MBS Unit -N
Mast-mounted Base Station
806-870 MHz

Internal Photographs

Code: D148N01PT
Version: 1.0

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Document Maintenance

Edition	Date	Author	Description
01.00	05/01/2018	Carlos Casanova Juan Luis Romera	Initial release

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1. INTERNAL STRUCTURE

The internal structure of the MBS Unit -N can be spotted by opening the enclosure, as shown in the figure below.
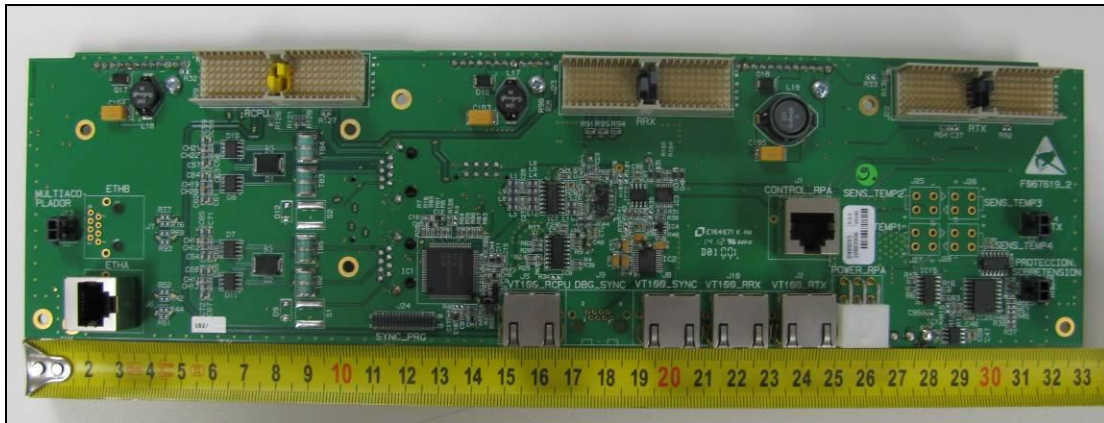

AC/DC converter (220/110 VAC – 24 VDC)   DC/DC converter (24 VDC – 48 VDC)   Overvoltage protection   LSC module (Local Site Controller)   Backplane and Ethernet Switch

