

Hyundai xMB-9640 Intelligent Module Interface (IMI) KIT

Upgrade Instructions

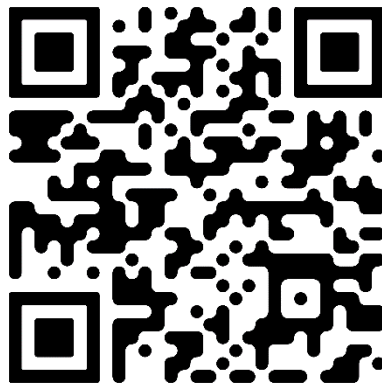


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Please refer to the online knowledge base for more information and Support:

<https://hyundaixmb9640.midtronics.com>



1. Introduction

The Midtronics xMB-9640 Module Balancer supports balancing modules used in Hyundai vehicles. Because of the variety of vehicles and modules used in their battery packs and their own connections and specification, there are many cables and interface boxes available.

What's new?

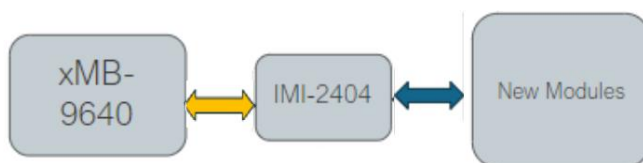
Midtronics introduces the use of the **Intelligent Module Interface or "IMI"**. This IMI is a box that provides communication from the module to the xMB-9640 in a better way than the current Interface Boxes used.

Benefits

- Simple – Only one IMI is needed instead of multiple Interface Boxes.
- Future Proof - Can read up to 24 cells, and up to 4 temperature sensors ensuring compatibility for new modules.
- User friendly - the IMI allows to guide the user through the cable connection process and needs less cables to get connected.
- Protection of equipment - IMI performs various checks before activating live voltages to prevent damage to xMB, cables and modules.
- IMI includes an InfraRed temperature sensor to also monitor the module surface temperature while resting on top of the module.

What does this mean for my xMB-9640?

- A) To service new modules using xMB-9640 cables released from April 2025 onwards, you need new IMI type cables. This includes the cables for AX EV (used in the Instar/Casper), ME EV (used in IONIQ 9), RG3 EV PE (in Genesis G80 EV) and HV LX3 (used in Palisade).



- B) For modules that were already support prior to now, you can continue using the cables and interface boxes you already have. For your convenience, you can leave the IMI attached and connect the Interface Box and specific module cables to the IMI as shown below:



Overview per situation – Do I need IMI?

Situation	Do I need IMI?	Software version needed
Modules supported by cables released prior to April 2025.	<p>No</p> <p>Not needed, but you can connect the interface box to the IMI as shown in this document to still use your interface boxes without having to disconnect the IMI every time.</p> <p>Exception: AE PHEV: to balance the 4cell module used in the AE PHEV (IONIQ Plug-in), you <u>cannot</u> use the Interface box A763 and cable A864 together with the IMI box and Software Rev N.</p> <p>Solution: once you updated to Revision N, you have to purchase a new cable (part number A877H) and connect this directly to the IMI.</p>	<ul style="list-style-type: none"> - If IMI is used: Software Revision N or higher is always needed. - If no IMI is used: Revision M, please see vehicle support matrix on the knowledge base: https://hyundaixmb9640.midtronics.com/knowledge-base/xmb-9640-vehicle-support-matrix/ - Note it's always advised to update to the latest software.
Modules supported by cables released from April 2025 onwards.	Yes	<ul style="list-style-type: none"> - Revision N or higher is mandatory for IMI to work.

The kit includes the IMI and all parts needed to use it on a Hyundai xMB-9640 previously bought without IMI support with exception of the AE PHEV.

Please see the next chapter for details.

2. Kit content

This **xMB-9640 Hyundai IMI Kit** (Part number A1071) contains everything you need to upgrade your xMB-9640 to support IMI cables. Note: in addition to this kit you will need the additional module specific cable for the vehicle your working on. Please use the knowledge base to find and order the right cable.

