

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

Internal Photographs

**Code: D148N01PT
Version: 1.0**

PowerTrunk Inc. is the subsidiary of Teltronic S.A.U. responsible for business development, distribution and customer support for Teltronic's Land Mobile Radio products in North America. The company is headquartered in New Jersey. Teltronic S.A.U. distributes the same products for Land Mobile Radio under different trademarks and brand names in other regions of the world.

Disclaimer

Although every reasonable effort has been made to ensure the accuracy of the information contained herein and in any other referred document, this should not be construed as a commitment on the part of Teltronic S.A.U. and/or PowerTrunk Inc., and the liability of Teltronic S.A.U. and/or PowerTrunk Inc. for any errors and omissions shall be limited to the correction of such errors and omissions. Teltronic S.A.U. and/or PowerTrunk Inc. welcomes any comment as a way to improve any delivered documentation.

The information contained herein has been prepared for the use of appropriately trained personnel, and it is intended for the purpose of the agreement under which the information is submitted. Any party using or relying upon this information assumes full responsibility for such use and in no event shall Teltronic S.A.U. and/or PowerTrunk Inc. be liable to anyone for special, collateral, incidental, or consequential damages in connection with or arising out of the use of this information.

The information or statements given in these documents regarding the suitability, capacity or performance of the mentioned hardware or software products cannot be considered binding but shall be defined in the agreement made between Teltronic S.A.U. and/or PowerTrunk Inc. and the customer.

Teltronic S.A.U. and/or PowerTrunk Inc. reserves the right to revise these documents and to make changes to their content at any time without prior notification.

Copyright

No part of the information contained herein and in the other referred documents may be copied, distributed or transmitted by any means to any other party without prior written permission of Teltronic S.A.U. and/or PowerTrunk Inc. The distribution of this document may be also covered by NDA (non-disclosure agreement) between Teltronic S.A.U. and/or PowerTrunk Inc. and the receiver.

Please also note that part of these contents even may be covered by patent rights.

This document, the referred documents and the described product are considered protected by copyright according to the applicable laws.

PowerTrunk and the PowerTrunk logo are registered trademarks of Teltronic S.A.U.

Copyright © PowerTrunk Inc. All rights reserved.

Document Maintenance

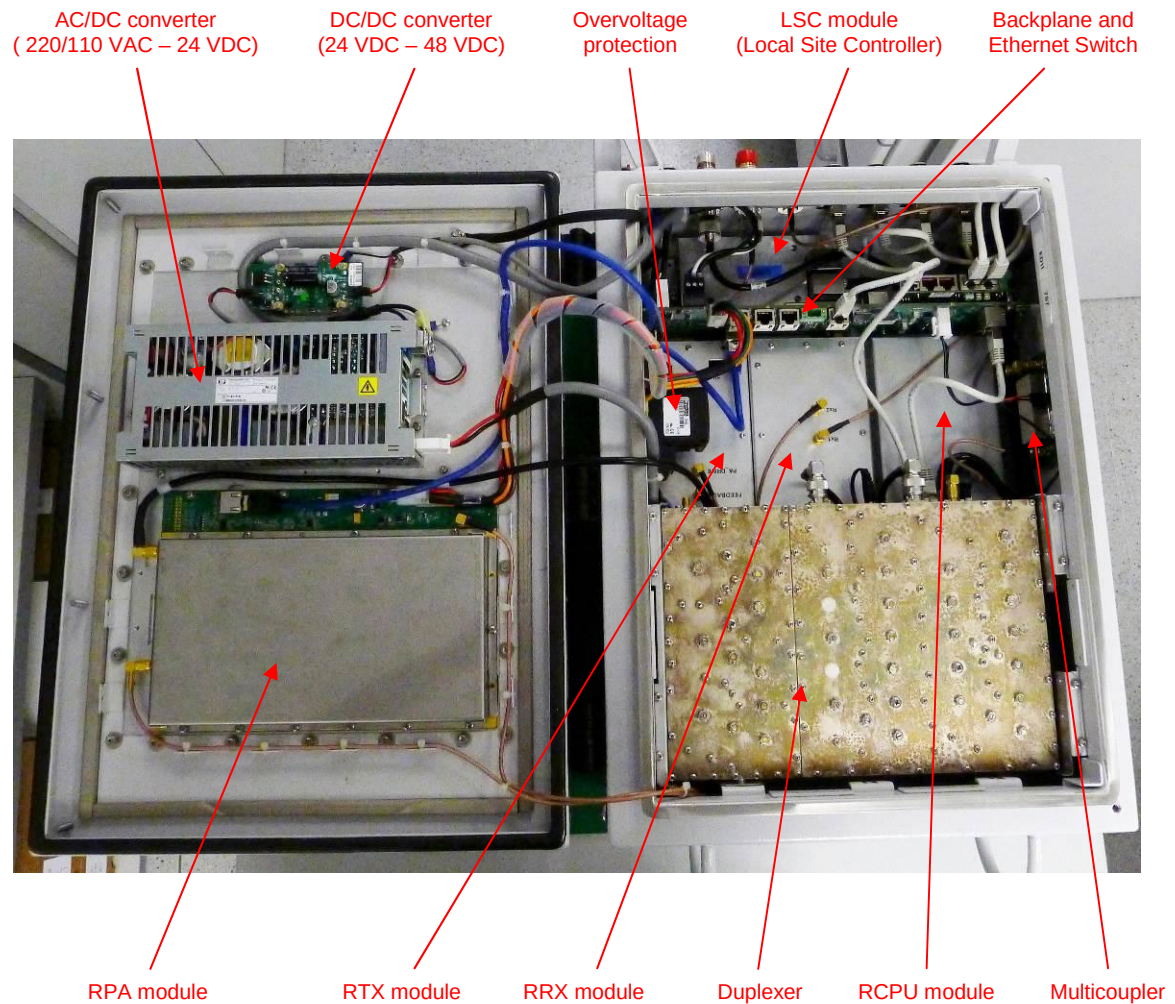
Edition	Date	Author	Description
01.00	05/01/2018	Carlos Casanova Juan Luis Romera	Initial release