RPA module   RTX module   RRX module   Duplexer   RCPU module   Multicoupler
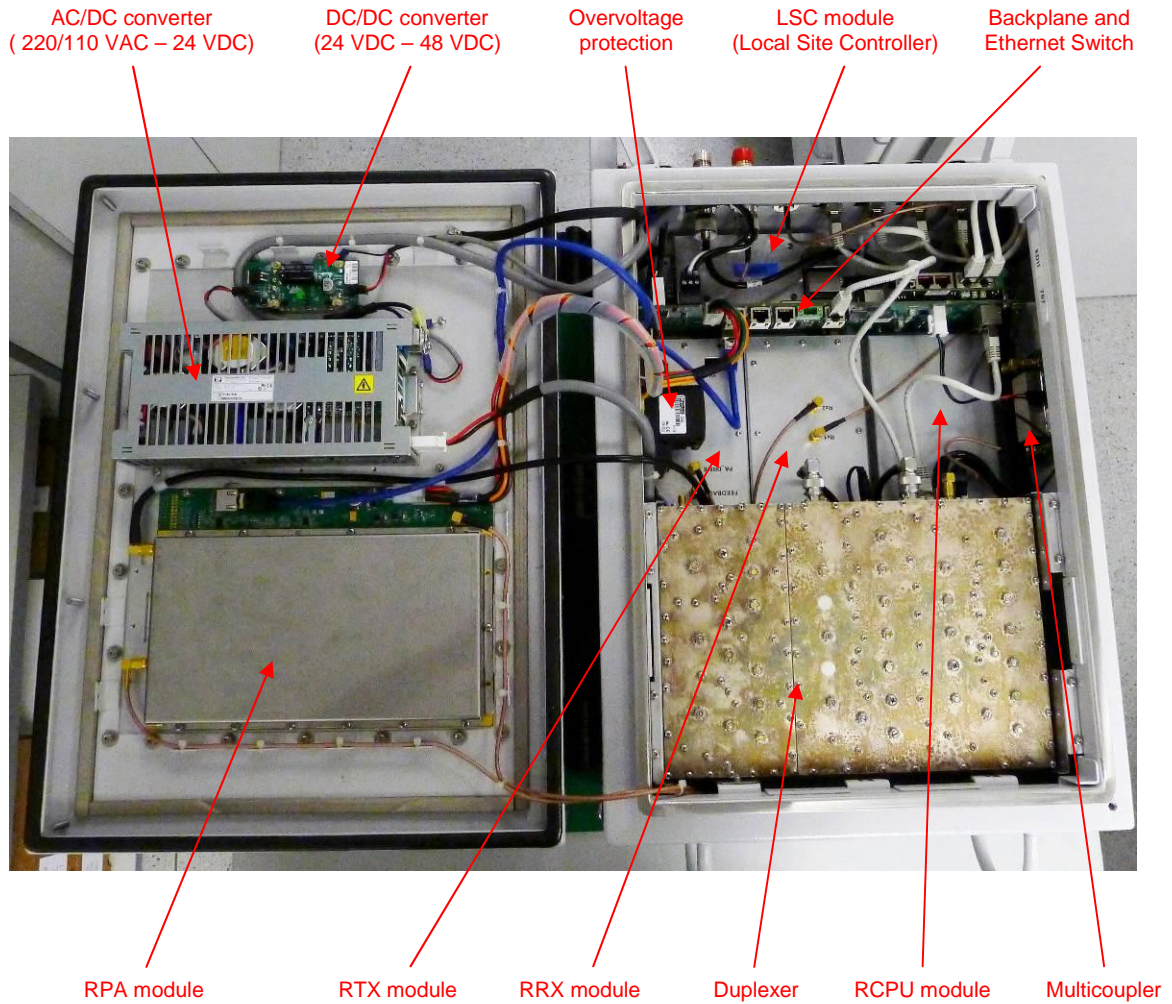
2. MBS UNIT -N EXPLODING VIEW
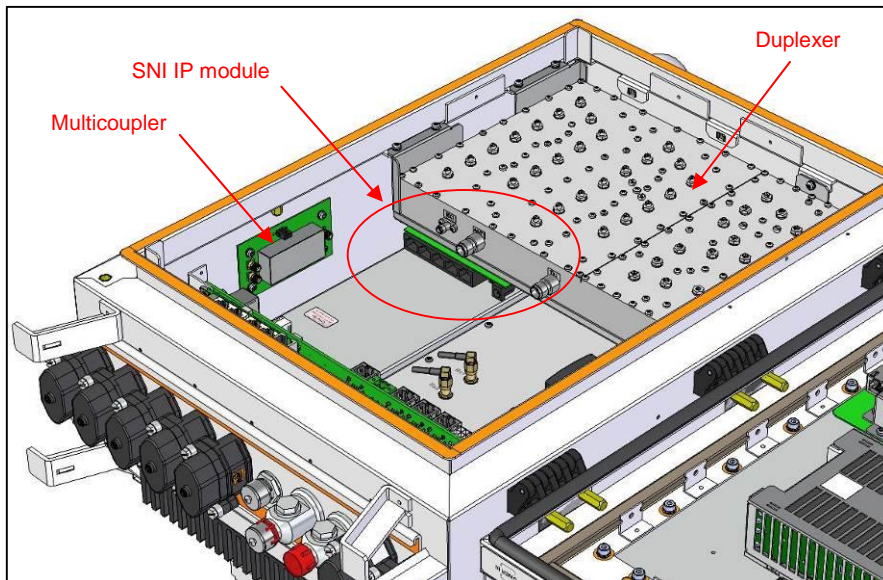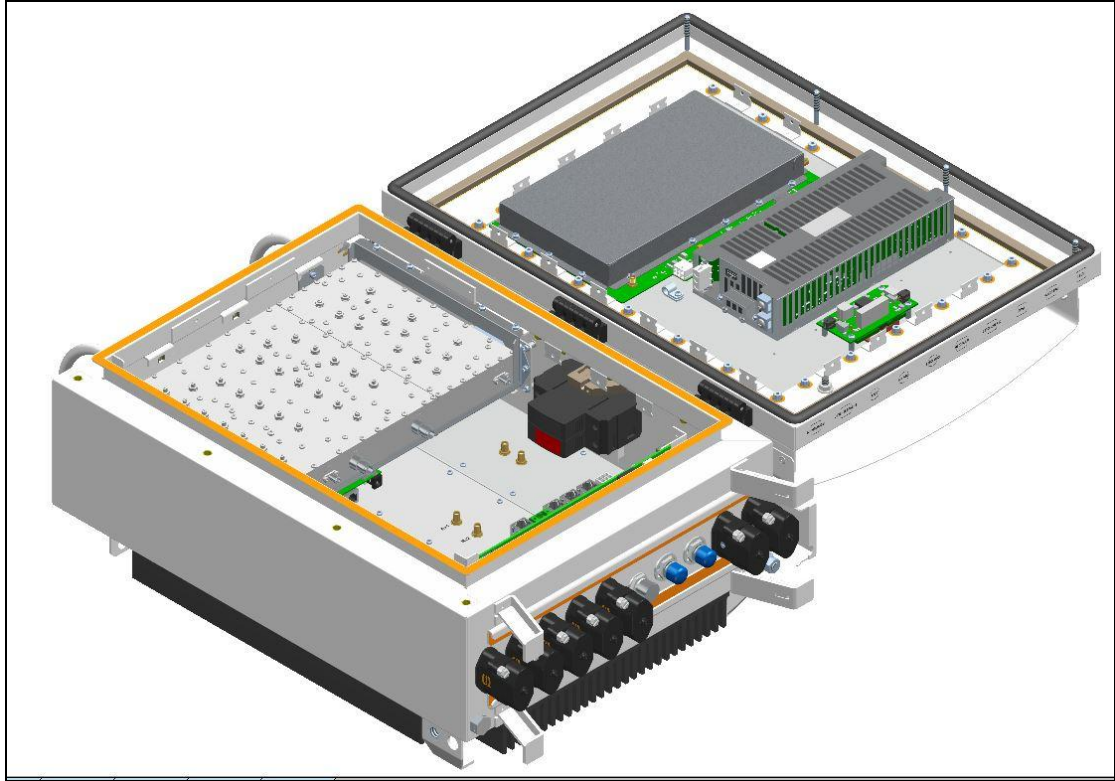
3. MBS UNIT -N BACKPLANE

