

# Inverter Range Compatibility Guide for Batteries Manufactured by Freedom Won

Optimised Compatibility for Diverse Ranges



This guide does not cover Freedom Won's general-purpose 12V LiFePO4 batteries. For detailed information on these batteries, refer to our website's 12V battery specification sheet.



## Contents

1. Freedom Won Battery Ranges .....	3
2. CAN Bus Interface and Compatibility Considerations .....	3
3. Custom RJ45 Cables and Pin Configurations.....	4
4. Classification of eTower, LiTE, and megaTower Ranges .....	4
5. Battery and Inverter Compatibility Information .....	4
6. Inverters Without CAN Bus or RS485 Interface .....	5
7. Included Inverter Cables .....	5

## 1. Freedom Won Battery Ranges

Freedom Won offers various battery ranges for home, commercial, and industrial applications. The battery ranges include:

- eTower
- LiTE Home and Business
- LiTE HV Home and Business
- LiTE Marine (13V, 26V and 52V)
- LiTE Mobility (golf carts, forklifts, etc.)
- LiTE Commercial (including Lite Commercial HV and HV+)
- LiTE Industrial
- megaTower Plus
- megaTower Extra

This guide summarises inverters and certified allied equipment brands compatible with eTower, Freedom Won LiTE range, and megaTower batteries. The interface options covered in this document relate only to the CAN Bus.

## 2. CAN Bus Interface and Compatibility Considerations

The CAN Bus interface is not the only aspect considered when determining the compatibility between Freedom Won batteries and inverters; the operating voltage and power rating of the inverters must also be taken into consideration.

To ensure correct CAN network function, two 120 Ohm termination resistors are required. Each LiTE unit comes with one resistor, which should be installed in the second RJ45 CAN Bus socket on the battery.



Note that some inverter systems may require an additional resistor, while others may have a resistor integrated within their design.

The eTower master module, which serves as the connection point for the inverter's CAN Bus or RS485, is equipped with a built-in termination resistor for both the CAN Bus and RS485. This eliminates the need for additional termination resistor installation.

### 3. Custom RJ45 Cables and Pin Configurations

Some systems require a custom RJ45 cable to accommodate varying pin configurations when connecting to the inverter. You can either purchase one from Freedom Won or crimp your own by following the guidelines provided in these manuals; [LiTE Home and Business 52V Range](#), [LiTE Commercial HV Range](#) for pin configuration.

However, eTower batteries come with a set of cables that are compatible with most inverters, making separate cable purchases unnecessary.

Certain inverters require customised profiles on the eTower or LiTE. If you need this function, contact Freedom Won for assistance.

Refer to the eTower or LiTE installation manual for further information on CAN Bus communication.

### 4. Classification of eTower, LiTE, and megaTower Ranges

The eTower, LiTE, and megaTower ranges can be categorised based on the following nominal operating voltages:

- i. 52V and below (this means 13V, 26V and 52V)
- ii. 150 to 300V
- iii. 300 to 600V
- iv. 600V to 800V
- v. 1000V Plus

### 5. Battery and Inverter Compatibility Information

The tables listed far below provide battery and inverter compatibility information for all inverters certified by Freedom Won in each of the above five classifications.

Inverter brands not included in these tables are not certified by Freedom Won for the CAN Bus interface. If you have a CAN Bus-compatible inverter from a brand not listed in this guide and would like to connect it to an eTower, LiTE, MegaTower Plus, or Extra, contact Freedom Won for assistance.

If you have a CAN Bus-compatible inverter from a brand not listed in this guide and would like to connect it to an eTower, LiTE, MegaTower Plus, or Extra, contact Freedom Won for assistance.

## 6. Inverters Without CAN Bus or RS485 Interface

Certain inverter brands do not support CAN Bus or RS485 protocols, resulting in an inability to communicate with eTower or LiTE systems. These inverters can still operate within a system featuring eTower or LiTE, but some functionality will be compromised due to the absence of battery-provided information and commands. For example, the true SoC of the battery will not be available on the inverter, and the battery will also be unable to stop charge or discharge if necessary.

In the event of a communication failure, the battery will automatically trip to ensure its protection, posing no safety risk but causing inconvenience. Freedom Won advises choosing a CAN Bus or RS485-enabled inverter compatible with lithium batteries for new installations to avoid this.