CONTENTS

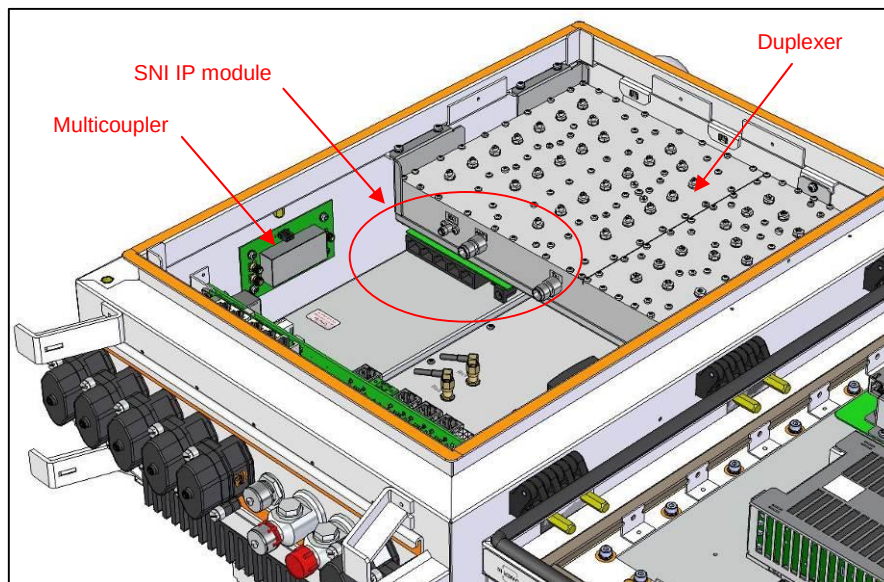
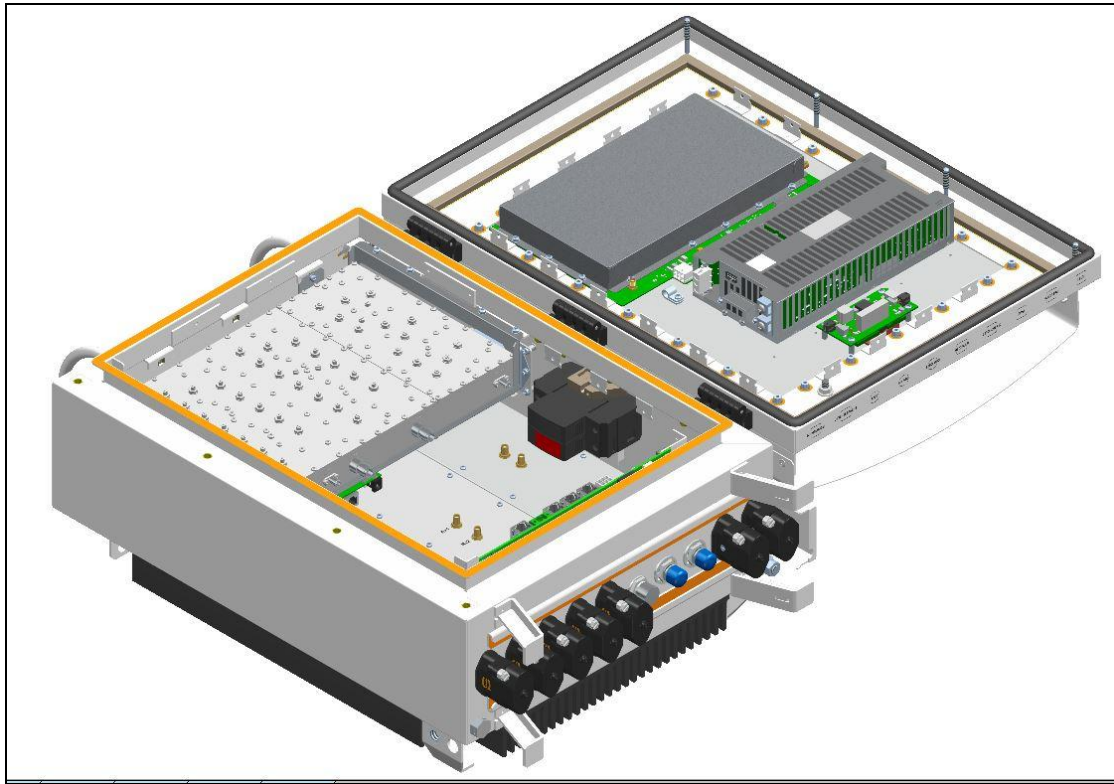
1. INTERNAL STRUCTURE	4
2. MBS UNIT -N EXPLODING VIEW	5
3. MBS UNIT -N BACKPLANE.....	6
3.1 UPPER SIDE OF THE BACKPLANE PCB	6
3.2 LOWER SIDE OF THE BACKPLANE PCB	6
4. MBS UNIT -N RCPU MODULE	7
4.1 UPPER SIDE OF THE MNI PCB	7
4.2 LOWER SIDE OF THE MNI PCB	7
4.3 UPPER SIDE OF THE RCPU PCB	8
4.4 LOWER SIDE OF THE RCPU PCB.....	8
4.5 UPPER SIDE OF THE ENCRYPTION PCB	9
4.6 LOWER SIDE OF THE ENCRYPTION PCB	9
5. MBS UNIT -N LSC MODULE	10
5.1 UPPER SIDE OF THE LSC CARRIER PCB	10
5.2 LOWER SIDE OF THE LSC CARRIER PCB.....	10
5.3 UPPER SIDE OF THE NANOX-TCR PCB	11
5.4 LOWER SIDE OF THE NANOX-TCR PCB	11
6. MBS UNIT -N RPA MODULE	12
6.1 UPPER SIDE OF THE RPA PCB	12
6.2 LOWER SIDE OF THE RPA PCB	13
7. MBS UNIT -N RTX MODULE	14
7.1 UPPER SIDE OF THE RTX PCB	14
7.2 LOWER SIDE OF THE RTX PCB.....	14
8. MBS UNIT -N RRX MODULE	15
8.1 UPPER SIDE OF THE RRX PCB	15
8.2 LOWER SIDE OF THE RRX PCB	15
9. ETHERNET SWITCH.....	16
9.1 UPPER SIDE OF THE ETHERNET SWITCH PCB	16
9.2 LOWER SIDE OF THE ETHERNET SWITCH PCB	17
10. SNI IP	18
10.1UPPER SIDE OF THE SNI IP PCB	18
10.2LOWER SIDE OF THE SNI IP PCB	18
11. MULTICOUPLER.....	19
11.1UPPER SIDE OF THE MULTICOUPLER PCB	19
11.2LOWER SIDE OF THE MULTICOUPLER PCB.....	19

