



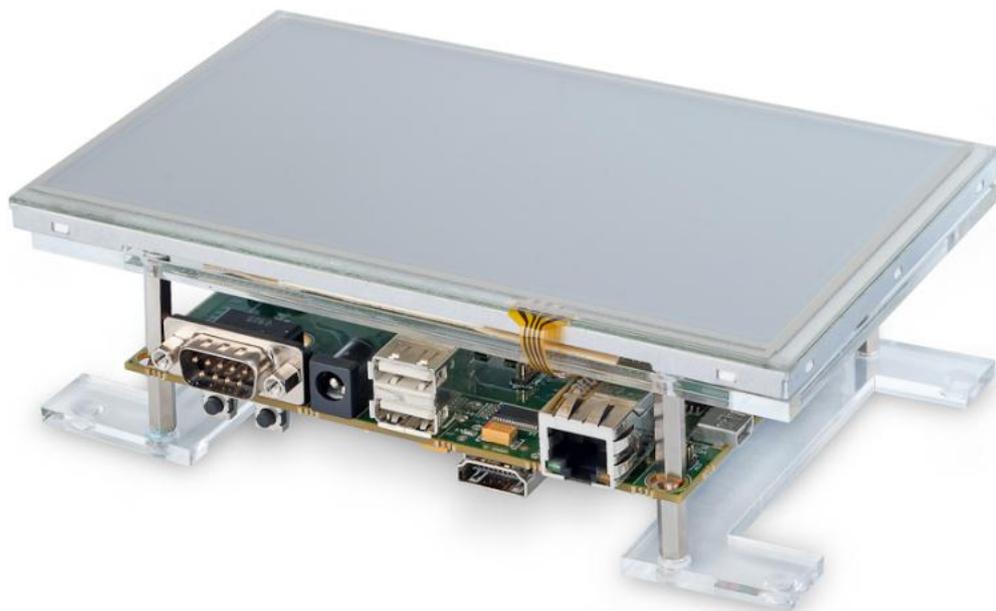
VARISCITE LTD.

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VAR-DVK-OM44 v0.91

## Quick Start Guide

Rev: 1.0



VARISCITE LTD.

## VAR-DVK-OM44 Quick Start Guide

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## Document Revision History

Revision	Date	Notes
1.0	1/11/2011	Initial

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# 1 Introduction

This quick start guide provides initial information about how to use the VAR-DVK-OM44 development kit. This guide covers the DVK connectors overview, connecting the DVK to a PC and initial operation with the supplied boot devices.

More comprehensive information can be found in the following documents and resources:

1. VAR-OM44CustomBoard data sheet :  
<http://variscite.com/products/item/81-var-om44customboard><sup>[1]</sup>
2. VAR-SOM-OM44 Data sheet  
<http://variscite.com/products/item/76-var-som-om44-ti-omap4460> <sup>[1]</sup>
3. Software documentation:  
<http://www.variwiki.com/index.php?title=Category:VAR-SOM-OM44>