For retrofits where an inverter without CAN Bus or RS485, the eTower or LiTE can be used, provided that the inverter voltage setpoints are correctly configured. If the eTower or LiTE manual does not provide sufficient guidance contact Freedom Won for assistance.

## 7. Included Inverter Cables

The Freedom Won eTower is supplied with the following inverter cables:

- CAN Bus Comms cable for Victron inverters.
- CAN Bus Comms cable for Type 1 inverters (e.g. Sunsink, Solis, GoodWe, Growatt, Revo).

The tables below assist users in determining which inverter brands and models are compatible with the eTower, LiTE, and MegaTower batteries, and provide additional installation notes to ensure a successful setup.

Table 1: Battery Inverter Compatibility for 13V, 26V, 52V Batteries

Category	Equipment/Battery Inverter Brand	Equipment Models	Installation Notes
13V, 26V, 52V	GoodWe	ES 48V models are compatible with Freedom Won 52V LiTE Home Business, Marine and eTower systems.	<ol style="list-style-type: none"> <li>1. For LiTE: Use the "LiTE to Type 1" RJ45 cable (available from Freedom Won) to connect the CAN Bus from LiTE to GoodWe.</li> <li>2. Configuration: Standard LiTE Profile.</li> <li>3. Note: No additional resistor is required.</li> <li>4. GoodWe Application Setup: Select "Default Lithium 100Ah" or contact Freedom Won for assistance.</li> <li>5. For eTower: Connect the CAN Bus using the "Type 1" cable provided with the eTower</li> </ol>
13V, 26V, 52V	Growatt/Sunforce	5kW 48V models are	<ol style="list-style-type: none"> <li>1. For LiTE: Use the "LiTE to Type</li> </ol>

		compatible with 52V LiTE and eTower systems.	<p>1" RJ45 cable (available from Freedom Won) to connect the CAN Bus from LiTE to the inverter.</p> <p>2. Configuration: Standard LiTE Profile.</p> <p>3. Note: No additional resistor is required.</p> <p><b>4.</b> For eTower: Connect the CAN Bus using the "Type 1" cable provided with the eTower.</p>
13V, 26V, 52V	Imeon	3,6; 9, and 12 kVA 48V models are compatible with 52V LiTE and eTower systems.	<p>1. For LiTE: Use the "Type Imeon" RJ45 cable (available from Freedom Won) to connect the CAN Bus from LiTE to Imeon inverter.</p> <p>2. Configuration: A non-standard "Imeon Profile" is required on LiTE; contact Freedom Won for any assistance.</p> <p><b>3.</b> For eTower: Connect the CAN Bus using the "Type 1" cable provided with the eTower.</p>
13V, 26V, 52V	Koyoe	3kVA Hybrid 48V models are compatible with 52V LiTE and eTower systems.	For assistance with connecting one of these inverters to a LiTE, contact Freedom Won.
13V, 26V, 52V	Lux Power	Lux Power LV Inverters are compatible with 52V LiTE and eTower systems.	<p>1. For LiTE: Use the "LiTE to Type 1" RJ45 cable (available from Freedom Won) to connect the CAN Bus from LiTE to the inverter.</p> <p>2. Configuration: Standard LiTE Profile.</p> <p>3. Note: No additional resistor required.</p> <p>4. For eTower: Connect the CAN Bus using the "Type 1" cable provided with the eTower.</p>
13V, 26V, 52V	MLT	PowerStar10 Oasis Nomad MPPT 48V models are compatible with 52V LiTE and eTower systems.	<p>1. The MLT range of products offers a complete CAN Bus interface from the 2019 models onwards.</p> <p>2. PowerStar10: Use "LiTE to Type 1" RJ45 Ethernet Cable (available from Freedom Won)</p> <p>3. The inverter includes a 2-pin jumper header to enable the termination resistor if it is the last in the CAN Bus line.</p>