1. INTERNAL STRUCTURE

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

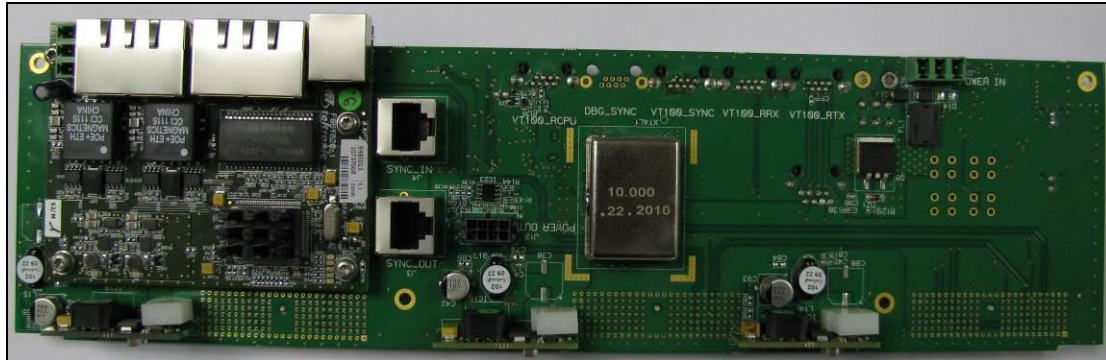


2. MBS UNIT -N EXPLODING VIEW

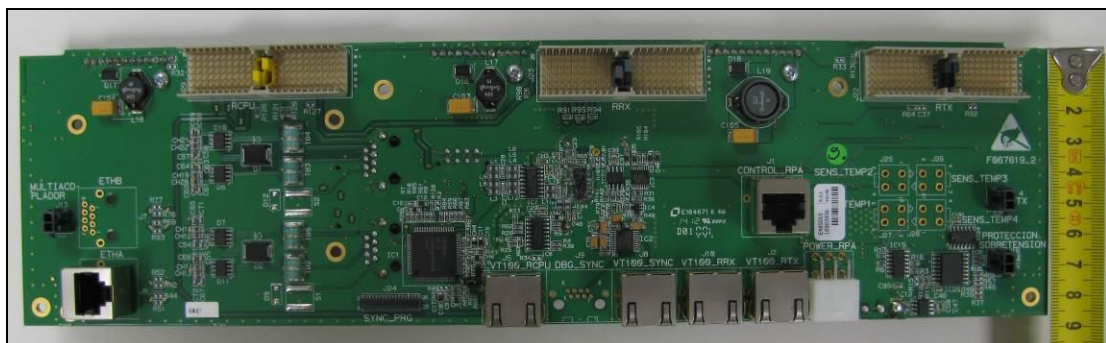
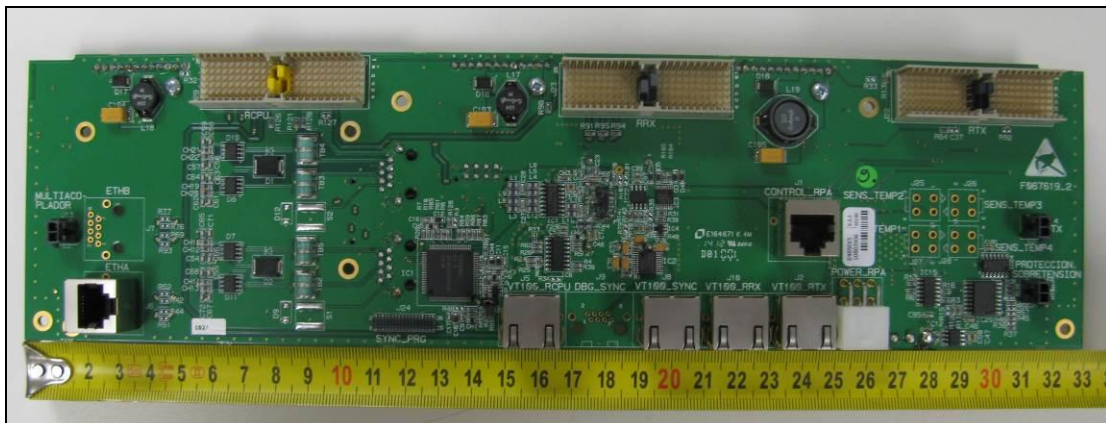


