajustable de 0 à 37 dBm

Dimensions : 20x20x8cm Poids : 2.5 kg différent selon versions

Consommation :15 watts

Spécifcations version 5 watts

RADIO			
Operating Channels	4900 – 6000 MHz		
Channel Bandwidth	5/10/20/40 MHz		
Parameter	Min.	Typical	Max.
Frequency	4900 MHz		6000 MHz
RF output power @ 64 QAM	28 dBm	30 dBm	31 dBm
RF output power @ BPSK	34 dBm	35 dBm	36 dBm
Frequency Stability	±10 ppm		
Modulation	OFDM		
Range	Up to 80 Km.		
EFFECTIVE THROUGHPUT			
5 MHz Channel BW	8 Mbps streams aggregated		
10 MHz Channel BW	18 Mbps streams aggregated		
20 MHz Channel BW	33 Mbps streams aggregated		
40 MHz Channel BW	45 Mbps streams aggregated		
Upload Stream Time Ratio supporting	20 – 80 %		
INTERFACES			
RF (antenna) connector	2 x N-type (Jack). One for Tx/Rx primiary & one for Rx antenna diversity		
Ethernet	IEEE 802.3(10Base-T) / IEEE 802.3u(100Base-Tx)		
MANAGEABLILITY			
Management and setup	Web-based configuration		
Operating mode	Base station / CPE (PTMP)		
SNMP agents	MIB II		
Protocol	TCP/IP, IPX/SPX, NetBEUI		
QOS	CPE data flow control		
DHCP supports	DHCP client		
Other features	VLAN(IEEE 802.1Q); Spanning tree protocol (802.1d)		
SECURITY			
Data Encryption	WEP-128 bits / AES-256 bits encryption		
Authorization	MAC Address Access Filter		
Advanced Security	Disable broadcast SSID		
	Wireless Client Security Separation (Layer 2 Isolation); Proprietary protocol		
ENVIRONMENT			
Operating Temperature	-30℃~55℃		
Storage Temperature	-30℃~70℃		
Humidity	95% non-condensing		
POWER SUPPLY SOLUTIONS			
AC 100-264V, 50-60Hz, DC 24V			
Wide range power input (10-30VDC), optional for Vehicle unit purpose			
DC 48V, optional			
PHYSICAL			
Dimension	259 (L) × 250 (W) × 75 (H) ; mm		
Weight	n/a		
WRRANTY			
1 year			
ADVANCE			
Base Station Scanning			
Ethernet Surge Protection			
ORDERING INFORMATION			
AETH2050-36	5GHz 36dBm TDMA/TDD Outdoor Radio (AC 100-264V)		
AETH2150-36	5GHz 36dBm TDMA/TDD Outdoor Radio (DC 48V)		
AETHV2050-36	5GHz 36dBm TDMA/TDD Vehicle Unit (10-30 VDC)		

All specifications are typical values and subject to change without prior notice.