



Hyundai xMB-9640  
Intelligent Module Interface (IMI)  
Upgrade Kit



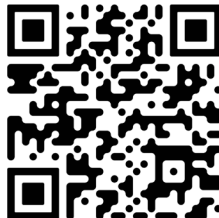
**Upgrade Instructions  
for Kit A1071**

# Contents

<b>1 – Introduction</b>	<b>3</b>
1.1 What's new?	3
1.2 Benefits	3
1.3 What does this mean for my xMB-9640?	3
<b>2 – Kit content</b>	<b>5</b>
<b>3 – Upgrade steps</b>	<b>6</b>
3.1 Hardware	6
3.2 Software	8
<b>4 – Setup to balance a module using your existing cables</b>	<b>9</b>
<b>5 – Support</b>	<b>10</b>

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

<https://hyundaixmb9640.midtronics.com>. Or use the QR code below.



# 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.

## 1.1 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.

## 1.2 Benefits

- **Simple** – Only one IMI-Box is needed instead of multiple Interface Boxes, plus less cables are needed.
- **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.

## 1.3 What does this mean for my xMB-9640?

A) To service new modules using xMB-9640 IMI cables (released from April 2025 onwards), you need new IMI type cables.



B) For modules that were already supported, you can continue using the cables and interface boxes you already have. Using the adapter cable in this kit, you can leave the IMI attached and connect the Interface Box and specific module cables as shown below:









**Overview per situation – Do I need IMI?**

Situation	Do I need IMI?	Software version needed
<p>Modules supported by cables released prior to April 2025.</p>	<p>No, you do not need IMI, but you can connect your interface boxes to the IMI as shown in this document to use your interface boxes without having to disconnect the IMI Box every time.</p> <p>Exception: AE PHEV: Once upgraded to IMI to balance the 4cell module used in the AE PHEV (IONIQ Plug-in), you cannot use the Interface box A763 and cable A864 any longer since this is not compatible.</p> <p>There are IMI Cables available. Please see the knowledge base for more information.</p>	<ul style="list-style-type: none"> <li>- If IMI hardware is used: Software Revision O or higher is always needed.</li> <li>- <b>Important: If you do not work with the IMI hardware in this kit, you must work with Software Revision M or older.</b></li> </ul>
<p>Modules supported by cables released from April 2025 onwards.</p>	<p>Yes. You need the IMI Box plus IMI cables.</p>	<ul style="list-style-type: none"> <li>- Revision O or higher is mandatory for IMI to work.</li> </ul>

This kit includes the IMI and other parts needed to upgrade a Hyundai xMB-9640 to a Hyundai xMB-9640 that can connect to the IMI.

## 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
<b>IMI Box</b> IMI-2404 HYUNDAI	
<b>IMI Expansion module</b> A679 (415-000806)	
<b>Cable – xMB-9640 to IMI</b> A791 (130-000808)	
<b>Cable – IMI to Interface Box</b> A1032 (130-001187)	
<b>Housing cover for interface cable connector</b> 115-000935	
<b>USB Stick for software update</b> 494-000230	
<b>Thumb screws and cable clips</b> 142-000150, 115-001033, 115-001034 These thumb screws and clips are not necessary to work with IMI, but provide a more easy way for attaching the HV cables.	
<b>This instruction sheet</b> 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.



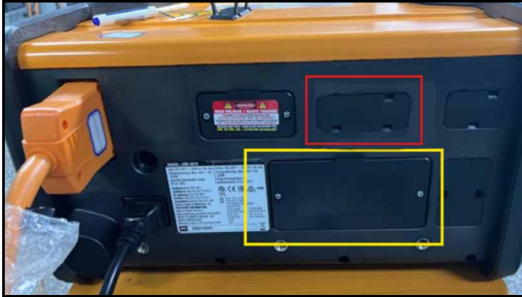
2. Pull out orange low voltage communication cable. The result is as below picture.



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



- 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.



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



- Now, connect the IMI-communication cable A791 (130-000808) onto the IMI Expansion Module in the back of your xMB-9640. Please be careful minding the pin layout of the connector.



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

### 3.2 Software

The IMI will only work with **Revision O or higher**.