			<ol style="list-style-type: none"> <li>Oasis: Same as PowerStar10</li> <li>Nomad: Use CAN Bus terminal plug on the PC board with the resistor (enable with bridge, refer to Nomad manual).</li> <li>Configuration: Standard LiTE Profile.</li> <li>For eTower: Connect the CAN Bus using the "Type 1" cable provided with the eTower.</li> </ol>
13V, 26V, 52V	MegaRevo	3,6 5, 8, 10kVA Hybrid Inverters 48V models are compatible with 52V LiTE and eTower systems.	<ol style="list-style-type: none"> <li>For LiTE: Use the "LiTE to Type 1" RJ45 cable (available from Freedom Won) to connect the CAN Bus from LiTE to the inverter.</li> <li>Configuration: Standard LiTE Profile.</li> <li>Note: No additional resistor is required.</li> <li>For eTower: Connect the CAN Bus using the supplied Type 1 cable.</li> </ol>
13V, 26V, 52V	Chisage	5kW to 14kW 48V models are compatible with both LiTE and eTower systems.	<ol style="list-style-type: none"> <li>For LiTE: Use the "LiTE to Type 1" RJ45 cable (available from Freedom Won) to connect the CAN Bus from LiTE to the inverter.</li> <li>Configuration: Standard LiTE Profile.</li> <li>Note: No additional resistor is required.</li> <li>For eTower: Connect the CAN Bus using the supplied Type 1 cable.</li> </ol>
13V, 26V, 52V	Growatt/Sunforce	5kW to 14kW 48V models are compatible with both LiTE and eTower systems.	<ol style="list-style-type: none"> <li>For LiTE: Use the "LiTE to Type 1" RJ45 cable (available from Freedom Won) to connect the CAN Bus from LiTE to the inverter.</li> <li>Configuration: Standard LiTE Profile.</li> <li>Note: No additional resistor is required.</li> <li>For eTower: Connect the CAN Bus using the supplied Type 1 cable.</li> </ol>
13V, 26V, 52V	Kodak	3 to 6kW models with 48V are compatible with 52V LiTE and eTower systems.	<ol style="list-style-type: none"> <li>For LiTE: Use the "LiTE to Type 1" RJ45 cable (available from Freedom Won) to connect the</li> </ol>

			<p>CAN Bus from LiTE to the inverter.</p> <ol style="list-style-type: none"> <li>Configuration: A special "Solis" LiTE Profile is required, which can be obtained from Freedom Won.</li> <li>Note: No additional resistor is required.</li> <li>For eTower: Connect the CAN Bus using the supplied Type 1 cable.</li> </ol>
13V, 26V, 52V	SMA	Sunny Island 48V model is compatible with 52V LiTE and eTower systems.	<ol style="list-style-type: none"> <li>A "Type SMA" RJ45 cable is required.</li> <li>Configuration: Standard LiTE Profile.</li> <li>An additional resistor is supplied with the inverter.</li> <li>For eTower: connect the CAN Bus using the "eTower to Type SMA" cable, available from Freedom Won."</li> </ol>
13V, 26V, 52V	Solis\Synapse\Dyness	Solis Low Voltage (LV) Hybrid Inverters.	<ol style="list-style-type: none"> <li>For LiTE: Use the "LiTE to Type 1" RJ45 cable (available from Freedom Won) to connect the CAN Bus from LiTE to the inverter.</li> <li>Configuration: Standard LiTE Profile.</li> <li>Note: No additional resistor is required.</li> </ol> <p>For eTower: Connect the CAN Bus using the supplied Type 1 cable.</p>
13V, 26V, 52V	Studer	Variotrack and Xtender models with 48V are compatible with 52V LiTE and eTower systems.	<ol style="list-style-type: none"> <li>The system must include an XCom CAN module and an RC3 module.</li> <li>Connect the LiTE CAN to the XCom CAN module.</li> <li>Set the XCOM CAN dip switches according to the required pin configuration (refer to the LiTE manual for LiTE CAN pin configuration details).</li> <li>Configuration: Standard LiTE Profile.</li> <li>The termination resistor dip switch is available on the XCOM CAN device.</li> <li>For eTower: Use the supplied "Type 1" cable to connect the</li> </ol>