3. MBS UNIT -N BACKPLANE

3.1 UPPER SIDE OF THE BACKPLANE PCB

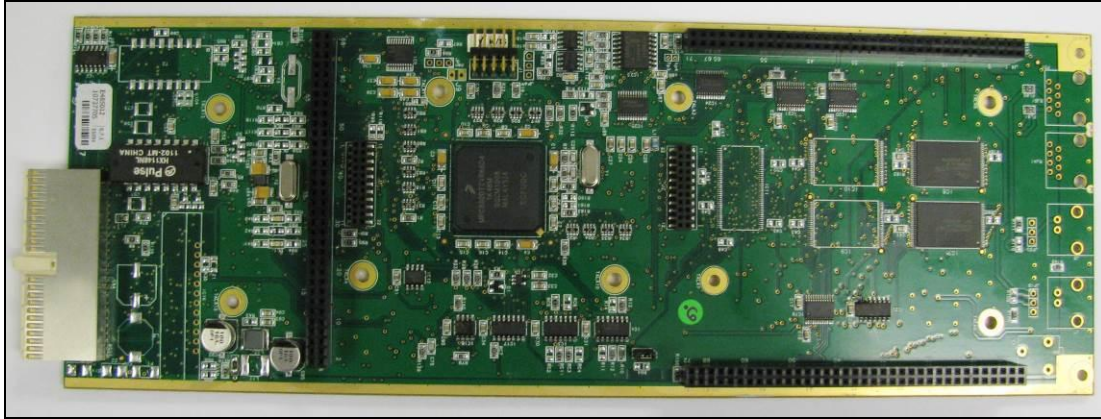


3.2 LOWER SIDE OF THE BACKPLANE PCB

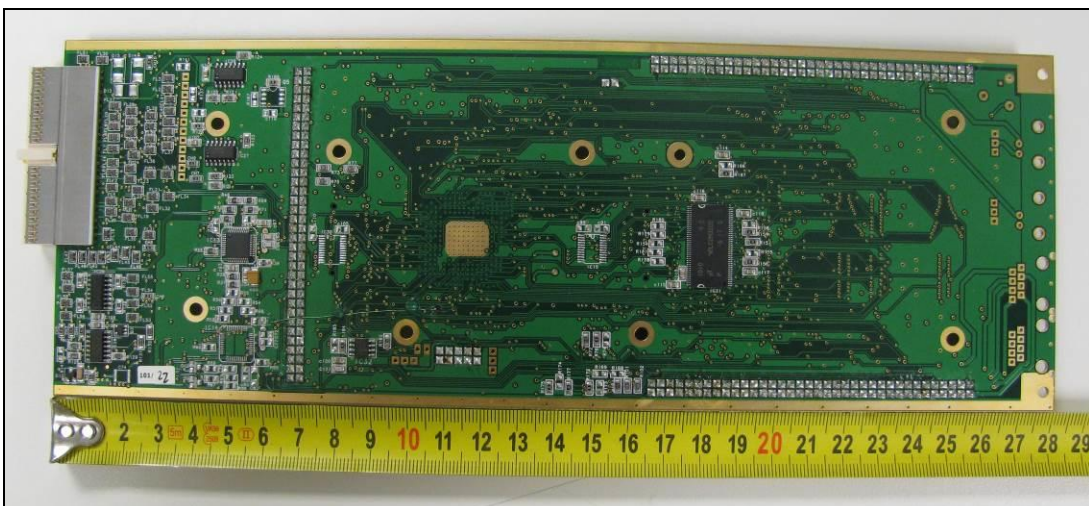
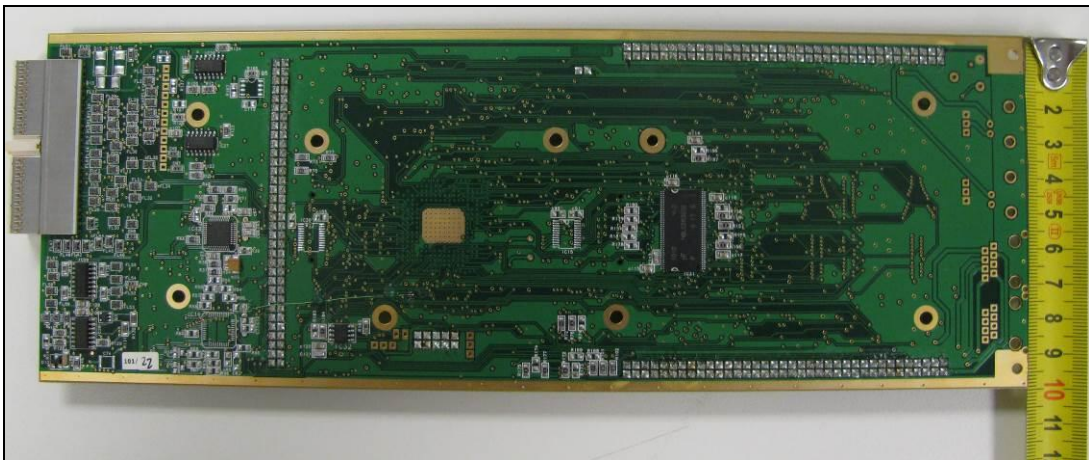