[1] Under the Documentation Tab

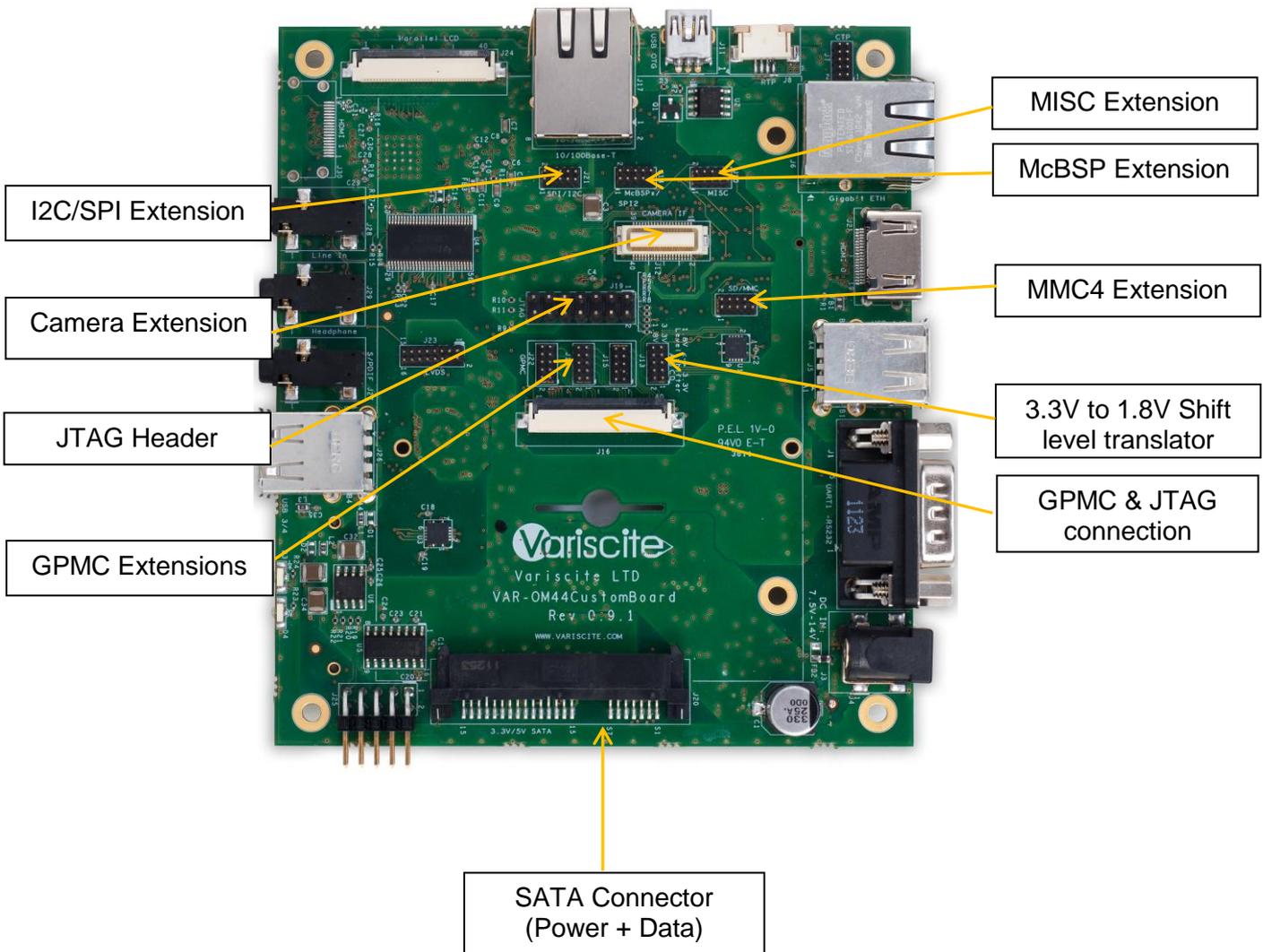
## 2 Package content

The VAR-DVK-OM44 kit contains the following items:

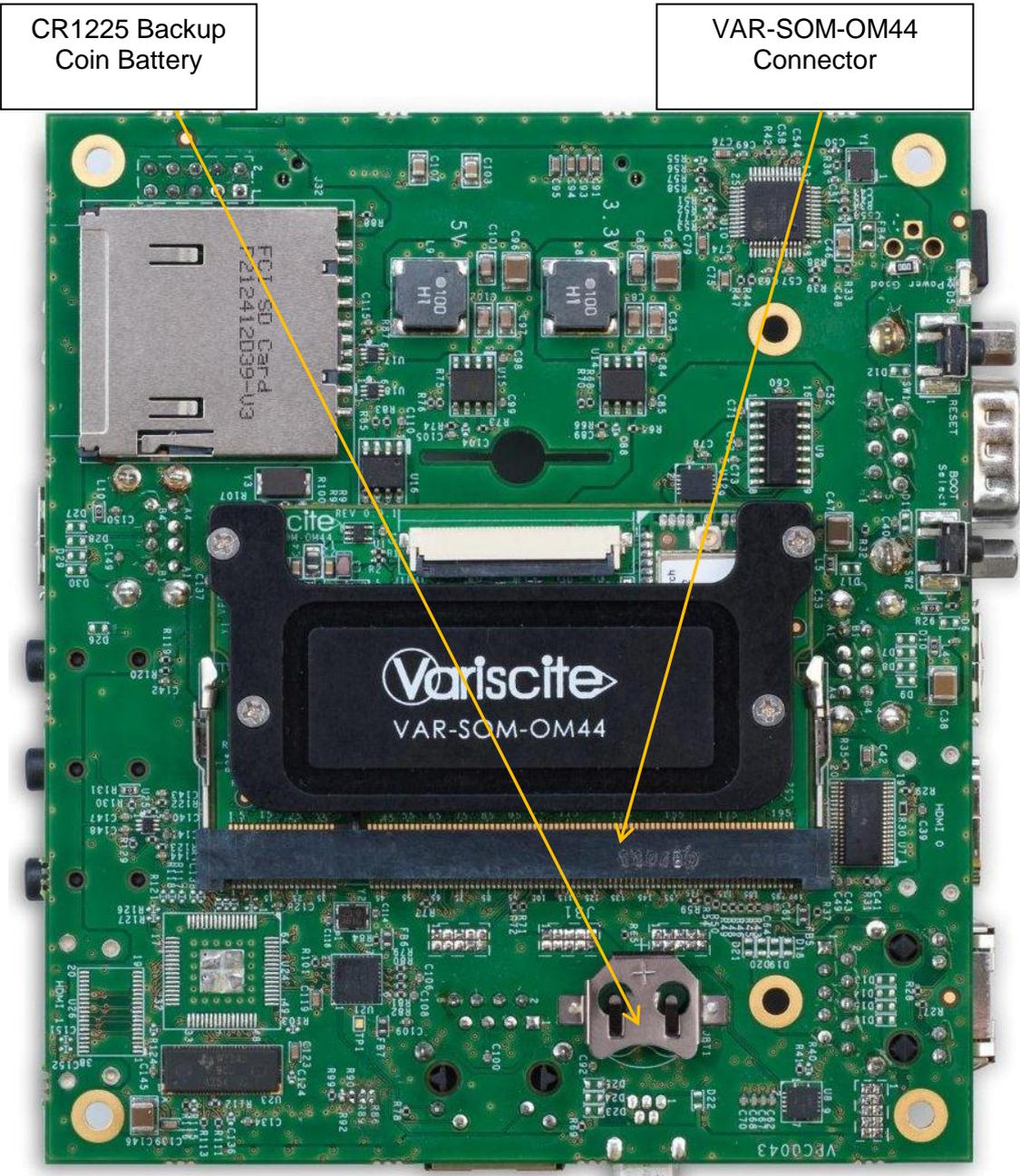
- VAR-DVK-OM44
  - VAR-SOM-OM44
  - VAR-OM44CustomBoard
  - 7" LCD Display with touch panel
- 110V-240V input AC wall mount adapter
- RS232, 10 pin header to DB-9, Serial cable
- Ethernet Cable
- USB Type A to Min B Cable
- Heat Spreader for the VAR-SOM-OM44
- Accessories bag , containing:
  - Heat Spreader assembly accessories
    - 4xM2 , 8 mm screws
    - 4xM2 nuts
    - 4xPlastic rings
    - Thermal pad
- Flat cable jumper , for exposing JTAG & GPMC interfaces
- Android boot microSD , inserted to the VAR-SOM-OM44
- Linux boot microSD card
- VAR-SOM-OM44 Software and Documentation CD.