			CAN Bus.
13V, 26V, 52V	Sunsynk/Deye	All Low Voltage (LV) Hybrid Inverters with 48V models are compatible with 52V LiTE and eTower systems.	<ol style="list-style-type: none"> <li>For LiTE: Use the "LiTE to Type 1" RJ45 cable (available from Freedom Won) to connect the CAN Bus from LiTE to the inverter.</li> <li>Configuration: Standard LiTE Profile.</li> <li>Note: No additional resistor is required.</li> <li>For eTower: Connect the CAN Bus using the supplied Type 1 cable.</li> </ol>
13V, 26V, 52V	Victron	Quattro and MultiPlus models are available in 12V, 24V, and 48V which are suitable with the LiTE Marine 13V, 26V, and 52V models, respectively. The 48V Victron models are compatible with the LiTE 52V and eTower models.	<ol style="list-style-type: none"> <li>All Victron systems require a Venus device (e.g. Venus GX, Color Control GX, Cerbo, Octo GX, Maxi GX) to interface with the LiTE over CAN Bus.</li> <li>Use a standard Ethernet cable to connect the LiTE CAN Bus to the Venus Ve.CAN.</li> <li>Configuration: Standard LiTE Profile.</li> <li>Termination resistors are supplied with the Venus device.</li> <li>Refer to the Freedom Won Compatibility Guide on the Victron Energy website.</li> <li>For eTower connect the CAN Bus using the "Victron" cable supplied with the eTower.</li> </ol>

Table 2: Battery Inverter Compatibility for 125 to 600V

Category	Equipment/Battery Inverter Brand	Equipment Models	Installation Notes
125 to 600V	Freedom Won Encore	Encore Home 12kW and 15kW 3 Phase Hybrid Residential Inverter High Voltage 125-600V IP65 are compatible with Freedom LiTE Home and Business HV (15, 20, 30, 40, and 80).	<ol style="list-style-type: none"> <li>Note: The 60/48HV is not compatible with these inverters.</li> <li>For LiTE: Use the "LiTE to Type 1" RJ45 cable (available from Freedom Won) to connect the CAN Bus from LiTE to the inverter.</li> </ol>
150 to 600V	Fox Inverter	H3 and K1 Series Residential HV Inverters are compatible with Freedom LiTE Home and Business HV (15, 20, 30, 40 and 80)	<ol style="list-style-type: none"> <li>Note: The 60/48HV is not compatible with these inverters.</li> <li>BMS Pin Configuration: <ol style="list-style-type: none"> <li>LiTE HV: CAN 7(High) and 8 (Low).</li> </ol> </li> </ol>

			b) Fox Ess: 5(High) and 4 (Low).
150 to 600V	Koyoe	20kW Three Phase inverters are compatible with Freedom LiTE Home and Business HV (15, 20, 30, 40 and 80)	For LiTE: Use the "LiTE to Type 1" RJ45 cable (available from Freedom Won) to connect the CAN Bus from LiTE to the inverter.

Table 3: Battery Inverter Compatibility for 150 to 800V

Category	Equipment/Battery Inverter Brand	Equipment Models	Installation Notes
150 to 800V	Solis	S6-EH3P (29.9 to 50) K-H Solis Three-Phase High Voltage Energy Storage Inverters compatible with Freedom LiTE Home and Business HV (15, 20, 30, 40, 60, and 80), m and Commercial HV and HV+ batteries.	Note: For parallel systems, each inverter requires its own separate battery.

Table 4: Battery Inverter Compatibility for 300 to 600V

Category	Equipment/Battery Inverter Brand	Equipment Models	Installation Notes
300 to 600V	Freedom Won	Encore HPS Hybrid Inverter 50kW, 100kW, and 150kW are compatible with Freedom LiTE Home and Business HV (40, 60, and 80) and Commercial HV and HV+ batteries.	<ol style="list-style-type: none"> <li>Note: No additional termination resistor is required.</li> <li>These inverters are available from Freedom Won with support services including design, installation, and commissioning assistance.</li> </ol>
300 to 600V	Sunsynk	50kW is compatible with Freedom LiTE Home and Business HV (20, 30, 40, 60, and 80) and Commercial HV and HV+ batteries.	<ol style="list-style-type: none"> <li>No additional termination resistor is required.</li> <li>A "LiTE to Type 1" RJ45 cable is necessary for connecting the CAN Bus from LiTE to the inverter.</li> <li>Inverters are available from Freedom Won, and support services include design, installation, and commissioning assistance.</li> <li>Note: For Home and Business range batteries, no special profile is required. For any issues, contact Freedom Won</li> </ol>