4. MBS UNIT -N RCPU MODULE

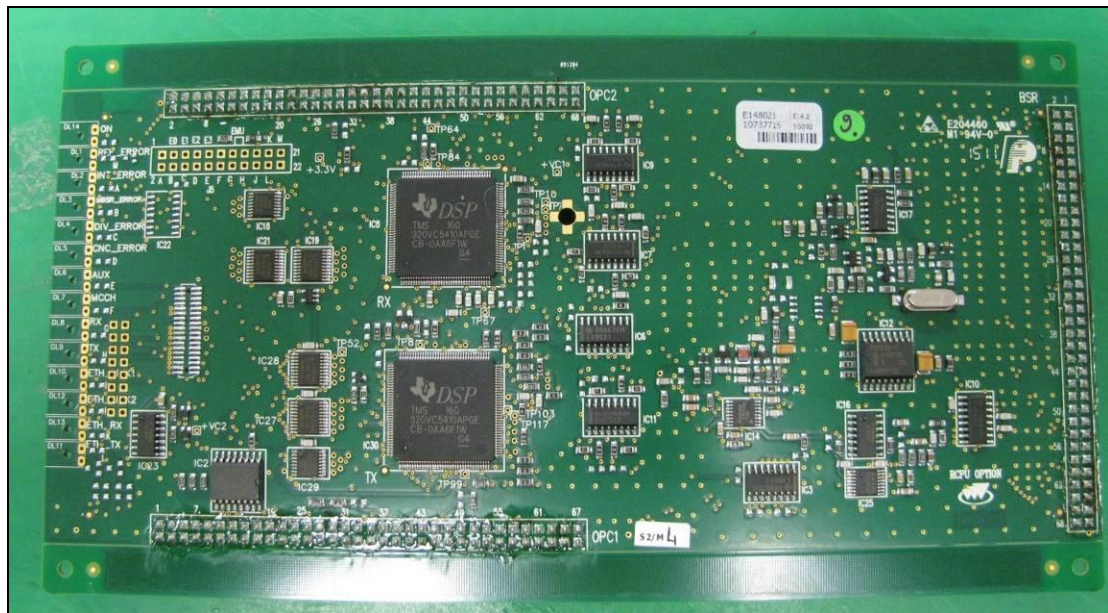
4.1 UPPER SIDE OF THE MNI PCB



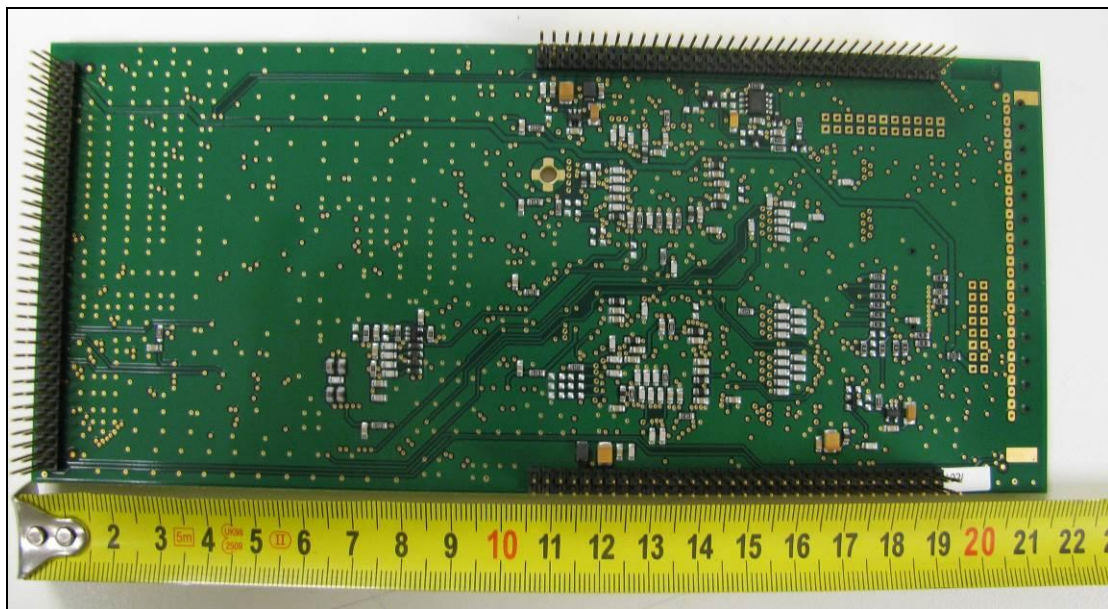
4.2 LOWER SIDE OF THE MNI PCB



4.3 UPPER SIDE OF THE RCPU PCB

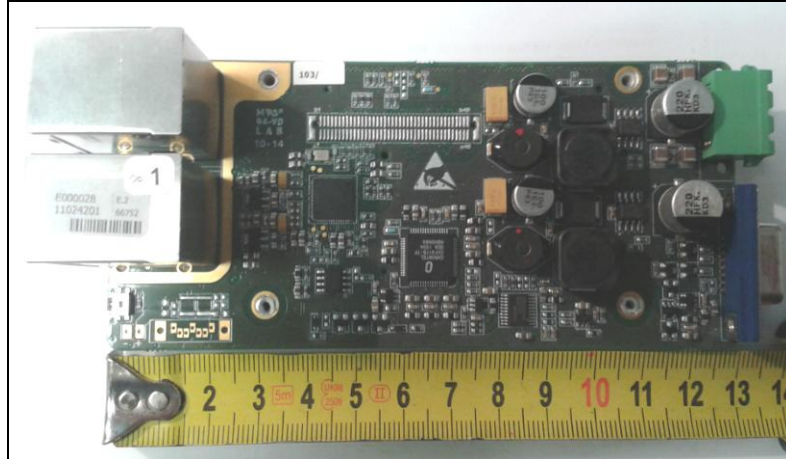


4.4 LOWER SIDE OF THE RCPU PCB

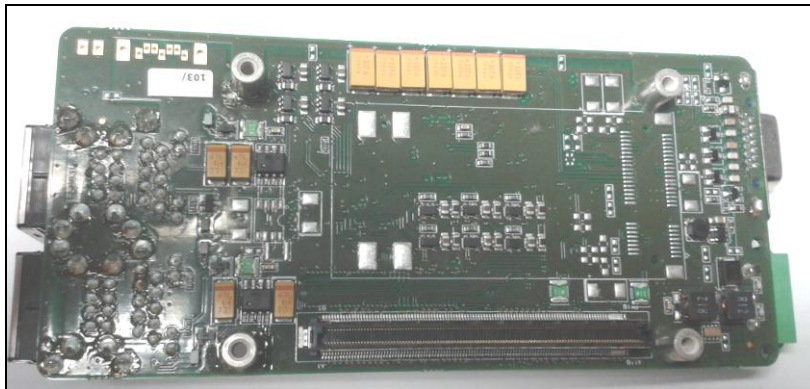


5. MBS UNIT -N LSC MODULE

5.1 UPPER SIDE OF THE LSC CARRIER PCB



5.2 LOWER SIDE OF THE LSC CARRIER PCB



5.3 UPPER SIDE OF THE NANOX-TCR PCB



5.4 LOWER SIDE OF THE NANOX-TCR PCB



