Nogema Ingénierie
embedded solutions

MAMBO2-B6

NEXT GENERATION PERSONAL TRACKER

Le MAMBO2-B6 est un traqueur GSM/GPRS quadribande, configurable permettant la communication bidirectionnelle et un récepteur GPS 50 canaux basse consommation pour positionnement. Au premier coup d'œil, le MAMBO2-B6 ressemble à un téléphone portable conventionnel. Cependant le MAMBO2-B6 a beaucoup de fonctions conçues spécifiquement pour l'utilisation dans des entreprises de logistique, transport, sociétés de taxi, sécurité, services de police, secours ou encore équipes techniques.

MAMBO2-B6 peut être utilisé comme un téléphone portable avec les fonctions standard ; appels voix, SMS, grâce à un menu et une navigation simple. Ce petit dispositif robuste peut être porté à la ceinture, dans une poche ou fixé dans un véhicule. C'est un vrai portable tout terrain tant pour un usage professionnel que pour une utilisation privée.

Il intègre aussi une série de fonctions pour la navigation GPS et suivi en temps réel.

La vraie force du MAMBO2-B6 réside dans la multitude de ses options de configuration ; l'affichage GPS, le Geofencing avec alarme et un détecteur de mouvement ultra-précis sont juste quelques-unes des multiples fonctions du MAMBO2-B6

MAMBO2-B6 Traqueur GPS et téléphone mobile avec fonction PTI

- Nouveau capteur A-GPS blox, 6 récepteurs Satellite
- Communication GSM quadribande bidirectionnelle
- Fonctions voix, SMS, data, GPRS, TCP/IP
- Affichage OLED
- Mémoire flash intégrée permettant le stockage de +400000 positions GPS
- Batterie longue durée1650 MHZ interchangeable
- Fonction Mains libres
- Complètement approuvé (FCC, CE)
- Administration distante, et mise à jour de micro logiciel
- Entièrement paramétrable
- Capteur de mouvement hautes sensibilité intégré, avec fonction PTI évoluées.
- Coque antichoc légère et compacte

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- Application TCP/IP embarquée
- Protocoles: IOP, GSM, AREA, 3DP, BIN
- Supporte les SMS, appels vocaux
- Mises a jour firmware et logiciel a distance
- Plusieurs modes d'économie d'energie et de mise en veille/reveil
- 20 modes de timer, et de déclenchement
- 100 géofences et 32 zones programmables
- Large gamme d'évènements et d'états
- Alerte de geofencing et parking programmables
- Historique alertes de suivi et de localisation
- Traçage de route d'un autre terminal MAMBO B6
- Bouton de panique/SOS et appel espion
- Prise en charge des alertes de mouvement, chute, perte de verticalité
- Rapports personnalisés
- Rapports de port et mise en service
- Accès a distance/local via PFAL
- Configuration via USB, TCP et SMS configuration

APPLICATIONS

- Surveillance de territoire collecte de
- Données calcul de navigation
- Activités exterieures
- Gestion de voyages et beaucoup d'autres
- Sécurité des personnes et services de secours
- Gestion de flotte
- Positionnement en temps réel
- Protection contre le vol

Spécifications

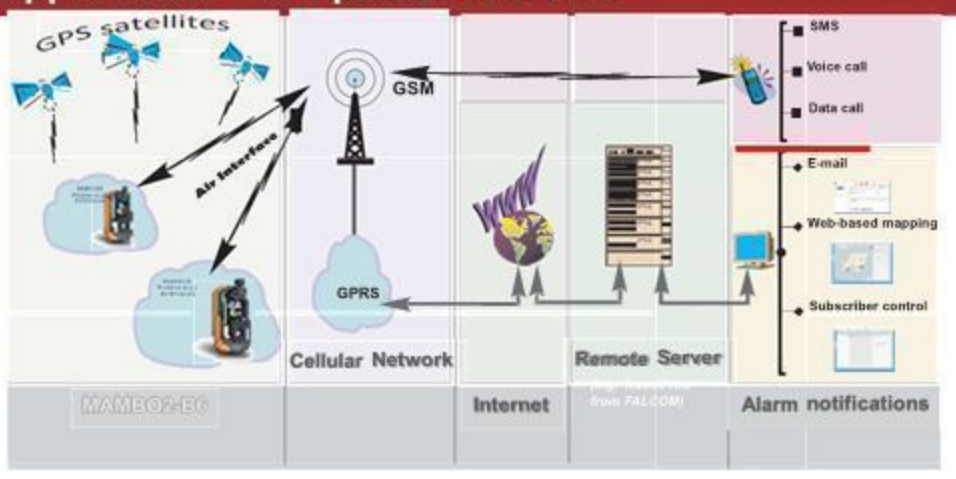
Général

Quadribande GSM/GPRS
Frequences GSM 850/900/1800/1900 MHz
GPRS classe 10, Classe B
Internet : (TCP/IPUDP/SMTP)
Antenne GPS 50 canaux
Frequence GPS L1 1575.42MHz
Protocoles : NMEA, FALCOM(binaire)
A-GPS autonome offline
Précision : 2,5 m,
SBAS 2m
Aquisition position a froid : 26 secondes
Sensibilité tracking :-162 dBm
A froid : -148dBm
Limites oprerationnelles du GPS
Velocité : 500m/s
Altitude 50000m
Taux de rafraichissement : 1 Hz
Environnement de fonctionnement
Temperature de fonctionnement : -20C° a +60C°
Température de stockage : -20C° a +60C°
Température de charge : 0 a +45C°
Carateritiques electriques :
Voltage 5V DC +/- 10%/500mA (miniUSB)
Charge rapide +12V MiniUSB
Batterie LI-Ion rechargeable