## 3 Get to know the VAR-OM44CustomBoard

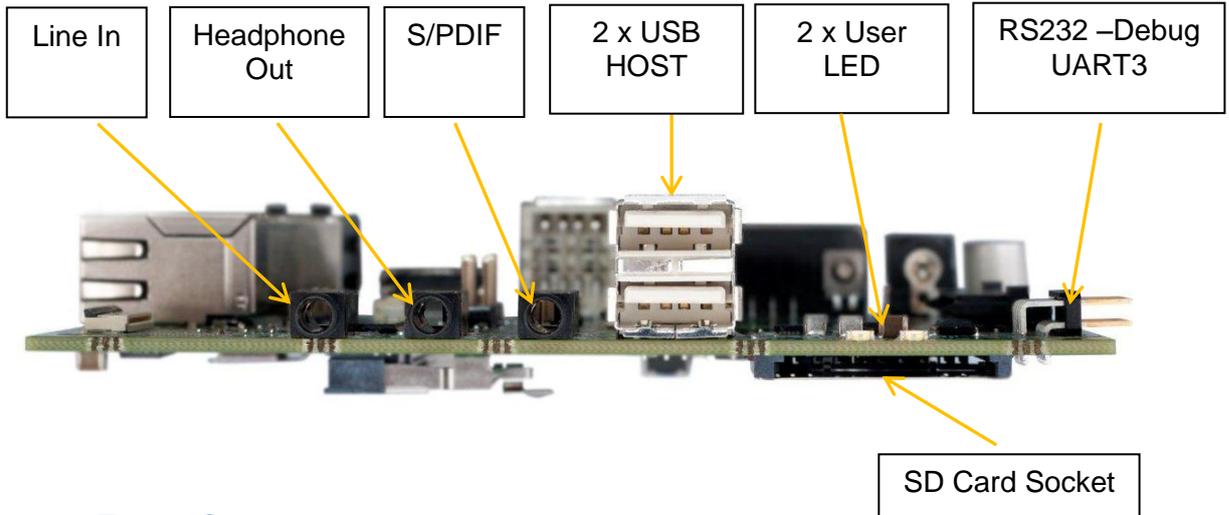
### 3.1 Top Connectors



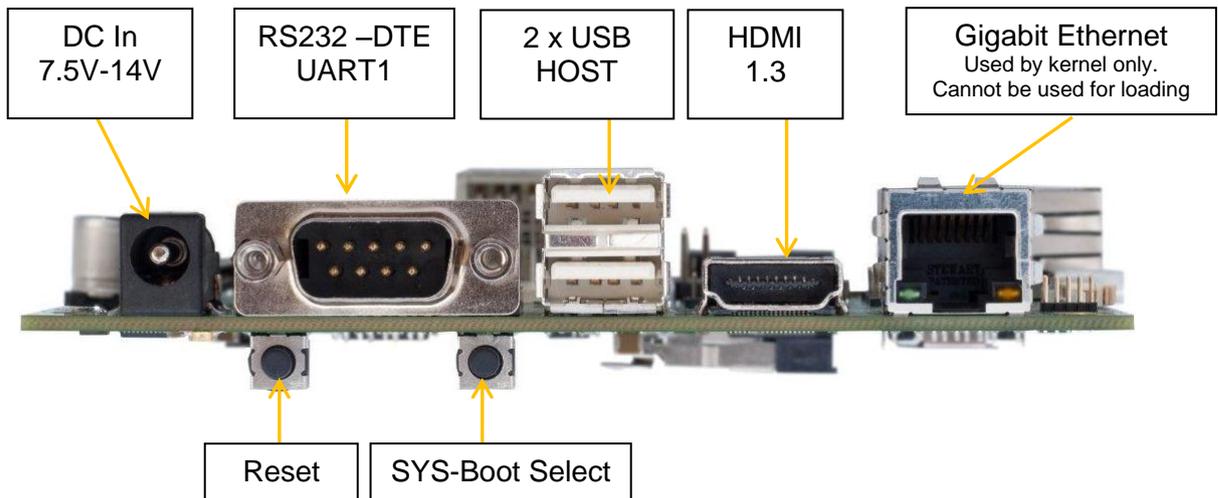
### 3.2 Bottom Connectors



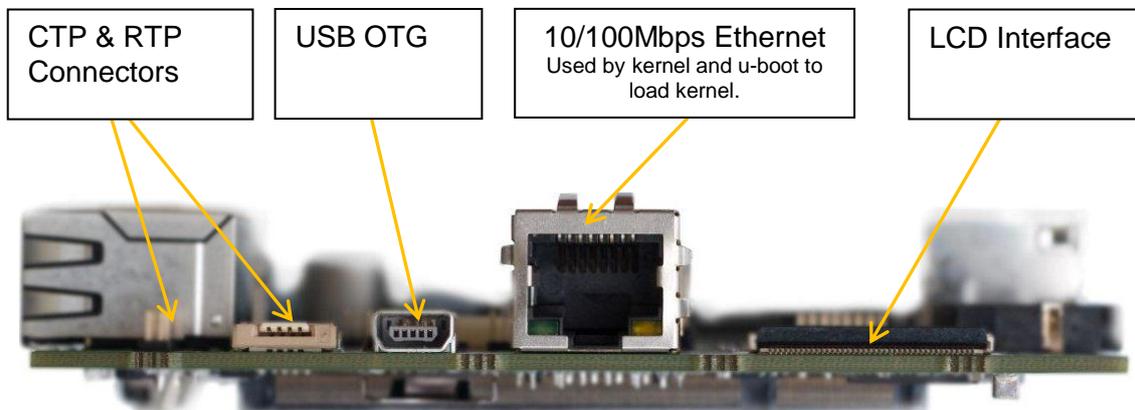
### 3.3 Front Connectors



### 3.4 Rear Connectors



### 3.5 Side Connectors



## 4 Initial Operation

### 4.1 Default Android microSD inserted

1. Plug the RS232 cable between J25 (market with silk "UART3- RS232") and a PC serial interface (DTE).
2. Set PC terminal Software parameters
  - Baud Rate: 115200
  - Data: 8 Bit
  - Parity: None
  - Stop bit: 1
  - Flow Control: None
3. Plug the wall adapter's pin into the VAR-OM44CustomBoard power jack (J3) and to a 120VAC~240VAC power source.
4. Boot messages are printed within PC's terminal window.
5. Variscite Logo appears within 10 seconds, followed by a full file system boot.
6. Use SW2, "SYS Boot" push button in order to back navigate on the Android GUI.