**IMPORTANT NOTICES:**

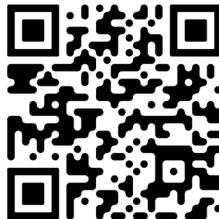
**Only update your software to Revision O or higher if you have successfully completed the previous steps. If you were unable to complete the hardware upgrade, updating the software will make you xMB-9640 unusable.**

The USB stick included in this Kit contains the latest software at the time this kit was released.

Please use the knowledge base where the latest software is always available as well as the guidance how to complete your software update and find more information.

The Software update process is the same as for earlier software updates. **However, it is very important that after you have installed the new software, you need to perform a factory reset before using the tool.** This will ensure your tool is correctly setup to for the IMI and Wi-Fi related features.

Please visit: <https://hyundaixmb9640.midtronics.com> or use the QR-Code below to go to the knowledge base for instructions on the **Software update** and other information.



## 4 – Setup to balance a module using existing cables

Once you've upgraded the hardware and installed the Software, you can use both the Interface Box and the IMI as below.

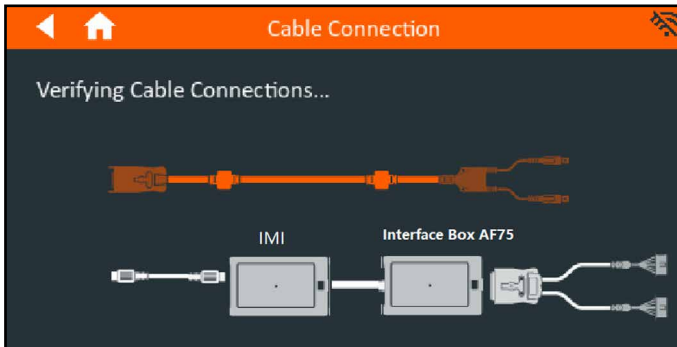
1. Before starting, please carefully check the pins. If they're not deformed, connect the Interface box to IMI communication cable (**A1032**) to the other side of the IMI as shown.



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 – 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
- Latest Software and update instructions
- Manuals
- Service and contact information

**ONLINE KNOWLEDGE BASE:**  
<https://hyundaixmb9640.midtronics.com>



How can we help?



**Help Topics**

<p><b>Cables</b></p> <p>Find the Hyundai xMB spare parts such as cables and accessories here.</p> <ul style="list-style-type: none"><li>• <a href="#">Vehicle Coverage Overview</a></li><li>• <a href="#">Cable Kits available</a></li></ul>	<p><b>Service &amp; Contact</b></p> <p>Contact our global service department for support</p> <ul style="list-style-type: none"><li>• <a href="#">Sales and Contact Information</a></li><li>• <a href="#">Contact Midtronics Service</a></li></ul>
<p><b>Software</b></p> <p>Download latest software and learn what's new</p> <ul style="list-style-type: none"><li>• <a href="#">Software revisions available</a></li><li>• <a href="#">How to check your software version</a></li><li>• <a href="#">How to update your software</a></li></ul>	<p><b>Product Documentation</b></p> <p>Documentation describing the product and how to use it can be found here</p> <ul style="list-style-type: none"><li>• <a href="#">User Manual</a></li><li>• <a href="#">Components</a></li><li>• <a href="#">Instructions per vehicle</a></li><li>• <a href="#">Temperature Cables</a></li><li>• <a href="#">Low Voltage Communication Cables</a></li></ul>



## 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.



[www.midtronics.com](http://www.midtronics.com)

### Corporate Headquarters

Willowbrook, IL USA

Phone: 1.630.323.2800

Canadian Inquiries

Toll Free: +1 1 866 592 8052

### Asia/Pacific (excluding China)

Contact Corporate Headquarters

Phone: +1.630.323.2800

### Midtronics b.v.

European Headquarters

Houten, The Netherlands

Serving Europe, Africa, the Middle East, and The Netherlands

Phone: +31 306 868 150

### Midtronics China

China Operations

Shenzhen, China

Phone: +86 755 2374 1010

### Midtronics India

Navi Mumbai, India

Phone: +91 22 2756 4103/1513