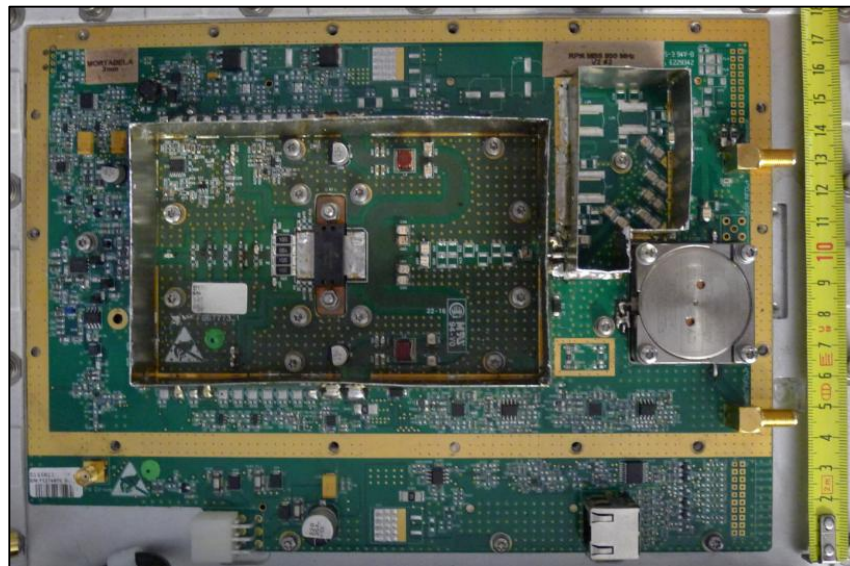
6. MBS UNIT -N RPA MODULE

6.1 UPPER SIDE OF THE RPA PCB

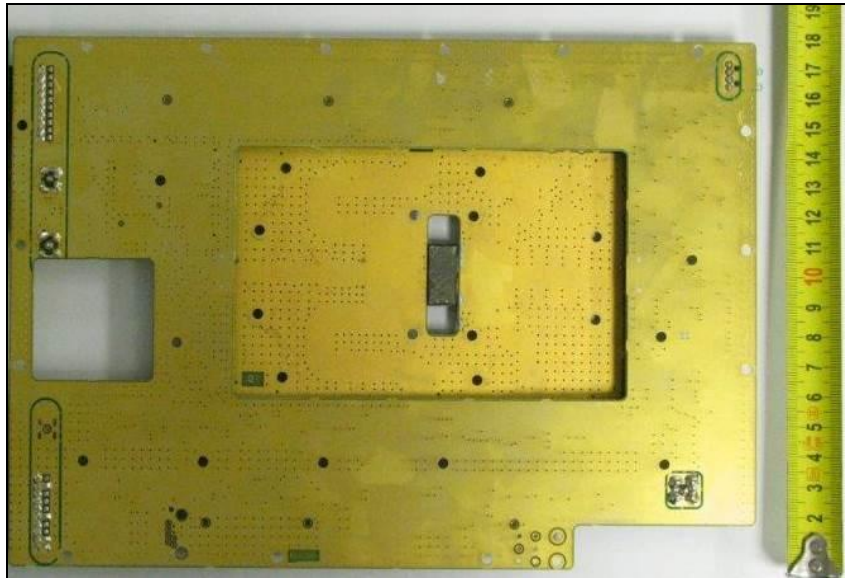
The pictures below show the RPA PCB (Repeater Power Amplifier) with and without shielding lids, respectively. A chain of three amplifying stages is integrated on this board. The first and the second ones correspond to drivers that are located on the left side of the PCB. The third stage integrates the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