### 4.2 Boot with Linux file system.

1. Disconnect system's power.
2. Remove the VAR-SOM-OM44.
3. On VAR-SOM-OM44 bottom side, remove microSD card and insert the Android SD card (see picture below).
4. Return the VAR-SOM-OM44 to the socket.
5. Re-connect power source.
6. Boot messages are printed within PC's terminal window.
7. Variscite Logo appears within 10 seconds, followed by a full file system boot.
8. Select 'root' user.
9. Password is not required.

VAR-SOM-OM44 Bottom View

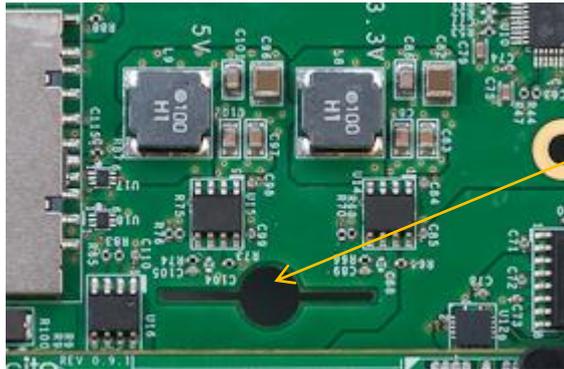


microSD socket.  
Slide to the right in  
order to replace  
memory card.

## 5 Using JTAG & GPMC Expansion Headers

In order to use VAR-OM44CustomBoard JTAG &GPMC expansion headers, a 40 pin FFC/FPC flat cable should be connected between the VAR-SOM-OM44 and the VAR-OM44CustomBoard. A compatible cable can be found in the attached accessory bag

1. Make sure that VAR-SOM-OM44 is attached to the VAR-OM44 CustomBoard
2. Pull VAR-SOM-OM44 J1 and VAR-OM44Customboard J16 dark plastic locks up.
3. Place the FFC/FPC 40 pin cable; it can be assembled at any orientation as both connectors are double sided.

