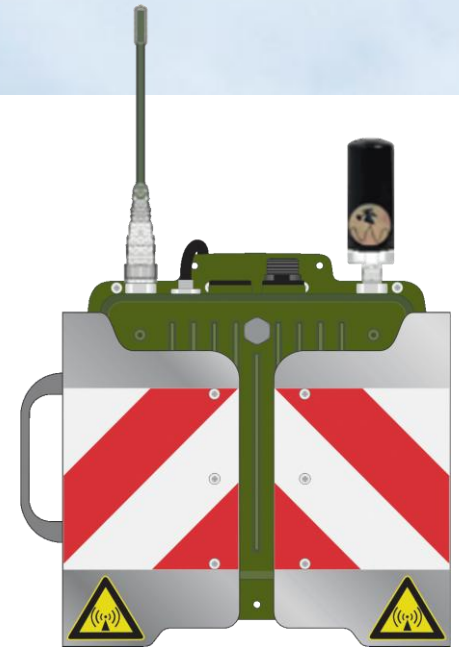


$$e = \sum_{n=0}^{\infty} \frac{1}{n!} = \lim_{n \rightarrow \infty} \left(\frac{1}{0!} + \frac{1}{1!} + \frac{1}{2!} + \dots + \frac{1}{n!} \right)$$

Wi10-PWSA041-118

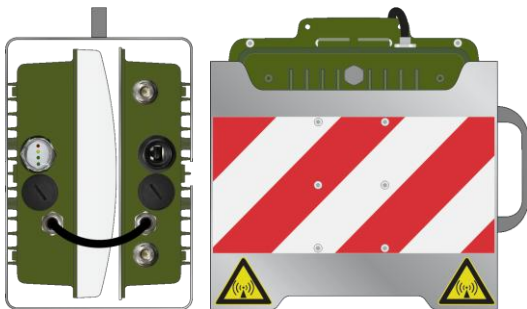
MobiRake 400MHz Bridge / 802.11 b/g/n AP
Powered by 12V/18AH LiFePO4 Battery

Portable / Cableless / Quickly Deployment
400MHz / 2.4GHz Dual Frequencies
Near/None Line of Sight (NLOS) Repeater
Independent Power for 15Hrs transmission



Features:

- **400MHz TDMA-OFDM Bridge for Near/None Line of Sight Link**
- **802.11 b/g/n 1x1 MIMO OFDM Radio for 2.4GHz Wi-Fi coverage.**
- **Integrated Multi-Radio Interfaces**
- **13.2V / 18AH LiFePO4 Battery with i-BMS (Intelligent Battery Management System)**
- **15hrs Independent Power Supply**
- **IP-67 Water & Dust Resistant**
- **IEC61000-4-5 Surge Protection**



The PWS (portable wireless Station) series is designed for urgent, temporary deployment or those environments that hard to be wired. With E-Rake high output power 400MHz NLOS Bridge and an integrated 802.11 b/g/n Access Point, this wireless station can really provides portable, cableless and quickly deployment wireless service.

The independent power for 15hrs transmission is from the best and safest battery technology – LiFePO4 battery, which supports 13.2V / 18AH capacity and i-BMS (Intelligent Battery Management System), fully protection for charge/discharge process and packed in a robust aluminum die-casting enclosure.

Product Highlights

- **Low EIRP for long distance and high capacity transmission**
E-Rake series improves the throughput performance up to 50~70% in long distance transmission, that means the system has the same performance with lower EIRP (smaller antenna) compare to other standard wifi products.
- **NLOS (Near / None line of sight) link by Time-Division Multiple Access (TDMA) and High output power OFDM technique**
TDMA tech can avoid the packets collision and transmit the packets more efficiency and stable. Co-work with High output power OFDM technology, that improve the capacity and quality of data transmission in long distance or NLOS (Near/ None-Line of sight) situation.
- **Proprietary Security**
E-Rake series uses proprietary protocol, so it can't connect to other standard wifi products. It also provides WEP-128 bits and AES-256 bits to build the highest security mechanism to prevent the malicious attacking from the internet.
- **Integrated 802.11 b/g/n MIMO 1x1 AP**
An integrated 802.11 b/g/n MIMO 1x1 AP can be associated by the mobile phone, laptop pad or other internet devices with standard 2.4GHz wifi interfaces. It's a simple and convenient function for customers to manage this PWS or contact with the people at remote sites or management center.
- **Integrated 13.2V / 18AH LiFePO4 Battery with i-BMS**
LiFePO4 battery is the best and safest Lithium battery, which is light, high capacity, great performance for DOD (Depth of Discharge), stable in wide temperature operation, highly cycle life and very low self-discharge rate. i-BMS provides status monitoring and better protection in charge / discharge process as well to extend battery's life.