Consommation moyenne
Usage normal : env. 132 mA@ 4VDC
Economie d'energie (IGN) : env. 1mA 4 VDC

Caracteristiques physiques
Dimensions (HxWxL) : 86/103mmx54mmx26mm
Poids : 108grs
Humidité de l'air : 5% a 95% (sans condensation)
Interfaces
Affichage OLED 128x128pixels couleur
MiniUSB 10 broches (chargement de batterie, transfer de données)
Hauts parleurs integrés/micro/mains libres
Coque plastique (differentes couleurs)
Antenne GPS et GSM interne
Capteur de mouvement 3 axes
Processeur ARM7/TDMI
Mémoire flash 8 MB

Applications - Graphical overview



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Caractéristiques techniques

MAMBO2-B6 avec accessoires.

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2 - Charging the battery

Before using the MAMBO2-B6 device you will need to charge the internal battery even if it may be shipped from the factory pre-charged. Because it may has been some time in transit and storage before reaching you, it is recommended to charge the device while turned off for approx. 4-5 hours before the first use.

Thereafter, open the ***SIM card/Charger cover*** on the bottom of the device by pulling down the cover with your fingernail. There are a mini-USB port and SIM Card interface.

1. Unpack the **USB to Mini-USB retractable cable** and plug one end of this cable with Mini-USU connector into the 5V Mini-USB connector of the device.
2. Unpack the **AC/DC Adapter USB** from the box and plug the other end (A-type plug) of the **USB to Mini-USB retractable cable** into the USB jack connector of the **AC/DC Adapter USB** and finally plug this adapter into an EU socket outlet (to access a US or UK socket outlets, or car's cigarette lighter use the corresponding **US** or **UK adaptor**, or **USB car charger**).

- The status LED on the right side of the display lights green when charging is started and turns off when charging is completed,
- It is recommended to fully discharge the battery before recharging,
- Charging time varies according to the ambient temperature and the status of battery.

Figure 2: Accessories for charging the internal battery

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4 - Connecting the MAMBO2-B6 to a PC USB port

To be able to transfer data from/to the MAMBO2-B6 device you have to assemble together the docking station. The docking station was specially designed to provide a stable and secure stand of the MAMBO2-B6 device on your working surface.

Therefore, mount the Docking station according to these instructions:

1. Unpack the **Holding cradle** and **Base plate** from the box and place the Holding cradle on the Base plate so that the four legs of the cradle are put into the corresponding holes on the plate.
2. Apply light pressure on the cradle towards the base plate to fully insert the two rear legs of the cradle into the corresponding holes on the Base plate. Both parts will now be firmly attached to each other.
3. Unpack the **USB to Mini-USB cable** from the box and position the Mini-USB connector of this cable forwards and run the cable through the opening at the rear of the cradle to the top. Insert the Mini-USB connector into the corresponding slot on the cradle. Please ensure the correct orientation of the connector (the black rectangle on the USB connector should face forward), otherwise it will not be possible to place the MAMBO2-B6 on the cradle if the connector has been rotated.
4. To prevent accidental removal of the USB cable from the docking station when tacking the MAMBO2-B6 out, it is necessarily to fix the cable into the slot in the base.
5. The assembled docking station can now be connected directly to a computer through USB port.
6. To connect the device to a wall outlet for charging, use the included power adapter.

Figure 4: Mount the docking station and communicate with MAMBO2-B6.

7. When you connect the MAMBO2 device to a PC for the first time, Windows* will announce that unknown hardware has been found and start a procedure to find the corresponding driver files and install them.
8. If the USB driver is still not downloaded from the FALCOM's website, (go to: **www.falcom.de** > **Support** > **Drivers & Firmware** and then select **MAMBO2** from the selection box after you **Login** using MAMBO2-B6 logging data), download it. Browse the hardware assistant to the directory where the driver was stored (e.g. D:\Driver). This will help Windows correctly install the USB driver.

* *For Vista users, log on using the account of the Administrator, otherwise you will not be able to install the USB driver.*
For Linux users, refer to the related documents [7]

5 - Turning the MAMBO2-B6 On/Off

To turn your device on:

1. Press the **right button** and when you hear a beep tone release it. The startup process may take several seconds before the first screen is shown. If the PIN code for the used SIM card is still not entered, you will be prompted to enter it (a 4 digit secret code). After entering the PIN code and confirming it with OK, your MAMBO will show the **Info** view (see description of GUIs in step 8). The PIN acception does not necessarily imply that your MAMBO2-B6 is registered to the desired network.