3.1 UPPER SIDE OF THE BACKPLANE PCB

3.2 LOWER SIDE OF THE BACKPLANE PCB

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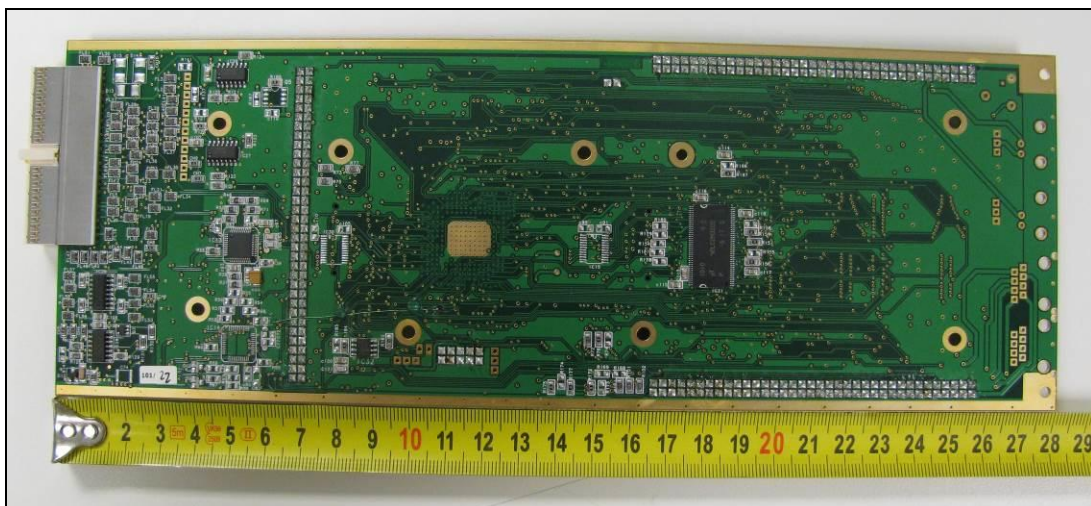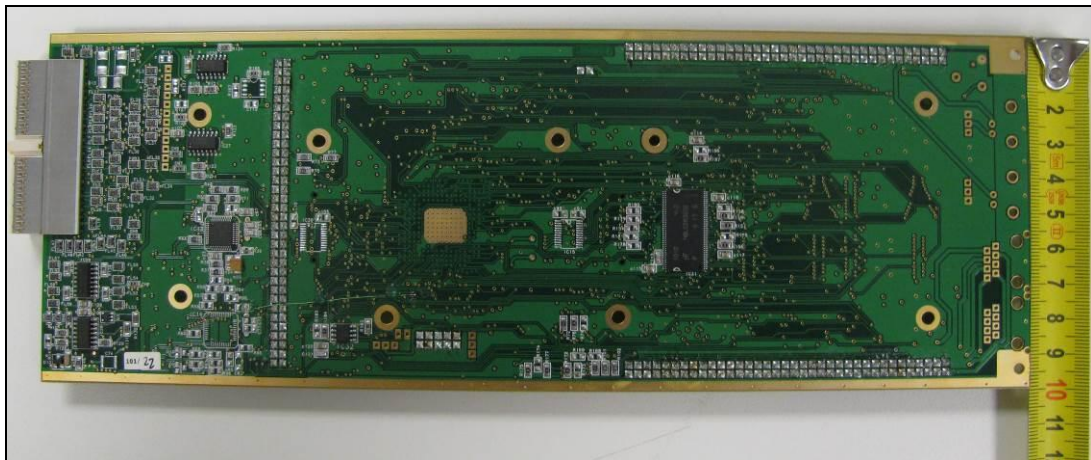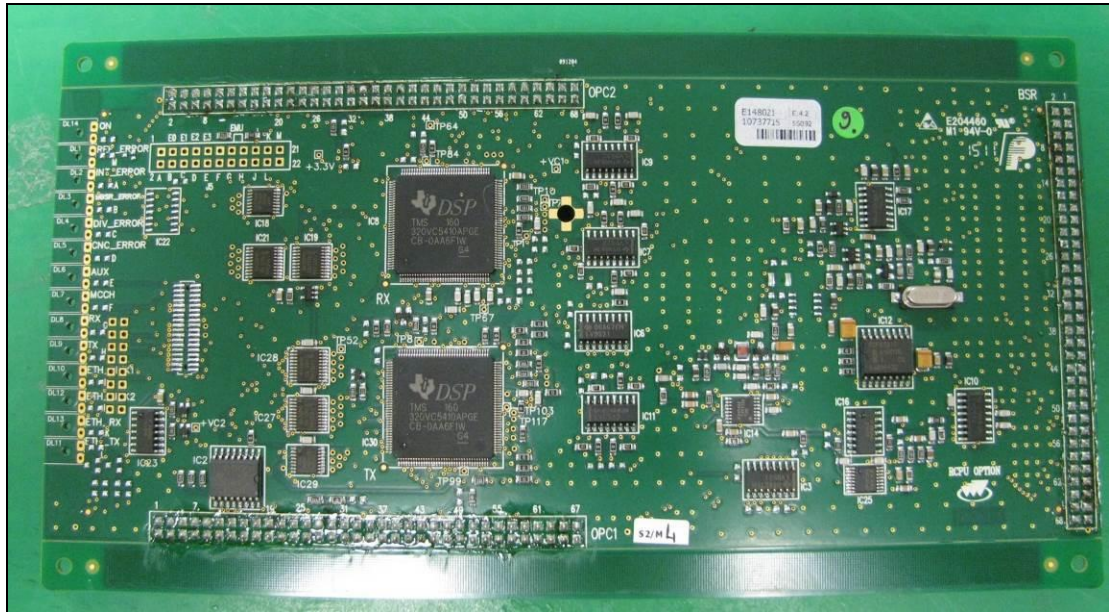# 4. MBS UNIT -N RCPU MODULE

