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# **HID Mercury™**

## **MR52-S3B Reader Interface Integration Guide and FAQs**

**PLT-06439, A.0**  
**March 2022**



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## Contacts

For technical support, please visit: <https://support.hidglobal.com>.

## What's new

Date	Description	Revision
March 2022	Initial release.	A.0

A complete list of revisions is available in [Revision history](#).

## 1.1 Motivation

The current supply chain climate, in particular the availability of silicon, have driven an alternate construction of the Mercury MR52 serial input/output (SIO) module. This guide details steps OEM software providers should take to integrate with the new MR52 variant.

## 1.2 Identification

The MR52-S3B is visually identifiable by reading the “MR52-S3B” model on the product label. Given this variant is only an alternate construction to the MR52-S3 and not marketed as a substantially different board, the PCB color will remain red and the board will be marketed as “just another” series 3 board.

## 1.3 Compatibility

The MR52-S3B is a form, fit, and function replacement equivalent to the MR52-S3, with the following exceptions:

### 1.3.1 Hardware identifier

The hardware identifier electronic value for the MR52-S3B, which is reported up through the SDK to the OEM partner software, will be different compared to the MR52-S3. The table below details the difference in data that is received from the SDK. For further information refer to the **TypeSioComm: reports SIO communication status (2:x)** section of the **HID Mercury SDK Specification (PLT-04553)**.

Version	model*	nHardwareId*
MR52-S3B	84 (MR52)	225
MR52-S3	84 (MR52)	211

\*Field name returned in the TypeSioComm reply.

### 1.3.2 Firmware binary

The firmware image for the MR52-S3B will be different compared to the MR52-S3. The SIO firmware update command and workflow facilitated by the SDK will remain as-is. Therefore the OEM will be required to implement logic to download the correct image, as is currently done when determining the image to download to one of the many input/output modules, such as the MR50-S3, MR52-S3, MR16IN-S3, MR16OUT-S3, MR62e, etc.

The minimum firmware version for the MR52-S3B is 3.22.0, and all input/output module firmware will increment from this new baseline.

## 1.4 FAQs

### **Will the MR52-S3B be manufactured in tandem with the MR52-S3?**

As components become available, the MR52-S3 boards will be manufactured. Once released, and as components to build become available, both MR52-S3B and MR52-S3 boards will be manufactured in tandem for a cut-over period. Once the MR52-S3B and its operations are efficiently running, HID will cut-over and manufacture ONLY the MR52-S3B.

### **Will both MR52-S3B and MR52-S3 firmware be maintained indefinitely?**

Yes, by rule, firmware will release for BOTH targets indefinitely until such time that the series 3 boards are replaced with a future generation of product (for example, series 2 to series 3 migration). Exception releases for a specific target may be needed, either to address defects that exist on only one target, or in other non-standard scenarios. That said, SIO firmware versions will maintain parity.

### **Will I have to order the MR52-S3B or MR52-S3 board by specific part number?**

Yes, the HID order entry system will require that the correct version of board is entered on sales orders and purchase orders. HID customer service will reach out to coordinate details with customers once sales order lines to ship are identified.

### **Will the MR52-S3B have all the latest hardware changes that went into the MR52-S3 board?**

Yes, the MR52-S3B board is based on the latest MR52-S3 design, with the only modifications being changes that are required to work around silicone supply constraints.

### **What happens if you download MR52-S3B firmware to an MR52-S3 board or vice versa?**

No issue will occur if the incorrect firmware image is downloaded to a board. When this occurs, the board will detect the incorrect firmware image and will revert back to the previous version running on the board.

## Revision history

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