   To know whether the GSM network is currently available, select the **NET** symbol from the **Info** view and press the navigation key. If the GSM item on the appeared dialog isn't online, the GSM network is currently not available. You may be in a bad GSM reception area: change the location. If the Y symbol on the **Info** view isn't green, the TCP connection is currently not available.

   Before putting your MAMBO2-B6 in your application, the device should first obtain a valid GPS-fix. Generally, this takes place automatically each time you turn the device on. Necessary satellites information will be retrieved to compute a position fix. Each time you turn on the device there are some differences in obtaining a GPS fix depending on the how long the device has been turned off and how far you have traveled since the last time you turned on. The MAMBO2-B6 will probably need a clear, unobstructed view of the sky until the device gets the first GPS fix.

   By default, your MAMBO2-B6 starts automatically the screen saver after 2 minutes of inactivity.

2. To turn off your device, either switch to the **Shutdown off** view on Standard GUI, press the **SHUTDOWN** item and confirm it with **OK** (on Simple GUI press the left key and to shutdown press and hold the **left soft key** for longer than 2 seconds) or push the **Reset** button with a suitable object (the reset pin is built into the "**Reset**" hole under the cover). The reset pin into the **"Reset"** hole may be damaged if you use it quite often or use force on it (You don't feel a click. You will only see that the display goes off while pushing the reset pin).

Figure 6: Function parts of the MAMBO2-B6.

4.2 Bike and Car Mounting Kit

4.2.1 Bike Mounting Kit

If you want to mount your MAMBO2-B6 device on your bicycle or motorbike, follow the instructions given below.

Figure 8: Bicycle mounting parts.

Step 1 Unpack the base plate and the holding cradle and place the base plate to the back of the holding cradle. The opening slots of base plate should be facing out when attached on the back of the cradle.

Step 2 Insert the 4 screws into the holes on the cradle side and secure them by the hex key.

Figure 9: Bicycle mounted kit.

Step 3 Select one of two included handlebar clamps that fits to the handlebar of your bike. The large clamp is for handlebars with a diameter of 27-32mm while the smaller one is ideal for handlebars from 22-27mm. Open the clamp and close the clamp around your bar, with the

quick release lever facing rearward. Rotate the quick release lever into position on the lower part of the clamp (with the lever pointing down) and then flip the Quick Release Lever upward to lock the clamp into position. If the clamp diameter setting is too loose or too tight, open the quick release lever, loosen or tighten the lever as necessary to adjust clamp tightness, and close the lever to check for a secure grip on the bar.

MAKE SURE THE CLAMP IS TIGHT ENOUGH THAT IT WILL NOT MOVE ON THE BAR FROM VIBRATION OR BUMPS DURING RIDING.

Step 4 Attach the Holding cradle to the handlebar bracket. Slide the assembled cradle onto the handlebar clamp from back to front until you hear it snaps into the clamp. An audible 'SNAP' indicates that the cradle is securely attached to the handlebar clamp.

Step 5 Place the MAMBO2 into the cradle by inserting first the two slots located on the bottom of the MAMBO2 into the two latches on the cradle. Apply light pressure on the MAMBO2 toward the cradle until you hear it snaps into the cradle.

Figure 10: Quick release clamp.

Step 6 To remove the cradle from the handlebar clamp, just push the latch lock at the front of the clamp downward, and slide the cradle rearward until it is free from the handlebar clamp.

4.2.2 Car Mounting Kit

If you want to mount your MAMBO2-B6 device in your vehicle on the windscreen, then follow the instructions given below.

Figure 11: Car mounting parts.

Step 1 To attach the base plate to the holding frame, unpack these both parts and hold the base plate against the rear of the holding frame es shown in figure above.

Step 2 Place both parts as is on the back with the cradle on the top and screw the 4 screws by inserting them through the holding frame into the base plate using the Allen key.

Step 3 Later on, unpack the suction mount and hook the assembled holding frame into the 4 legs of the suction mount and push the holding frame down until it snaps into the place.

Figure 12: Car mounting kit.

Step 4 Select an appropriate mounting position for the suction mount on the car windscreen. Clean the part of the installation area with a cleaning-cloth (not included) and attach the mount onto the cleaned area. Now place the MAMBO2-B6 on the holding frame, adjust the viewing angle of MAMBO2-B6, connect the power cable to the MAMBO2-B6 mini-USB port and car charger and plug the car charger into the vehicle cigarette light.

When putting the MAMBO2 into the cradle first insert the two slots on the bottom of the MAMBO2 into the two latches on the cradle. Thereafter, apply light pressure on the MAMBO2 toward the cradle until you hear it snaps into the cradle.

To adjust right/left position, turn both knobs the left and the right ones clockwise. Then turn back to fix that position. To adjust the viewing angle of MAMBO2-B6 turn the middle knob clockwise. Then turn back to fix that position.

In addition the holding frame can be extended by pulling the on both knobs and the base plate.

Figure 13: Suction mount.

❢ Safety Precautions: Do not install this product over an air bag cover or within the air bag deployment zone or where it will obstruct view of the road. FALCOM is not responsible for any damages caused to your car, your device, or yourself due to the installation or use of this suction mount.