

**Title:** Grounding of non-Touch LCD Modules

**Type of Notification:** Design Change **Updated:** n/a

**Affected Areas:** ESD Protection **Superseded By:** n/a

**Original Notification Date:** 07 Apr 2015 **Supersedes:** n/a

**Scope:** Power  BOM  Design  PCB  Mechanical  Software

**Summary:**

On products with LCD displays without touch capabilities, the chassis of the LCD component will be grounded to PCB ground in future revisions to improve immunity to ESD events.

**Affected Products\*:**

Family	LCD Option(s)	Variant(s)	Version(s)	PCB Revision(s)	Serial Number(s)
SIM115	All	All no-touch	v2.0	PCB-000019-02	All within Version + PCB Revision scope
SIM225	All	All no-touch	V1.1	PCB-000010-02	All within Version + PCB Revision scope
SIM231	All	All no-touch	v2.0	PCB-000020-02	All within Version + PCB Revision scope
SIM535	All	All no-touch	v2.1	PCB-000018-03	All within Version + PCB Revision scope
			v2.2	PCB-000018-04	All within Version + PCB Revision scope

\*See Identifying Affected Products (below) for more information.

**Detail/Root Cause**

The metal chassis of the LCD module on the affected products is not connected to any electrical signal; in environments where electrostatic discharge to the face of the LCD component is of significant concern to the OEM, it is recommended that the OEM connect the metal chassis of the LCD module via conductive tape or equivalent in the OEM’s bezel design to a system ground directly in order to dissipate the charge away from the electronics of the affected product. In OEM designs where this is grounding is problematic the affected product can be more susceptible to discharges as manifested by system reboots and other typical ESD behavior as the discharge flows from the LCD component into the affected product’s circuitry. Note that resistive touch products have ESD protection built into the touch controller and do not have the same issues as non-touch products.

**Workarounds and Software Implications**

There are no software considerations for this PCN.

It is recommended that the OEM connect the metal chassis of the LCD module via conductive tape or equivalent in the OEM’s bezel design to a system ground directly in order to dissipate the charge away from the electronics of the affected product.

**Plans**

New revisions of the affected products will incorporate a connection from the LCD metal chassis to the products’ ground signal.

**Anticipated Products with Change Implemented**

Family	LCD Option(s)	Variant(s)	Version(s)	PCB Revision(s)	Serial Number(s)
SIM115	All	All no-touch	v2.1	PCB-000019-03	All within Version + PCB Revision scope
SIM231	All	All no-touch	v2.1	PCB-000020-03	All within Version + PCB Revision scope
SIM535	All	All no-touch	v2.3	PCB-000018-05	All within Version + PCB Revision scope

### Identifying Affected Products:

Affected products can be identified in the following ways:

- PCB silk screen with product and version number
- PCB silk screen of PCB revision
- Through the product serial number, which encodes the product identification and version, and can be accessed:
  - at runtime by OEM custom software as described in the product’s Technical Reference Manual (TRM),
  - at runtime in SHIP GUIs,
  - using SHIPTide, and,
  - from an attached controller using the SHIPBridge protocol.
- The Manufacturing ID (MID) 2D matrix barcode on all units can be submitted to Serious for determination

### For Further Information

Contact your local [Serious manufacturers’ representative](#) or [Contact Serious](#).

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