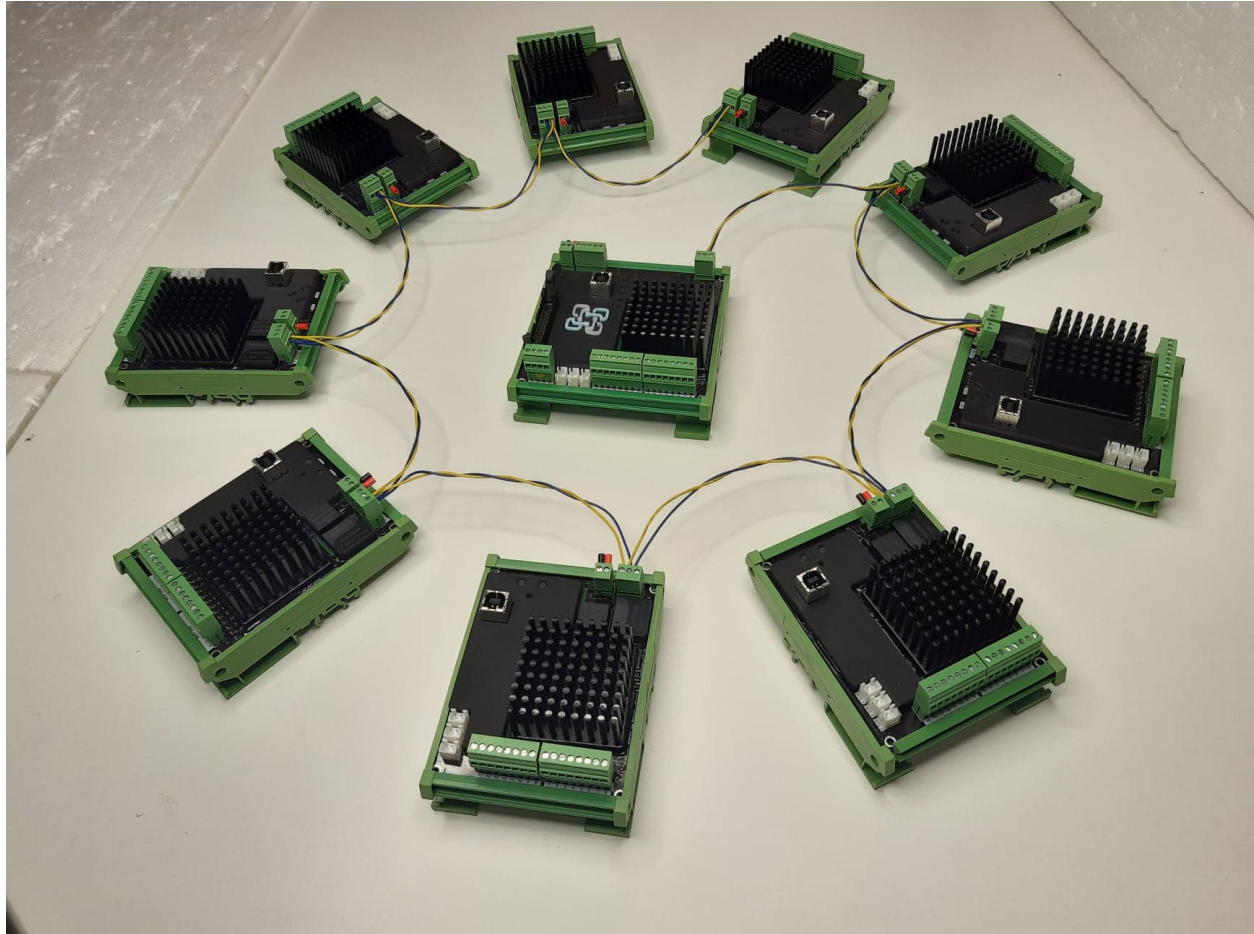# MultiMon MM8: How to Wire Up and Configure the CANbus Network

MultiMon MM8 uses CANbus to communicate to the **WatchMonPlus** (**WM5**) Supervisor.

CANbus is a twisted pair wiring used to connect the devices wired from the **WatchMonPlus** (**WM5**) to the first **MM8**, then onto the second **MM8** and so on, to form a chain.

The last **MM8** in the chain requires a 120 Ohm resister between CAN high and CAN low to indicate one end of the chain. The other end of the chain could be the **WatchMonPlus** (**WM5**) if there is no CAN link to an Inverter / Charger present or the Inverter / Charger itself.

If using an Inverter / Charger, this is normally inbuilt into the device. Where the **WatchMonPlus** (**WM5**) is one end of the chain, it too requires a 120 Ohm resister between CAN high and CAN low. It is common to adopt the typical CAT5 or CAT6 Ethernet network cable and adopt 1 pair.
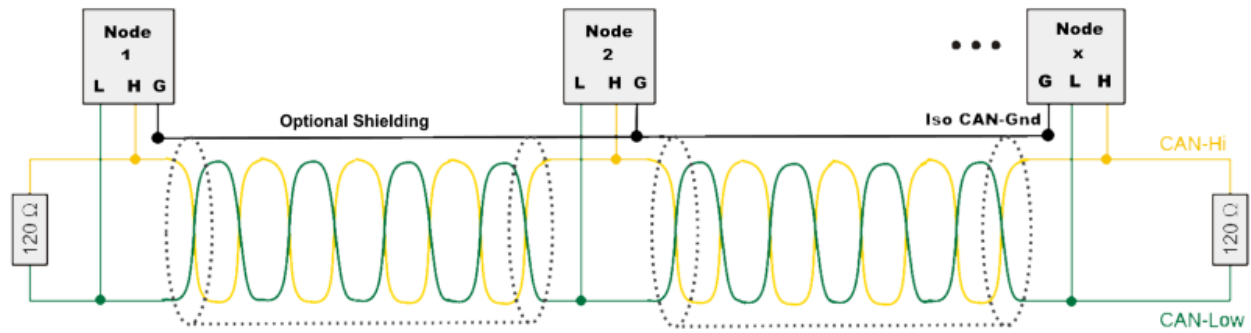
Uniquely Identifying the Devices for CANbus

The Hardware - CellMon page and Hardware - Integration page need to be setup.

