

# MultiMon MM8 Install -WatchMon Toolkit

What can I do with a MultiMon (MM8) that I can't do with a WatchMonPlus?

1. **MM8** allows you to expand your system with **multi-string** so you may add extra banks of batteries to your WatchMonPlus as **satellites**, allowing the doubling/tripling or more of your battery banks.
2. **MM8** allows you to expand your system into a higher voltage. Do you want 96 V or more?

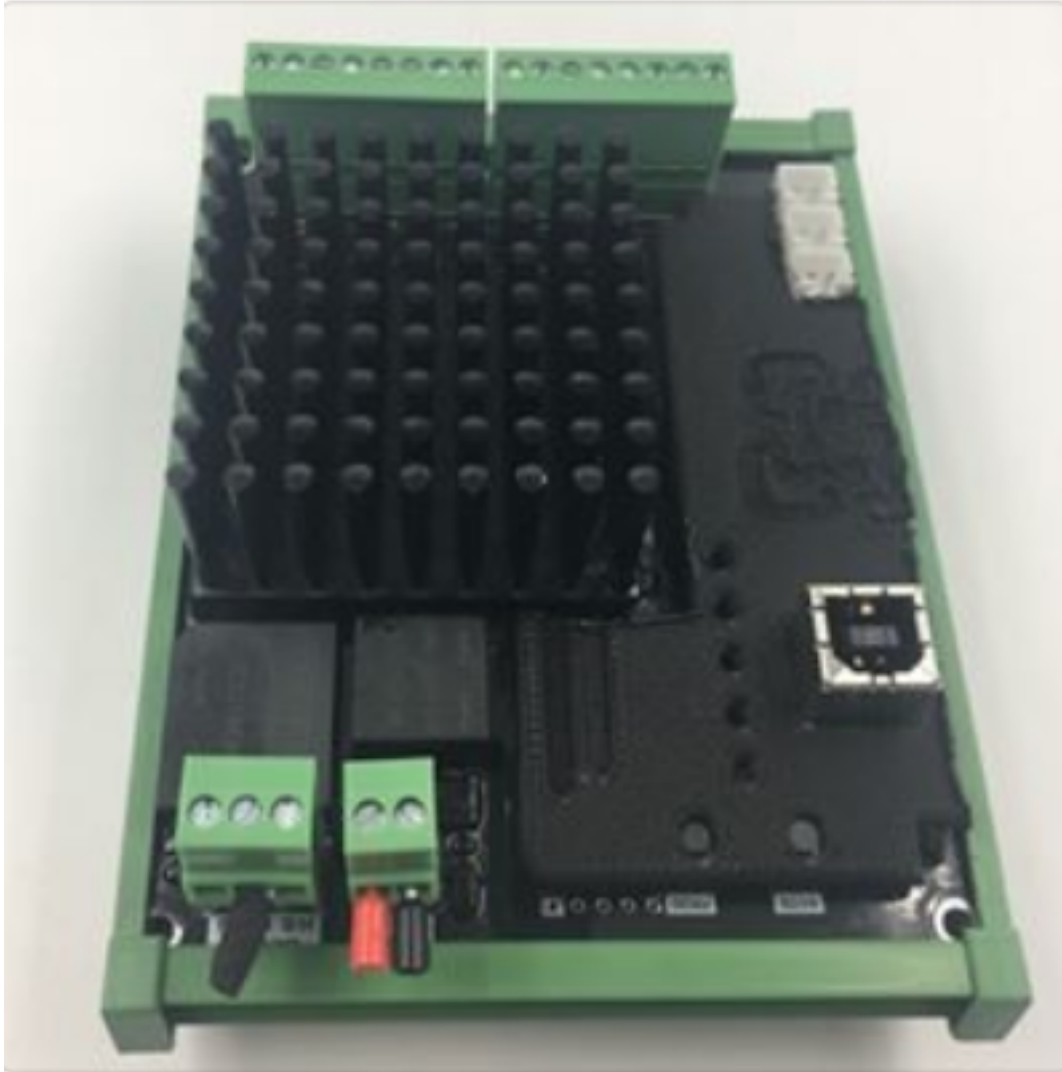
## Warnings

- Each **WatchMonPlus** or **MM8** should be a discreet bank of batteries not e.g. 2 x 24 V ALL cell monitors on same **WatchMonPlus** or **MM8** need to belong to the same bank.
- Always test the battery wiring using the provided **TestMon** before plugging in the **WatchMonPlus** or **MM8**
- Only plug one **WatchMonPlus** or **MM8** at a time to the PC/computer.
- **MM8** requires 12V power once setup is complete (**e.g. power pack not powered off the battery**)

## Setup the MM8

Unbox the product.