Radio Specifications

RADIO				
Frequency Range	450-500MHz	2400-2482MHz		
		802.11 b/g	802.11gn (HT 20/40)	
64QAM (54Mbps)	33(±1.5) / -72	15(±1.5) / -72	MCS7 / 150	14(±1.5) / -69
16QAM (36Mbps)	33(±1.5) / -81	17(±1.5) / -78	MCS6 / 135	14.5(±1.5) / -71
BPSK (18Mbps)	36(±1.5) / -88	18.5(±1.5) / -84	MCS5 / 120	15.5(±1.5) / -73
QPSK (6Mbps)	37(±1.5) / -92	18.5(±1.5) / -90	MCS4 / 90	16.5(±1.5) / -76
CCK(DSSS)	37(±1.5) / -92	18.5(±1.5) / -90	MCS3 / 60	17.5(±1.5) / -80
			MCS2 / 45	18.5(±1.5) / -83
			MCS1 / 30	18.5(±1.5) / -85
			MCS0 / 15	18.5(±1.5) / -88
Modulation	TDMA - OFDM / (DSSS)	MIMO OFDM		
Duplex	TDD	TDD		
Channel	5 / 10 MHz	5/10/20/40 MHz		
Frequency Stability	± 2ppm	± 10ppm		
INTERFACES				
RF	N-Jack (Female)			
Ethernet	IEEE 802.3(10 Base-T) / IEEE 802.3u(100 Base-Tx)			
MANAGEABILITY				
Management and Network	Web-based configuration			
Operating System	PTP / PTMP			
SNMP agents	Windows 98 / 2000 / NT / XP			
Protocol	MIB II			
DHCP support	TCP/IP, IPX/SPX, NetBEUI			
	DHCP Client	DHCP Client / Relay / Server		
SECURITY				
Data Encryption	WEP-128 bits / AES-256 bits		WEP / WPA / WPA2	
Advanced Security	Group Name / Proprietary protocol		802.1x / MAC Access Control	
ENVIRONMENT				
Operating	-30~70℃		-20~55℃	
Storage	-30~70℃			
Humidity	95% non-condensing			
POWER SUPPLY				
	10~30 VDC			
PHYSICAL				
Dimension	259 (L) * 250 (W) *75 (H) ; mm			
Weight	2Kg			
WARRANTY				
	1 Year			
ADVANCE				
RSSI indication	Base Station Scanning			
	Watch dog			
ORDERING INFORMATION				
Wi10PWSA041-118	MobiRake 400MHz 37dBm radio + 802.11bgn 1x1 MIMO18.5dBm AP / 13.2V-18AH LiFePO4 Battery			
e-R/PWSE201-118	e-Rake 2.4/5GHz 2x2 MIMO 21dBm radio (1* RF module) / 13.2V-18AH LiFePO4 Battery			
e-R/PWSE202-118	e-Rake 2.4/5GHz 4x4 MIMO 21dBm radio (2* RF module) / 13.2V-18AH LiFePO4 Battery			
e-P/WSE203-118	e-Rake 2.4/5GHz 6x6 MIMO 21dBm radio (3* RF module) / 13.2V-18AH LiFePO4 Battery			
e-R/PWSE201H-118	e-Rake 2.4/5GHz 2x2 MIMO 25dBm radio (high output power) / 13.2V-18AH LiFePO4 Battery			
e-R/PWSE202H-118	e-Rake 2.4/5GHz 4x4 MIMO 25dBm radio (high output power) / 13.2V-18AH LiFePO4 Battery			
e-R/PWSE203H-118	e-Rake 2.4/5GHz 6x6 MIMO 25dBm radio (high output power) / 13.2V-18AH LiFePO4 Battery			

Battery Specifications

GEB-1218 12V / 18AH LiFePO4 Battery

Intelligent BMS / Battery status indicators



Benefits and Features

■ Safety

LiFePO4 provides a stable power charge / discharge process with multi-system level protection for greater durability and reliability compared to lead acid and competing lithium ion battery technologies

■ Highly Efficiency

The higher energy density, deeper DOD (Depth of Discharge) and lower internal resistance realized the highly Efficiency.

■ i-BMS for Ultra-Long life

Long recycle life is one of the benefits of LiFePO4 originally, i-BMS (Intelligent Battery Management System) makes it better.

■ Robust packing and LED indication of battery status

Battery has robust aluminum die-casting enclosure and LED indicators that shows the status of battery.

■ Protecting the Earth

Unlike lead-acid batteries contain heavy metals and strong acid electrolyte, which can easily cause the burden of the earth. LiFePO4 battery LiFePO4 batteries provide green energy with less polluting materials to protect this planet.

GEB-12V18 is designed as high efficiency, ultra-long life, safe and green power storage device. The new generation power storage battery technology --- LiFePO4 with i-BMS realized this idea. Compares to the traditional lead acid battery, LiFePO4 supports 500% cycle life, 300% energy density, 150% energy efficiency and only 30% internal resistance.

ELECTRICAL SPECIFICATIONS	
Nominal Voltage	13.2 V
Nominal Capacity	18 Ah
Available Energy (<i>Beginning of Life</i>)	240 Wh
Maximum Pulse Current	90 A
Maximum Continuous Current	54 A
Operating Temperature	-30° C to +60° C
Charging Continuous Current	10 A
Recharge Voltage	14.4 V
Recommended Float Voltage	14.0 V
Fuse	40 A
Modularity Maximum Configuration	4 in series 6 in parallel
Storage Temperature	-40° C to +60° C