Item Part number	Picture
IMI Box IMI-2404 HYUNDAI	
IMI Expansion module A679 (415-000806)	
Cable – xMB-9640 to IMI A791 (130-000808)	
Cable – IMI to Interface Box A1032 (130-001187)	
Housing cover for interface cable connector 115-000935	
This instruction sheet 167-001171	

3. Upgrade steps

3.1 Hardware

Make sure your xMB-9640 is on a stable place to work on, it's clean, and the power cord is disconnected. To install the components, follow the steps below.

1. Before upgrade the xMB-9640 looks like this, where the low voltage communication cable is the orange one on the right side, highlighted below.



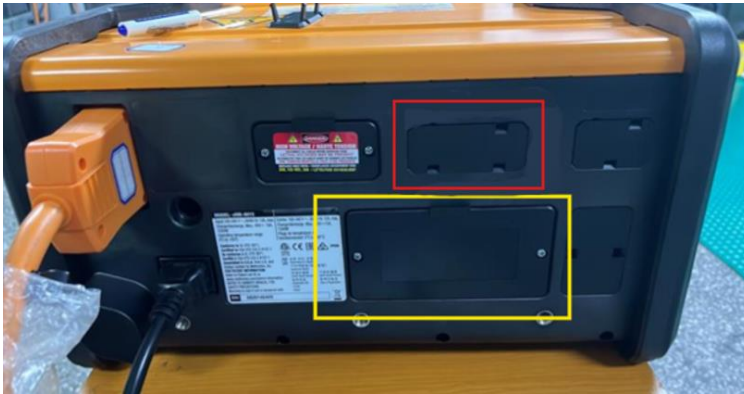
2. Pull out orange low voltage communication cable. The result is as below picture.



3. Push the new **housing cover** (115-000935) included in the kit, into the hole.



4. Verify the result is as in the **red** area in the picture below. The next step is to remove the IMI connection cover marked with the **yellow** square here below.



5. Unscrew the **IMI cover** highlighted in the yellow area above, don't discard the screws
6. Use the 2 screws to mount the **IMI Extension Module A679** (415-000806)



7. Now, connect the IMI-communication cable A791 (130-000808) onto the IMI Expansion Module. Please be careful minding the pin layout of the connector.



8. Connect the other side of this cable into the **IMI**. It does not matter in which side.
9. Hardware upgrade completed.

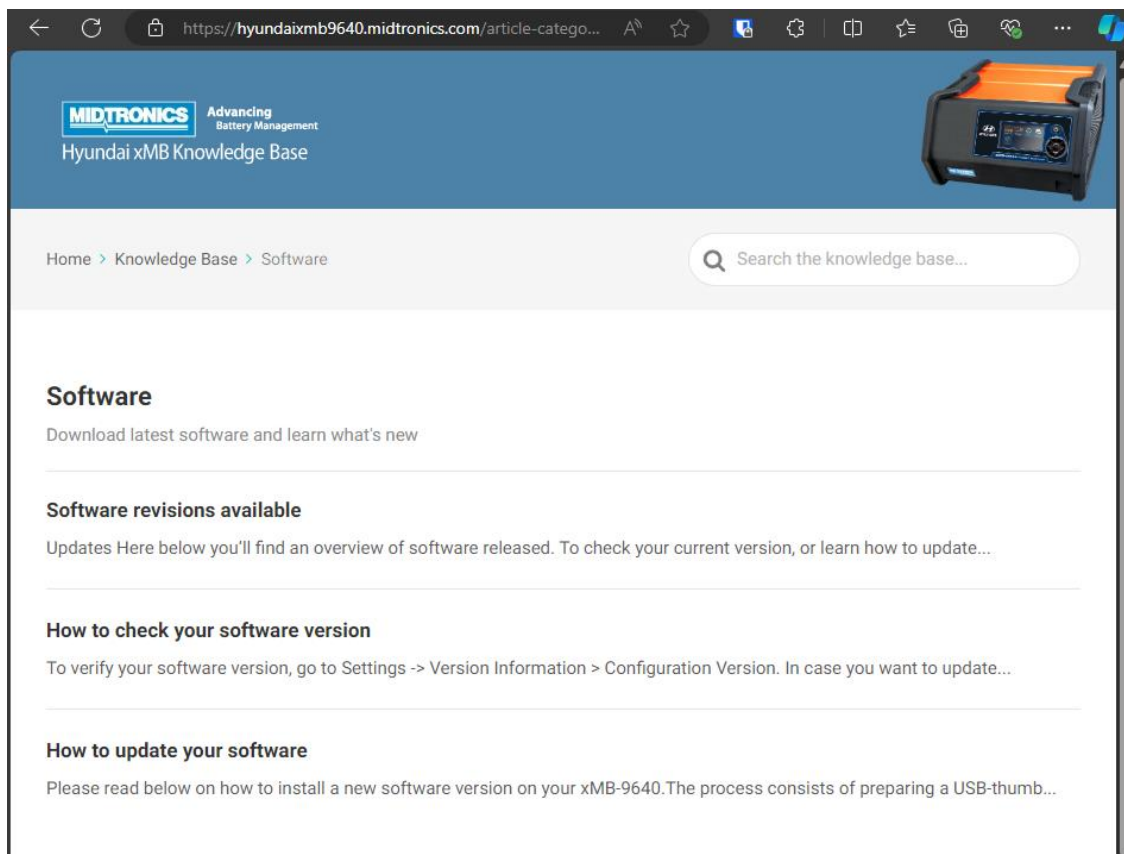
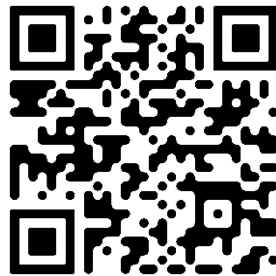
3.2 Software