**Note**, this is equivalent to the **WatchMonPlus**, minus the **shunt**, **outputs** and **expansion connection**. These functions are on the **WatchMonPlus** Master and therefore not needed on an **MM8** Satellite.



1. Setup **WatchMonPlus** Master if not already setup (see **WatchMonPlus** method)  
Use [https://www.dropbox.com/s/22mj3ka3ei6o1ug/WatchMonToolkitInstaller\\_2.0rc14g.msi?dl=0](https://www.dropbox.com/s/22mj3ka3ei6o1ug/WatchMonToolkitInstaller_2.0rc14g.msi?dl=0)
2. Plug **MM8** into computer with USB (**CANbus, Power or Battery SHOULD NOT BE PLUGGED INTO THE MM8 FOR THIS**)
3. Update [firmware](#)
4. Go to **Hardware** - then, **CellMon** page and press **Edit** and **update** as required.

The areas inside the **Red** boxes (**below**) need changes.

Menu Batrium SYS2196 - CellMon hardware settings

System CellMon Shunt Expansion Integration

Undo Save Default Advanced

Batt Type Li-FePO4 Typical

Lo Cell Voltage CV2 2.50 V

Nom. Cell Volt CV7 3.20 V

Bypass Volt CV9 3.65 V

Hi Cell Voltage CV11 3.75 V

Lo Cell Celcius -10 °C

Hi Cell Celcius CT8 55 °C

Ignore Lo Celcius -40 °C

CellMon Type Multimon MM8 15-10s

Bypass Current Limit 0.68 A

Bypass Temp Limit 75 °C

Bypass Impedance 4.0 Ohm

Bypass Extra Mode None More

Has Satellite Off

Grp Range Entire Range

First Cell ID 16 16

Last Cell ID 30 30

Dif Nominal Off

Nom Series 15

Poller Mode Simulator running

Status Running

Low High

Cell Volt 0.00 0.00 V

Cell Temp -40 -40 °C

Repeat 0

StatusRx

SetupRx

Window

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- CellMon Type = **MultiMon**
- 'Has Satellite' is **OFF** as it is the Satellite system
- You need to pick and assign the cell numbers for your **MM8**,
- **Note** if **WatchMonPlus** is **1-14** then the first **MM8** may be **15-28**, the second **MM8** may be **29-42**, etc, etc

5. Go to **Hardware**, then **Integration** page to set up **CANbus**

Menu Batrium SYS2196 - Integration hardware settings

System CellMon Shunt Expansion Integration

Undo Save Default

**CanBus** Broadcast On  protocol mode Native 2.0  
Ticks Tx  Rx  Unk  Err

**Canbus Remote Admin**  
Base Address  0x0520  
Remote Address  0x0000  
Group Address  0x0500  
Auth Reject

**Wifi** Broadcast On  Verbose  
Ticks Tx  Rx  Unk  Err

**Usb** Broadcast Off  Command  
Ticks Tx  Rx  Unk  Err

StatusRx  
SetupRx

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- Press **Edit** and set **CANbus** to "**Reserved 37**" for **MM8**
- Press default (**Note base address and group address update**)
- **Base address**: Identifies the device on the CANbus network
- **Remote address**: Talks to the inverter master (**only applicable for WatchMonPlus Master**)
- **Group address**: Identifies the group and matches **WatchMonPlus** to Satellite **MM8**
- Turn off wi-fi
- Press **Save**

Note: System/Shunt/Expansion and any control logic do not need to be changed as they are inherited from their WMPlus Master.

Unplug this **MM8** and repeat steps above for any extra **MM8**'s that are needed.