	Inverter Charger	WatchMon Plus WM5 Master		MultiMon MM8 Satellite(s)
	Remote	**Base**	**Group**	**MM8 - A**
Cell Numbers	NA	1 to 14		15 to 28
Address	0x300	0x500	0x520	0x540
Range	0x300 - 0x399	0x500 - 0x51F	0x520 - 0x53F	0x540 - 0x55F
ID		1280	1312	1344
Refresh Rate	Application	Canbus Profile		
60 sec	Energy Storage	Project Coconut		MultiMon Satellite
4 sec	Electric Vehicle	Native2		Reserved 37

Hardware Setup - CellMon Screen

The following should be configured within the Master Supervisor (**i.e. WM5**) as follows:

- Has Satellite: **On** Enabled to specify the entire range of satellites

- First Cell ID: **1** Typically the lowest cell voltage in series

- Last Cell ID: **14** Number of cells in series monitored by the local supervisor

- Entire Range First **1** Identical to the first cell

- Entire Range Last: **28** Last number in the entire range of cells
(typically the total number of cell monitored)

- Dif Nominal **On** Enable for multiple parallel strings, but off for high voltage systems in series

- Nominal Series **14** Outline the typical number when more than one parallel string

On the MultiMon MM8 should be configured as follows:

- Has Satellite: **Off**

- First Cell ID: **15**   next number in sequence
                                    (**i.e. if after the WM5 supervisor which has 1-14, it would be 15**)

- Last Cell ID: **28**   incremental number above the first ID for the number of cells
                                    monitored (**i.e. if first is 15 for 14 cells will be 28**)

- Entire Range First   **N/A**   Calculated

- Entire Range Last: **N/A**   Calculated

- Dif Nominal   **Off**

- Nominal Series   **N/A**   Calculated

System   CellMon   Shunt   Expansion   Integration   **MM8 - MultiMon Satellite**   👾

Edit

StatusRx
SetupRx

Network Tester
Device Sync
Bypass Tester
Device Led Identifier

Batt Type	Li-Ion LongLife ▼	
Lo Cell Voltage **CV2**	2.90	V
Nom. Cell Volt **CV7**	3.70	V
Bypass Volt **CV9**	4.17	V
Hi Cell Voltage **CV11**	4.20	V
Lo Cell Celcius	-5	°C
Hi Cell Celcius **CT8**	55	°C
Ignore Lo Celcius	-40	°C

Has Satellite	Off	
	Grp Range	Entire Range
First Cell ID	15	15
Last Cell ID	28	28
Dif Nominal	Off	
Nom Series	14	
Poller Mode	Normal	More
Status	Running	

CellMon Type	Multimon MM8 15-10s ▼
Bypass Current Limit	0.60	A
Bypass Temp Limit	75	°C
Bypass Impedance	4.0	Ohm
Bypass Extra Mode	None ▼	More

	Low	High	
Cell Volt	4.05	4.16	V
Cell Temp	26	26	°C
Repeat	238		

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Hardware Setup - Integration Screens

	Inverter Charger	WatchMon Plus WM5 Master		MultiMon MM8 Satellite(s)		
	Remote	**Base**	**Group**	**MM8A**	**MM8B**	**MM8C**
Cell Numbers	NA	1 to 15		16 to 30	31 to 45	46 to 60
Address	0x300	0x500	0x520	0x540	0x560	0x580
Range	0x300 - 0x399	0x500 - 0x51F	0x520 - 0x53F	0x540 - 0x55F	0x560 - 0x57F	0x580 - 0x59F
ID		1280	1312	1344	1376	1408
Refresh Rate	Application	Canbus Profile				
60 sec	Energy Storage	Project Coconut		MultiMon Satellite	MultiMon Satellite	MultiMon Satellite
4 sec	Electric Vehicle	Native2		Reserved 37	Reserved 37	Reserved 37

On the Master Supervisor (**i.e. WM5**) the following should be configured:

- Protocol: **Project Coconut** for solar inverters (**or Native2 for EV projects**)
- base address is **0x500 ,** if multiple BMS supervisors exist on the same CANbus network, the addresses must be different and not overlap
- group address is **0x520** this is the same for all devices that are part of the same BMS so that both the master and satellites can see each other
- remote address is **0x0** and only relevant to communicate with a specific charger if a function of that CANbus profile

The MultiMon MM8 should be configured as follows:

- protocol: **MultiMon Satellite** (**or Reserved 37 for faster updates**)
- base address is **0x540** . If there are multiple each needs to be different (**typically in increasing ranges of 0x20**) and must not overlap (**0x560, 0x580, etc**).
- group address is **0x520** this is the same for all devices that are part of the same BMS supervisor
- remote address is **0x0** not relevant for satellites