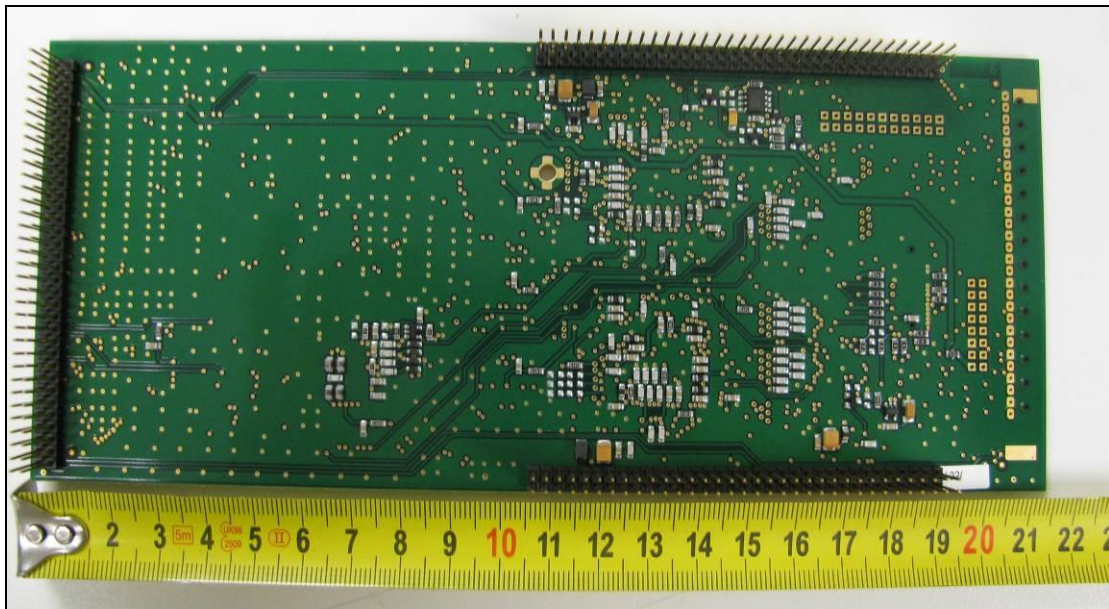## 4.1 UPPER SIDE OF THE MNI PCB
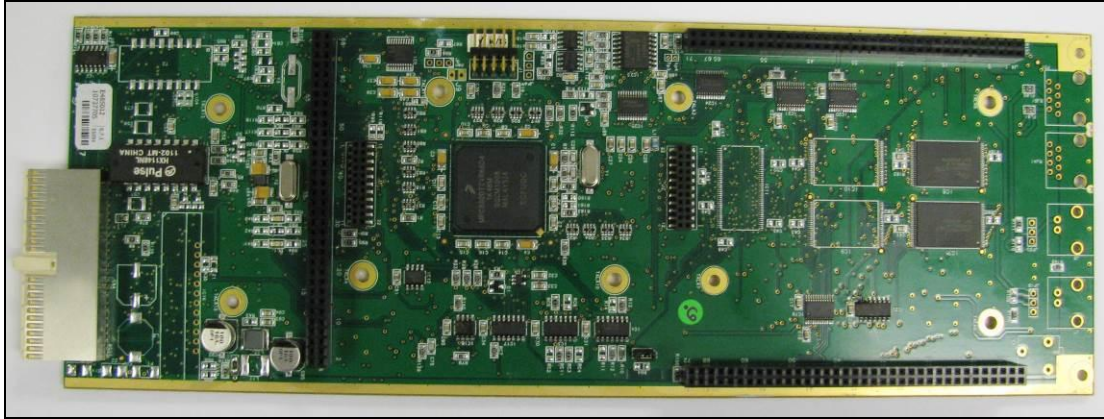
4.2 LOWER SIDE OF THE MNI PCB

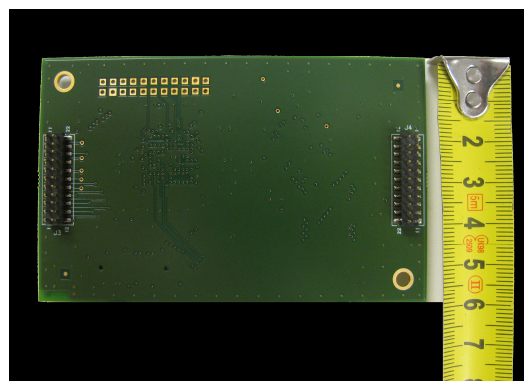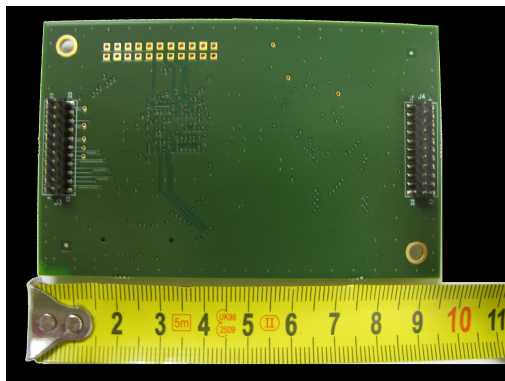## 4.3   UPPER SIDE OF THE RCPU PCB