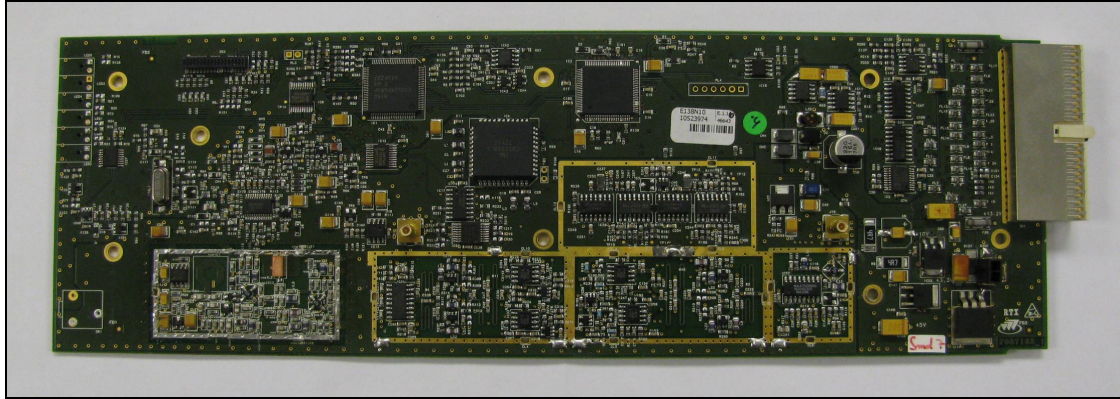


6.2 LOWER SIDE OF THE RPA PCB

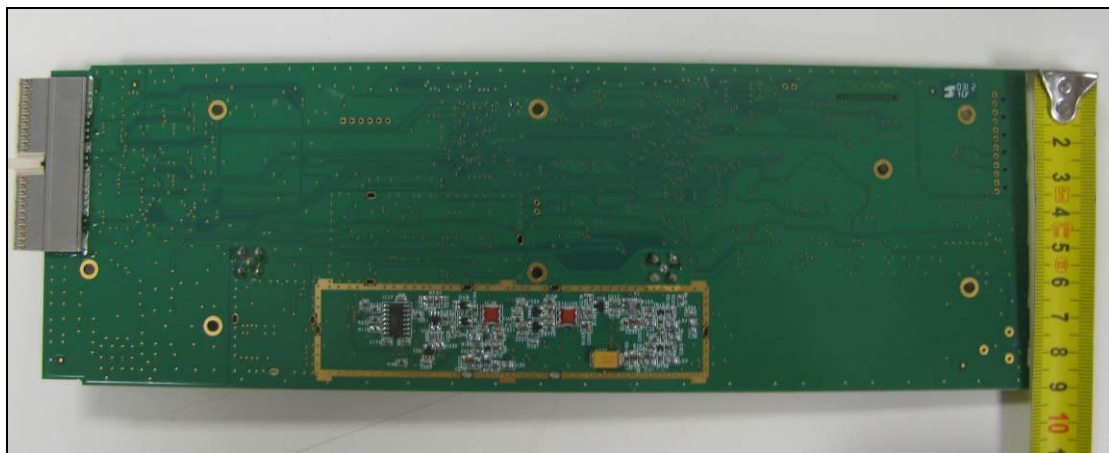
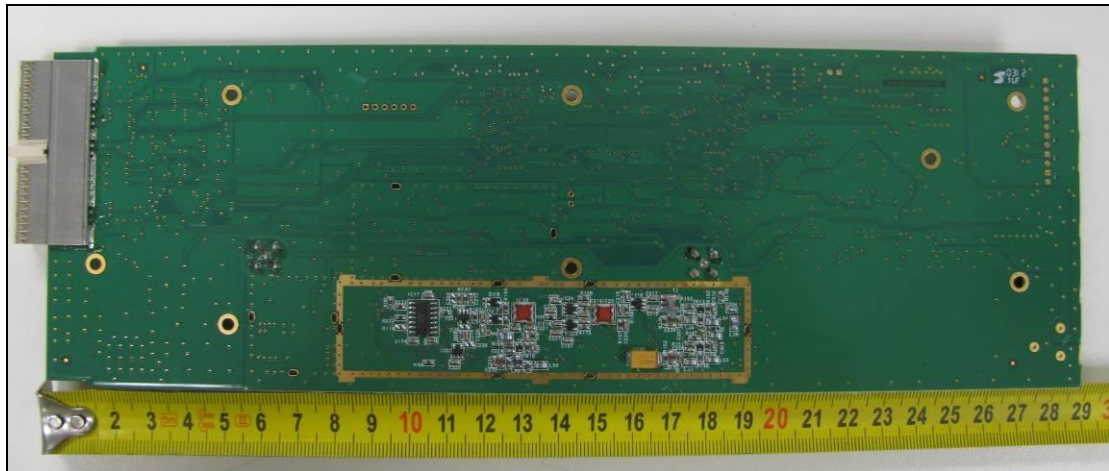


7. MBS UNIT -N RTX MODULE

7.1 UPPER SIDE OF THE RTX PCB

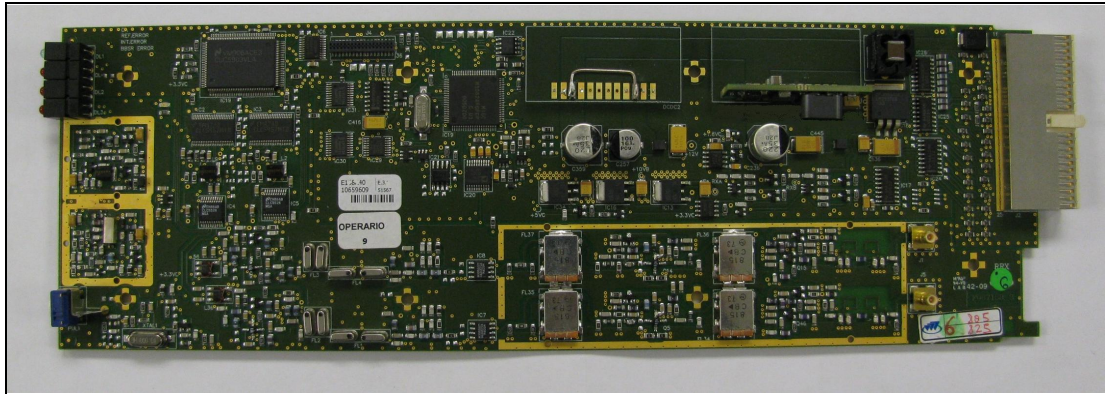


7.2 LOWER SIDE OF THE RTX PCB

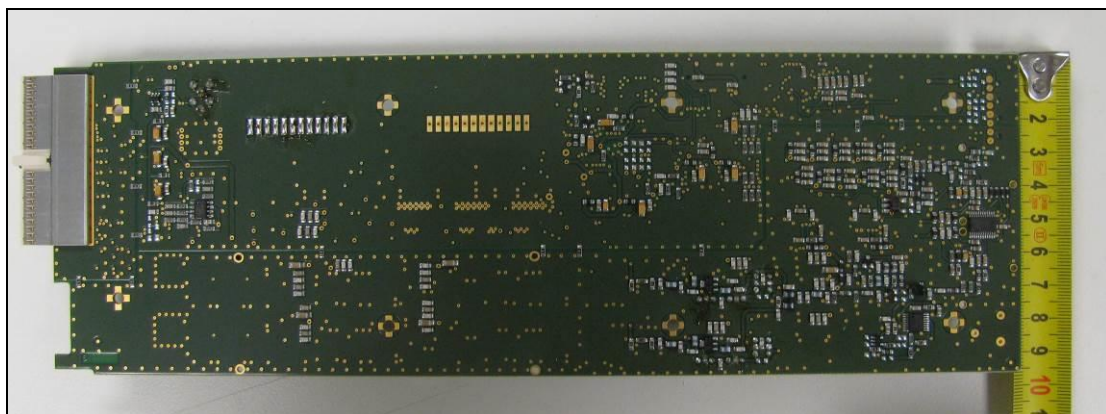
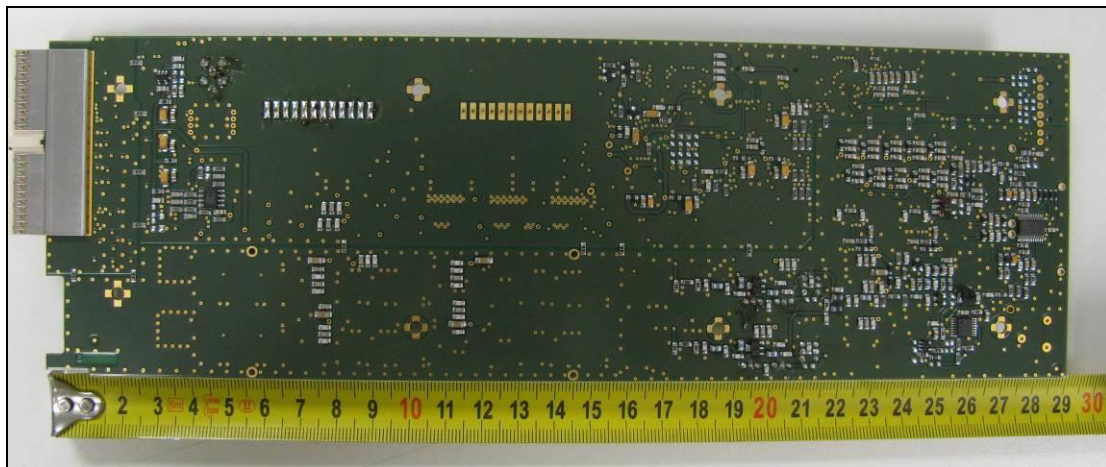