			for assistance."
300 to 600V	Deye	50kW is compatible with Freedom LiTE Home and Business HV (20, 30, 40, 60, and 80) and Commercial HV and HV+ batteries	<ol style="list-style-type: none"> <li>1. No additional termination resistor is required.</li> <li>2. A "LiTE to Type 1" RJ45 cable is necessary for connecting the CAN Bus from LiTE to the inverter.</li> <li>3. Note: For Home and Business range batteries, no special profile is required. For any issues, contact Freedom Won for assistance.</li> </ol>
300 to 600V	Sofar Solar	20kVA 3 Phase is compatible with Freedom LiTE Home and Business HV (15, 20, 30, 40, 60, and 80) and Commercial HV and HV+ batteries	<ol style="list-style-type: none"> <li>1. The 30/24HV+ model is compatible but with a slight power derating due to lower than-ideal voltage. All other LiTE Home and Business HV+ models operate at full performance.</li> <li>2. Use a standard Ethernet cable (connects to a terminal multipin plug on the inverter).</li> <li>3. The "Sofar Solar LiTE Profile" is required.</li> <li>4. No additional termination resistor is needed.</li> </ol>
300 to 600V	Solinteg	20 to 50kW Integ M series.	<ol style="list-style-type: none"> <li>1. For LiTE: Use the "LiTE to Type 1" RJ45 cable (available from Freedom Won) to connect the CAN Bus from LiTE to the inverter.</li> <li>2. A special profile is needed for Home and Business range batteries. If you have any issues, contact Freedom Won.</li> </ol>

Table 5: Battery Inverter Compatibility for 600 to 800V

Category	Equipment/Battery Inverter Brand	Equipment Models	Installation Notes
600 to 800V	ATESS	<ul style="list-style-type: none"> <li>• HPS 30kW to 150kW is compatible with Lite Commercial HV Lite Industrial</li> <li>• PCS250 to 630kW is compatible with Lite Commercial HV+ Lite Industrial and MegaTower Plus.</li> </ul>	<ol style="list-style-type: none"> <li>1. This battery inverter range is designed to couple with DC solar charge controllers (PBD250 and 350)</li> <li>2. Compatibility Requirement: The Freedom LiTE must be an HV+ model.</li> <li>3. Configuration: The "ATESS LiTE" profile is required.</li> </ol>

			<ol style="list-style-type: none"> <li>4. A standard Ethernet cable is required.</li> <li>5. No additional resistor is required.</li> <li>6. Inverters are available from Freedom Won, with support services including design, installation, and commissioning assistance.</li> </ol>
600 to 800V	Freedom Won	Encore HPS Hybrid Inverter 250kW to 500kW is compatible with Lite Commercial HV+ Lite Industrial and MegaTower Plus.	<ol style="list-style-type: none"> <li>1. This battery inverter range is designed to couple with DC solar charge controllers</li> <li>2. Compatibility Requirement: The Freedom LiTE must be an HV+ model.</li> <li>3. Configuration: Lite requires an "HPS Lite" profile.</li> <li>4. A standard ethernet cable is required.</li> <li>5. No additional resistor is required. Inverters are available from Freedom Won with design, installation, and commissioning assistance.</li> </ol>

Table 6: Battery Inverter Compatibility for 1000V Plus

Category	Equipment/Battery Inverter Brand	Equipment Models	Installation Notes
1000V Plus	Freedom Won MegaTower Extra.	EPC Power CAB 1000	Contact Freedom Won for more information.



### Freedom Won Technical Support Contact Details

Use the following contact details to make inquiries on technical matters or for actual technical support with design and/or commissioning:

Email: [support@freedomwon.co.za](mailto:support@freedomwon.co.za)

Tel: +27(0)10 597 7794

Contact the Freedom Won office for urgent assistance if the mobile number is temporarily engaged or unavailable (see [www.freedomwon.co.za](http://www.freedomwon.co.za) for contact details)

### **Technical Support pertaining to sold in Australia, New Zealand and all other countries of the Oceania region:**

Attention: Dan Nel or Hennie Coleman

Mobile: +61 499 408 975 or +61 477 304 101

Email: [support@freedomwonaustralia.com](mailto:support@freedomwonaustralia.com)

Support System to log a ticket online: <https://freedomwonaustralia.samanage.com/login>

Note: first visit to the support – register and then log a ticket.

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