To use the xMB-9640 with IMI, update your xMB-9640 to the latest software revision. The IMI will only work with **Revision N or higher**.

IMPORTANT: Only update to Software Revision N or higher if you have successfully completed the previous steps. If you were unable to complete the hardware upgrade, updating the software will make the tool unusable.

Please use the support information on the knowledge base to get the software or the guidance how to complete your software update and find more information.

Please visit: <https://hyundaixmb9640.midtronics.com/article-categories/software> or use the QR-Code below to go to the knowledge base



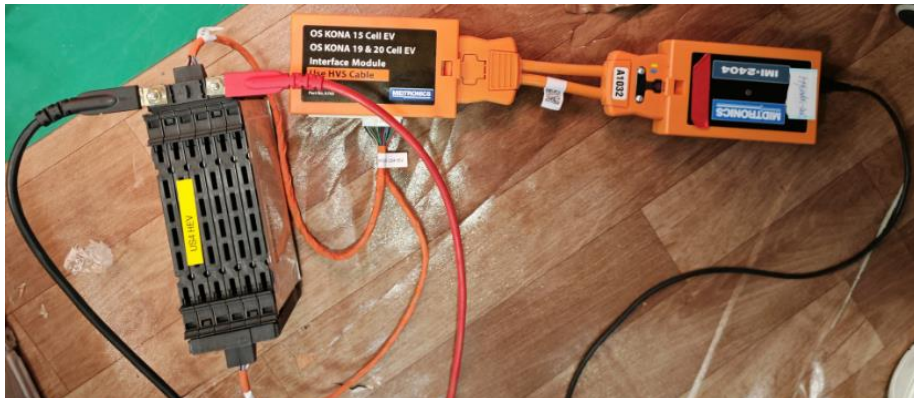
4. Setup to balance a module using your existing cables

Now, once you've installed Revision N Software, you can use both the Interface Box and the IMI as below.

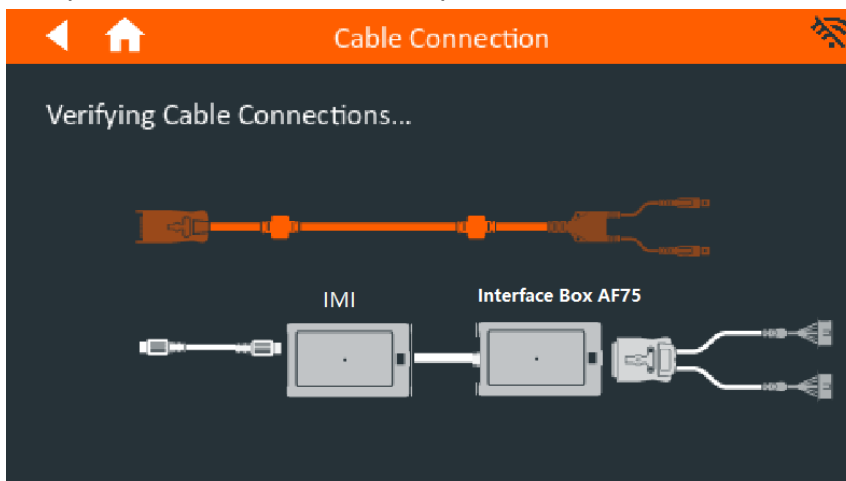
1. Connect the Interface box to IMI communication cable (**A1032**) to the other side of the IMI as shown below:



2. If you haven't done already, connect the low voltage communication cable to the other side of the IMI.
3. You can connect the low voltage communication cable and temperature cable were applicable to the Interface Box to service the module of your choice.
4. Note the Interface box remains connected to the IMI, and the IMI is connected to the xMB-9640, as the example shown here below.



5. The software its cable validation process will also guide you through the cable setup on screen, as in the example below:



5. Setup to balance a module using new IMI -type cables

For IMI type cables, you only have to connect the cable to the IMI box. Simply follow the guidance on the screen that will tell you the right part number for your module.

Midtronics will provide more IMI cables soon together with next software updates.

As of April 2025, Software revision N supports the following IMI Cables:

Vehicle Code	Description	Module	Software Revision needed:	IMI Cable Part number
RG3 EV PE	Genesis G80 EV	3P4S	N	A1104H
ME EV	IONIQ 9			
SU2i EV	CRETA EV (India)		N	
AX EV TSD	CASPER EV / INSTER EV	2P4S	N	A1023H
LX3 HEV	Pallisade	1P16S	N	A1055H

Note: in the menu other vehicles and cable may show up. Support to service these modules will be added in future software updates.

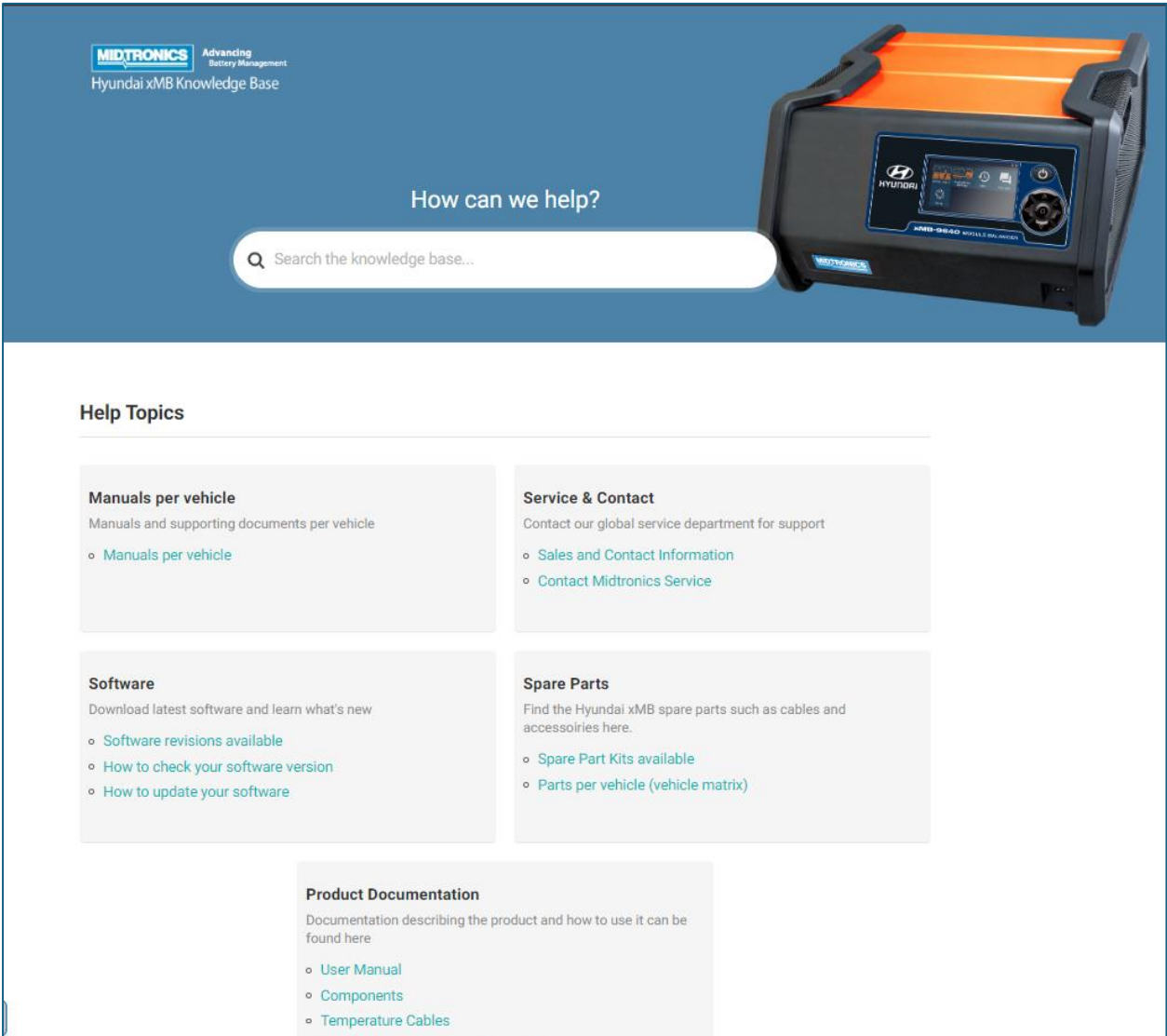
6. Support

For further support and updated information on modules supported and part numbers, please refer to the knowledge base, covering:

- Product documentation
- Spare parts overview per vehicle
- Software and update instructions
- Manuals
- Service and contact information

ONLINE KNOWLEDGE BASE:

<https://hyundaixmb9640.midtronics.com>



MIDTRONICS Advancing Battery Management
Hyundai xMB Knowledge Base

How can we help?

Search the knowledge base...

Help Topics

- Manuals per vehicle**
Manuals and supporting documents per vehicle
 - [Manuals per vehicle](#)
- Service & Contact**
Contact our global service department for support
 - [Sales and Contact Information](#)
 - [Contact Midtronics Service](#)
- Software**
Download latest software and learn what's new
 - [Software revisions available](#)
 - [How to check your software version](#)
 - [How to update your software](#)
- Spare Parts**
Find the Hyundai xMB spare parts such as cables and accessories here.
 - [Spare Part Kits available](#)
 - [Parts per vehicle \(vehicle matrix\)](#)