4.4   LOWER SIDE OF THE RCPU PCB

4.5 UPPER SIDE OF THE ENCRYPTION PCB

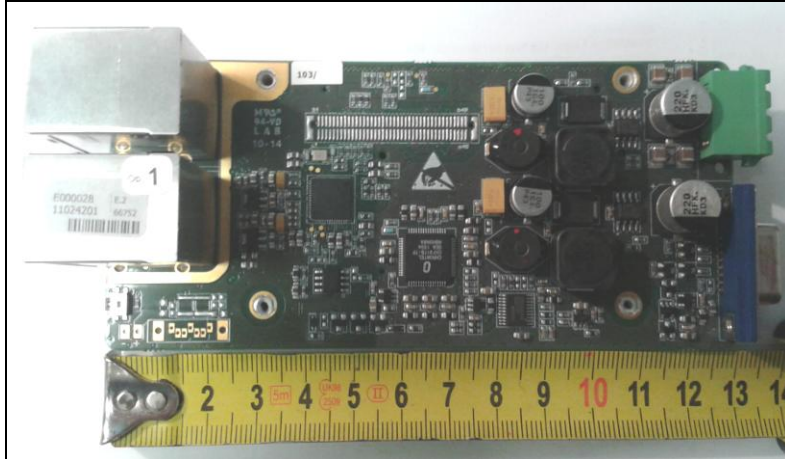

4.6 LOWER SIDE OF THE ENCRYPTION PCB
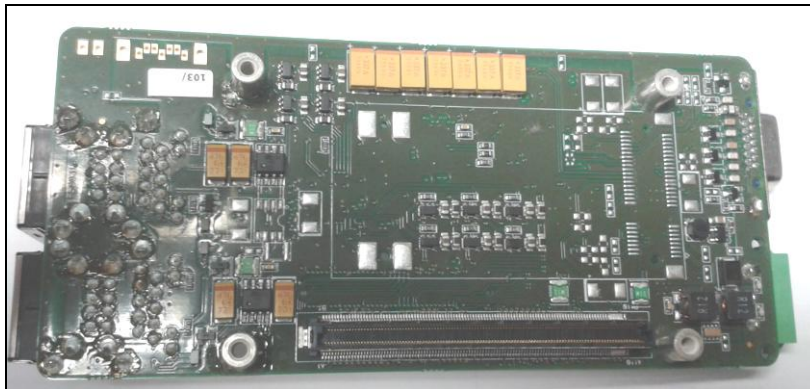
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5.   MBS UNIT -N LSC MODULE

5.1   UPPER SIDE OF THE LSC CARRIER PCB

5.2   LOWER SIDE OF THE LSC CARRIER PCB

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5.3 UPPER SIDE OF THE NANOX-TCR PCB

5.4 LOWER SIDE OF THE NANOX-TCR PCB

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6. MBS UNIT -N RPA MODULE
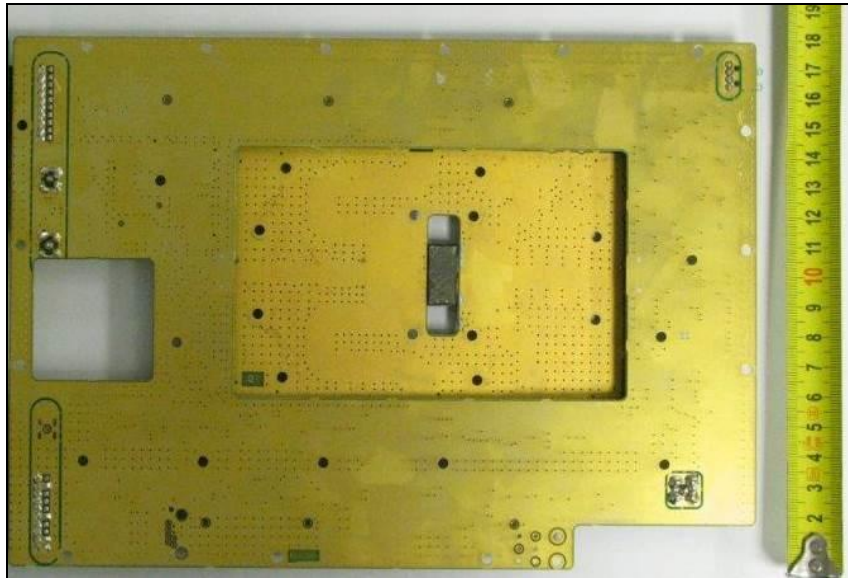
6.1 UPPER SIDE OF THE RPA PCB

The pictures below show the RPA PCB (Repeater Power Amplifier) with and without shielding lids, respectively. A chain of three amplifying stages is integrated on this board. The first and the second ones correspond to drivers that are located on the left side of the PCB. The third stage integrates the power amplifier and is built up on an ancillary PCB named PA PCB.

The RPA PCB provides a central void surrounded by a number of pads on which the PA PCB is laid and soldered. Then it is shielded with a metallic enclosure that is also soldered to the RPA board.