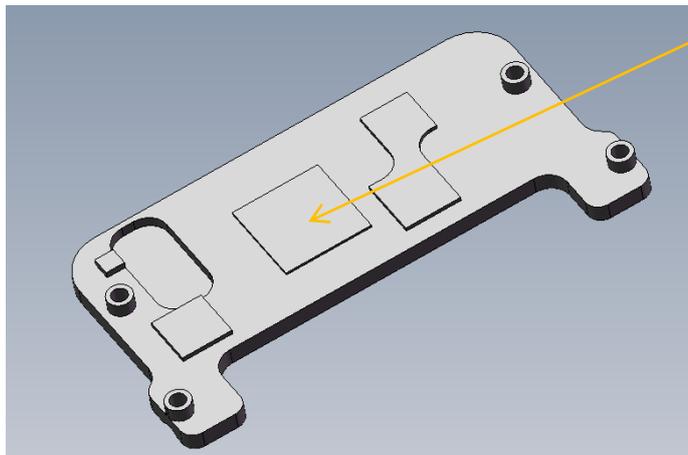


Slot for JTAG &  
GPMC FFC/FPC  
cable insertion

4. Re-Lock VAR-SOM-OM44 J1 and VAR-OM44Customboard J11 after placing the cable.

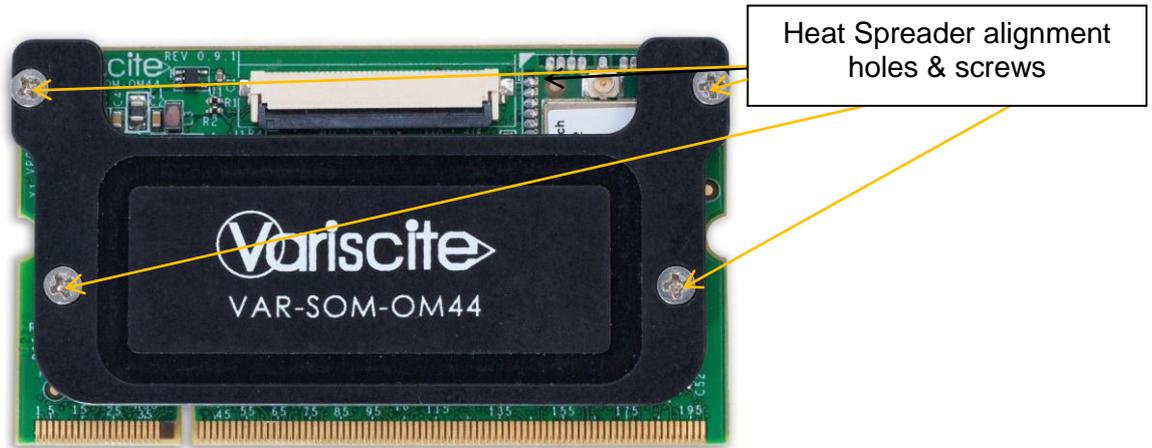
## 6 Connecting the Heat Spreader

1. Disconnect system's power.
2. Remove the VAR-SOM-OM44 from the VAR-OM44CustomBoard.
3. Attach the 12x12mm thermal pad on the internal side of the heat spreader (see below). Make sure that the two plastic covers, on both sides of thermal pads are removed before attaching the pad.



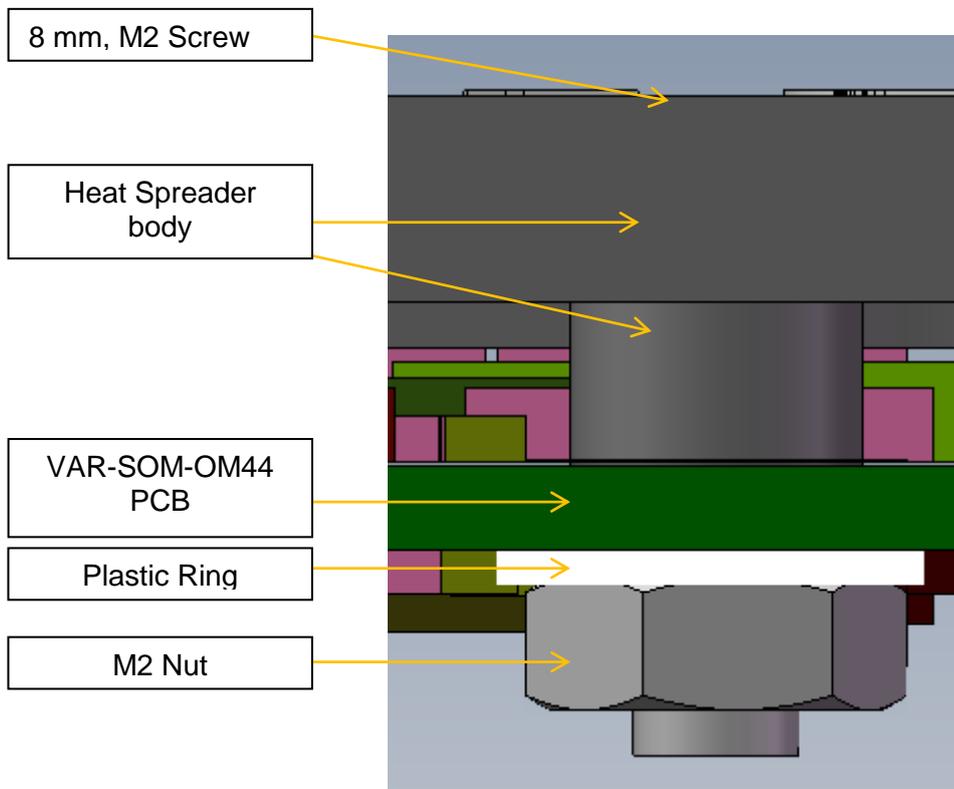
Place for 12x12mm  
thermal pad.

4. Assemble the heat spreader on top side of the VAR-SOM-OM44. Use the mechanical holes in order to align the heat spreader to VAR-SOM-OM44 PCB.



5. Insert the M2 screws from the heat spreader top direction.
6. Place plastic rings on bottom side. (see drawing below)
7. Tight the head spreader to the VAR-SOM-OM44 using the supplied nuts.

VAR-SOM-OM44 Heat Spreader screws assembly order



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