*Now it is time to let your WatchMonPlus work with its Mates.*

## Setup Changes to WMPPlus needed for MM8

1. Plug **WatchMonPlus** Master into computer with USB (**Canbus, Power, Battery SHOULD NOT BE PLUGGED IN FOR THIS**)
2. Update [firmware](#), if required
3. Go to **Hardware**, then **CellMon** page and press **Edit** and update as required

The areas in the **Red** boxes (**below**) need changes.

The screenshot shows the Batrium SYS6085 - CellMon hardware settings interface. The interface is divided into several sections. The top section includes a menu, the Batrium logo, and the title 'SYS6085 - CellMon hardware settings'. Below this are navigation tabs for System, CellMon, Shunt, Expansion, and Integration. The main content area is titled 'Edit' and contains various configuration options. Two areas are highlighted with red boxes: the 'CellMon Type' dropdown menu is set to 'WatchmonPlus WM5', and the 'Has Slave' toggle is turned 'On'. Other settings include Batt Type (Li-FePO4 Typical), Lo Cell Voltage (2.50 V), Nom. Cell Volt (3.20 V), Bypass Volt (3.50 V), Hi Cell Voltage (3.75 V), Lo Cell Celcius (-10 °C), Hi Cell Celcius (55 °C), Bypass Current Limit (0.50 A), Bypass Temp Limit (75 °C), Bypass Impedance (4.0 Ohm), Bypass Extra Mode (None), Poller Mode (Disabled), Status (Timeout), Cell Volt (0.00 V), Cell Temp (-40 °C), and Repeat (0). The interface also includes a menu, navigation tabs (System, CellMon, Shunt, Expansion, Integration), and a user profile icon.

- CellMon Type = **WatchMonPlus (WM5)**
- 'Has Satellite' is **ON** as **WatchMonPlus** is the Master
- You need to pick and assign the cell numbers for your **WatchMonPlus** Master
  - Group Range is the range for this device so **1-12, 1-14, 1-15** whichever is appropriate
  - Entire Range covers the **WatchMonPlus** and the **MM8**, meaning if each bank is 15 and there are 2 banks (**i.e. with 1 MM8**) then the Entire range is **1-30**
  - ALL cell monitors on same **WatchMonPlus** or **MM8** need to be on the same bank

- **Dif Nominal** and **Nom** Series are about **Multi-string** For example if you want 2 x 48V banks they would have **Dif Nominal** set to **ON** and the number of cell monitors in each bank as the Nominal series

5. Go to the **Hardware**, then **Integration** page to setup **CANbus**

The screenshot shows the Batrium SYS2196 Integration hardware settings page. The page is titled "Batrium SYS2196 - Integration hardware settings" and has a navigation menu with "System", "CellMon", "Shunt", "Expansion", and "Integration". The "Integration" tab is selected. Below the navigation bar are buttons for "Undo", "Save", and "Default".

The main content area is divided into three sections: CanBus, Wifi, and Usb. The CanBus section is highlighted with a red box and contains the following settings:

- CanBus**: Broadcast  On, protocol mode: Native 2.0
- Ticks: Tx: 0, Rx: 0, Unk: 5, Err: 0

The Canbus Remote Admin section is also highlighted with a red box and contains the following settings:

- Canbus Remote Admin**: Base Address: 1312 (0x0520), Remote Address: 0 (0x0000), Group Address: 1280 (0x0500)
- Auth Reject: 0

Below the CanBus section are the Wifi and Usb sections. The Wifi section has Broadcast  On, protocol mode: Verbose, and Ticks: Tx: 188, Rx: 5, Unk: 0, Err: 0. The Usb section has Broadcast  Off, protocol mode: Command, and Ticks: Tx: 2, Rx: 0, Unk: 0, Err: 0.

At the bottom of the page, there is a row of system status icons: a heart, a signal tower, a green square, a blue square, a purple square, a yellow square, and a lightning bolt.

- Press **Edit** and set CANbus to "**Native**" for **WatchMonPlus** Master
- Press default (**Note: base address and group address update**)
- **Base address**: identifies the device on the CANbus network
- **Remote address**: talks to the inverter master (**Only applicable for WMPlus Master**)
- **Group address**: Identifies the group and matches **WatchMonPlus** to it's Satellite
- Press **Save**