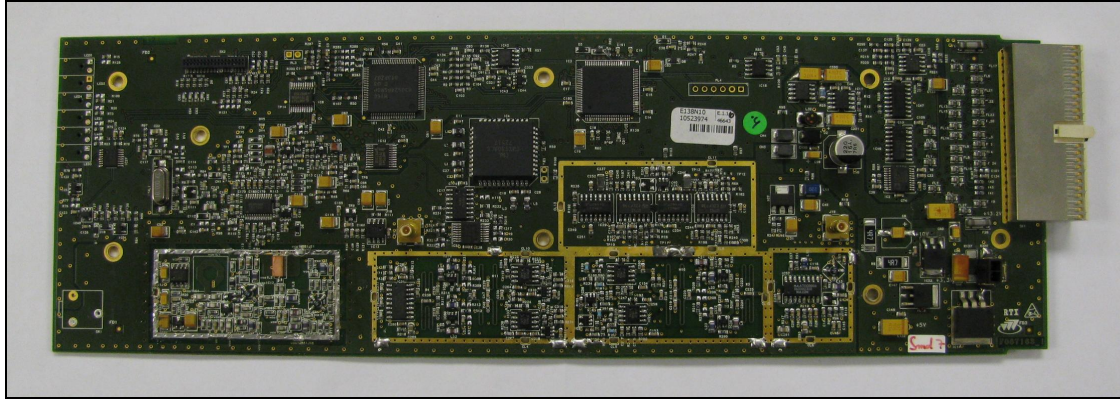The enclosure on the right side is intended to shield the harmonic filter.
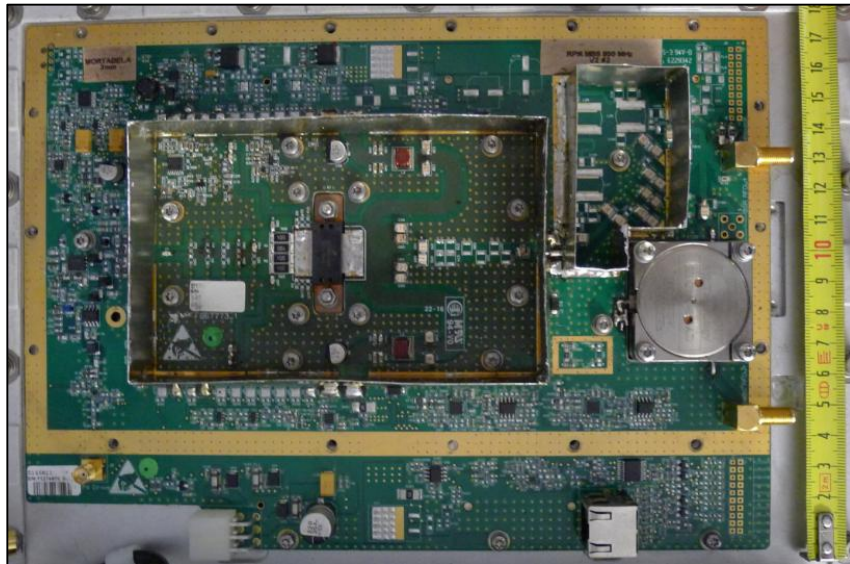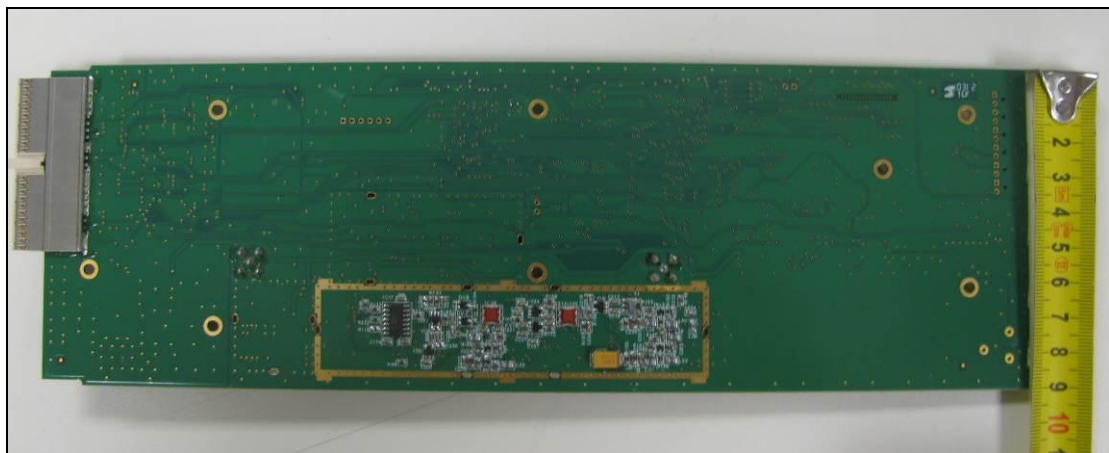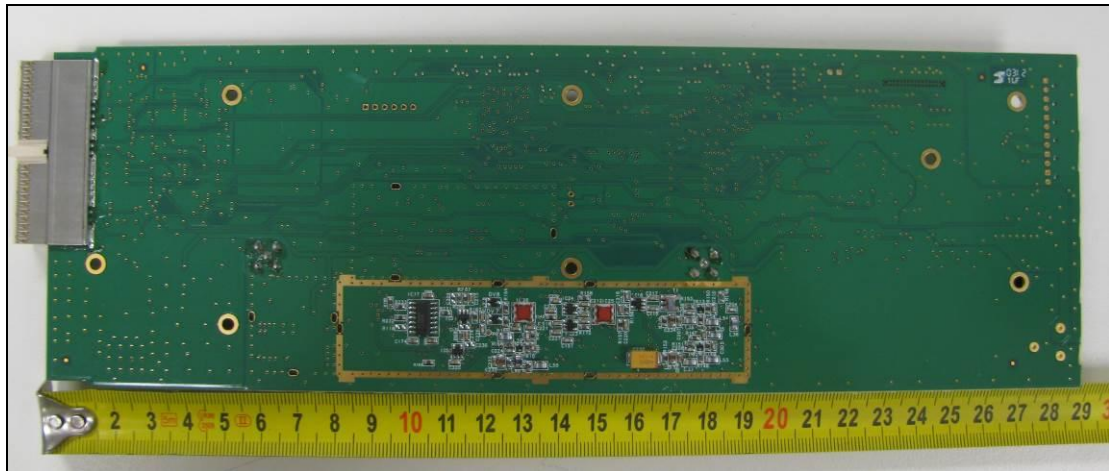
6.2 LOWER SIDE OF THE RPA PCB