- Product Documentation**
Documentation describing the product and how to use it can be found here
 - [User Manual](#)
 - [Components](#)
 - [Temperature Cables](#)

PATENTS

This product is made by Midtronics, Inc., and is protected by one or more U.S. and foreign patents. For specific patent information, contact Midtronics, Inc. at +1 630 323-2800.

LIMITED WARRANTY

Midtronics products are warranted to be free of defects in materials and workmanship for a period of one (1) year from date of purchase. Midtronics will, at our option, repair or replace the unit with a re-manufactured unit. This limited warranty applies only to Midtronics products, and does not cover any other equipment, static damage, water damage, overvoltage damage, dropping the unit, or damage resulting from extraneous causes including owner misuse. Midtronics is not liable for any incidental or consequential damages for breach of this warranty. The warranty is void if owner attempts to disassemble the unit or to modify the cable assembly.

SERVICE

To obtain service, contact the Midtronics office in your region (see address block below). Have your model number and serial numbers at hand. This first step is critical as Midtronics will troubleshoot the problem(s) over the phone, and many problem(s) are resolved during this step. If the problem cannot be resolved, the Customer Service Agent will issue a Return Material Authorization (RMA) number and provide instructions on where to ship your equipment. The RMA number becomes your tracking number when communicating with Midtronics. The final step is to pack the equipment to avoid damage in transit and return the equipment freight prepaid (you pay), to the attention of the RMA number and the address provided by the Customer Service Agent.

Midtronics or its designee will repair and return the unit using the same shipping service level as received. If it is determined that the failure was caused by misuse, alteration, accident or abnormal condition of operation or handling, purchaser will be billed for the repaired product and it will be returned freight prepaid with the shipping & handling charges added to the invoice. Midtronics' products beyond the warranty period are subject to the repair charges in place at that time.

Out-of-warranty repairs carry a 6-month warranty.



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