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7. MBS UNIT -N RTX MODULE
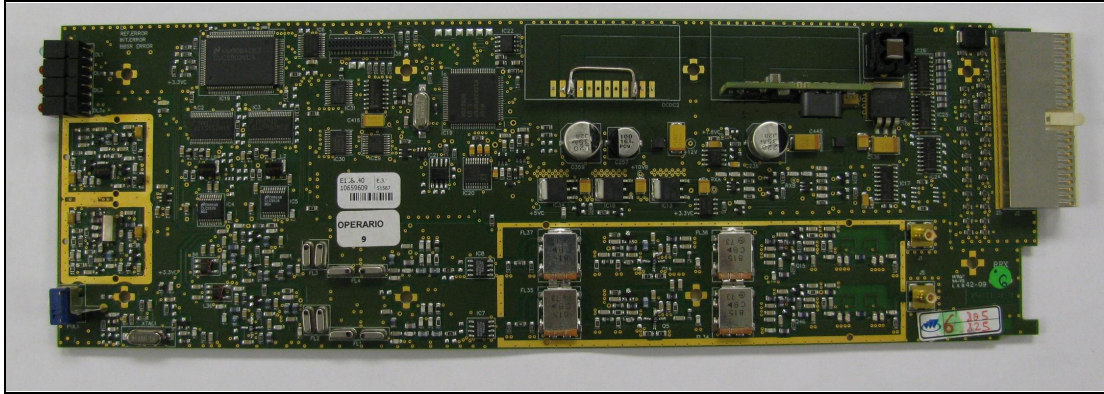
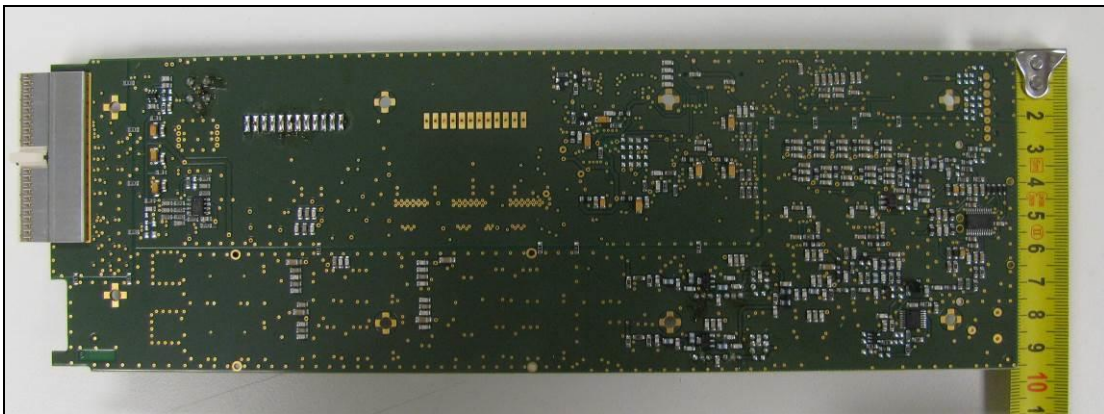## 7.1 UPPER SIDE OF THE RTX PCB
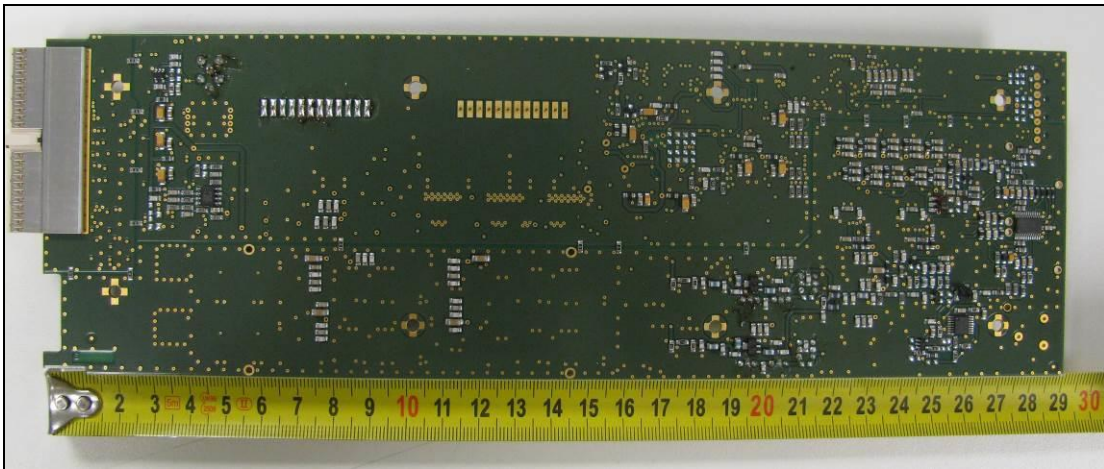

7.2 LOWER SIDE OF THE RTX PCB

8. MBS UNIT -N RRX MODULE

8.1 UPPER SIDE OF THE RRX PCB

8.2 LOWER SIDE OF THE RRX PCB

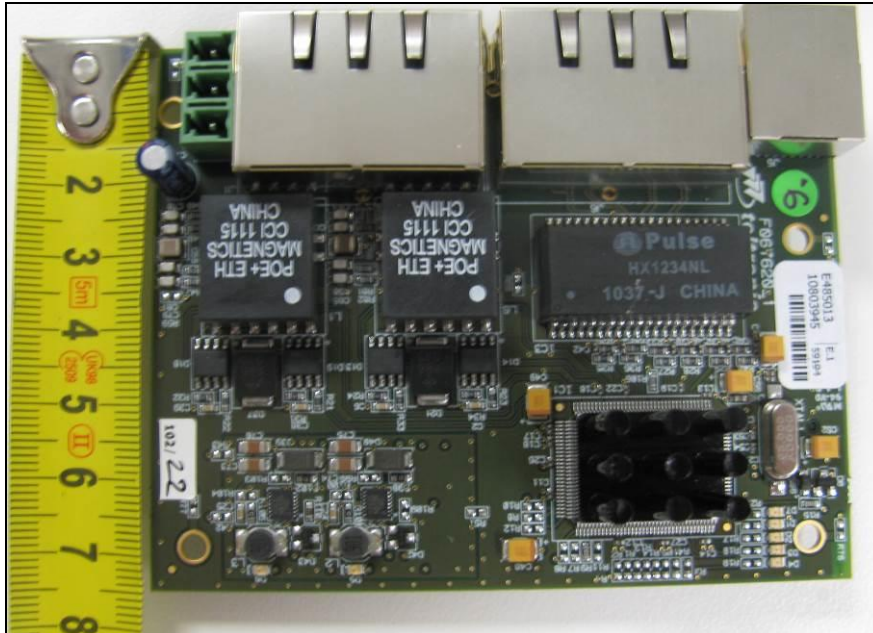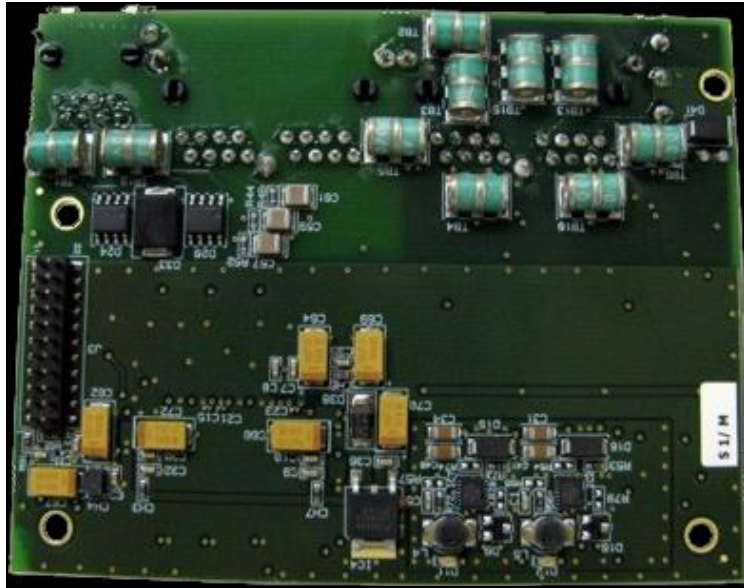CONFIDENTIAL

9. ETHERNET SWITCH
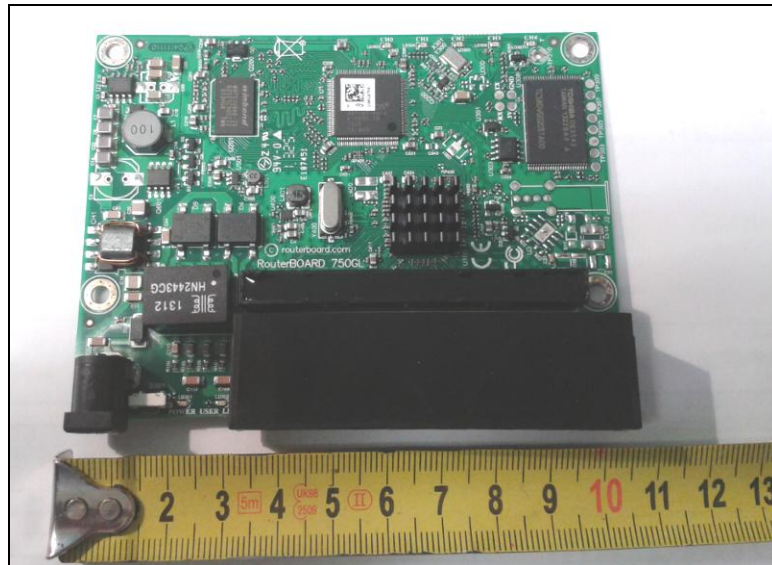
9.1 UPPER SIDE OF THE ETHERNET SWITCH PCB
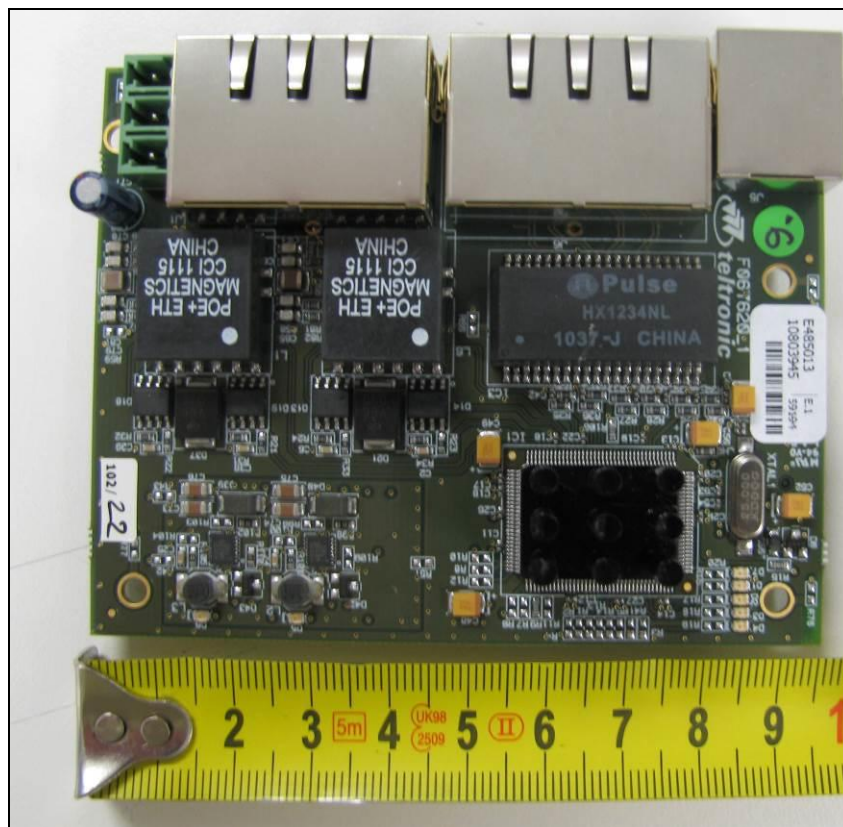
9.2   LOWER SIDE OF THE ETHERNET SWITCH PCB

10. SNI IP

The SNI IP router has a single board fitted inside, as shown in the photographs below. This module is provided by a third party.

10.1 UPPER SIDE OF THE SNI IP PCB

10.2 LOWER SIDE OF THE SNI IP PCB

11. MULTICOUPLER

11.1 UPPER SIDE OF THE MULTICOUPLER PCB

11.2 LOWER SIDE OF THE MULTICOUPLER PCB

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