8. MBS UNIT -N RRX MODULE

8.1 UPPER SIDE OF THE RRX PCB

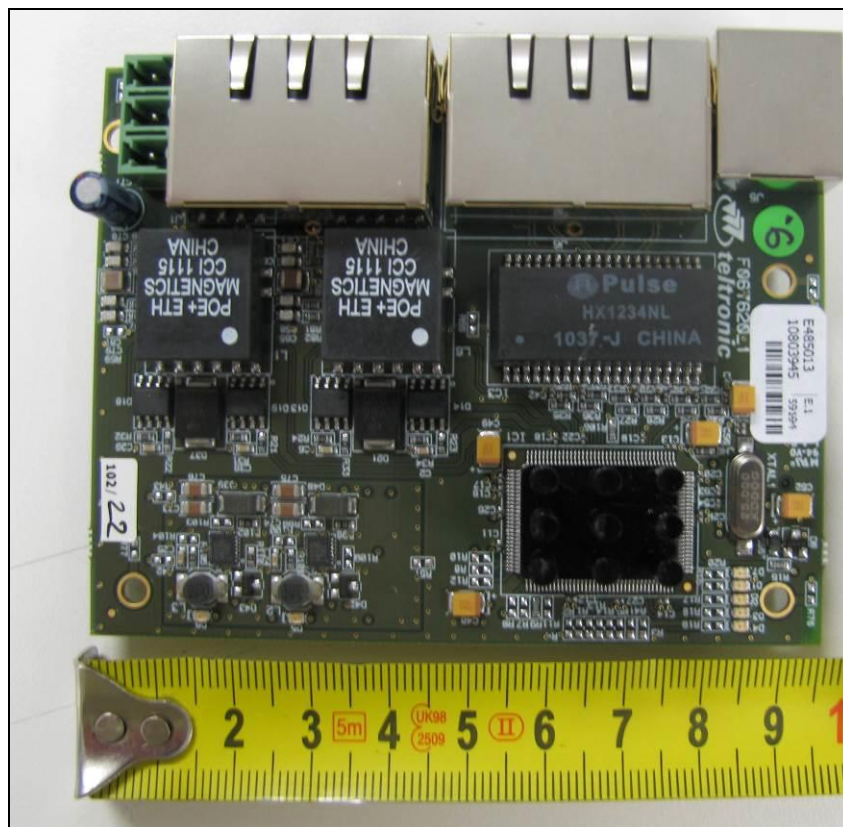
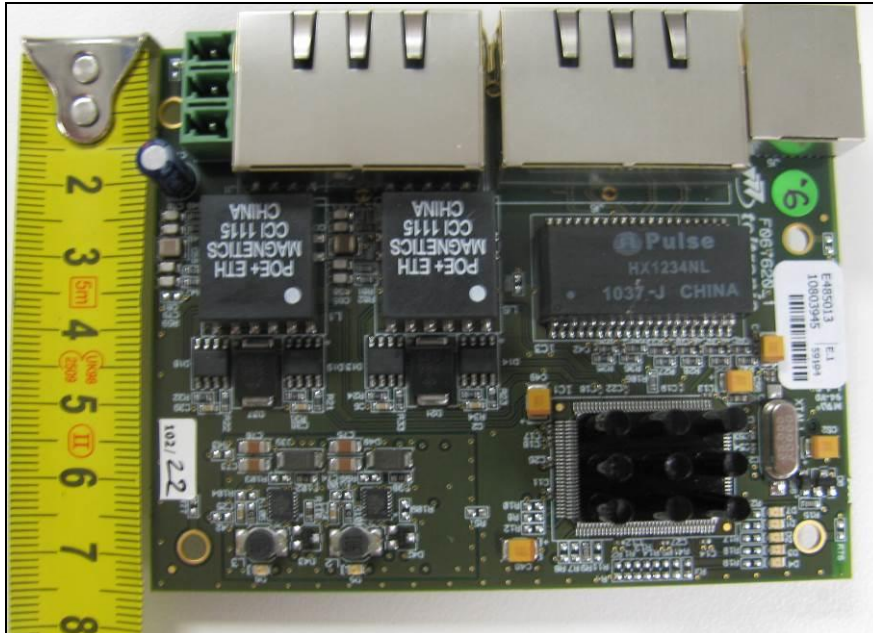


8.2 LOWER SIDE OF THE RRX PCB

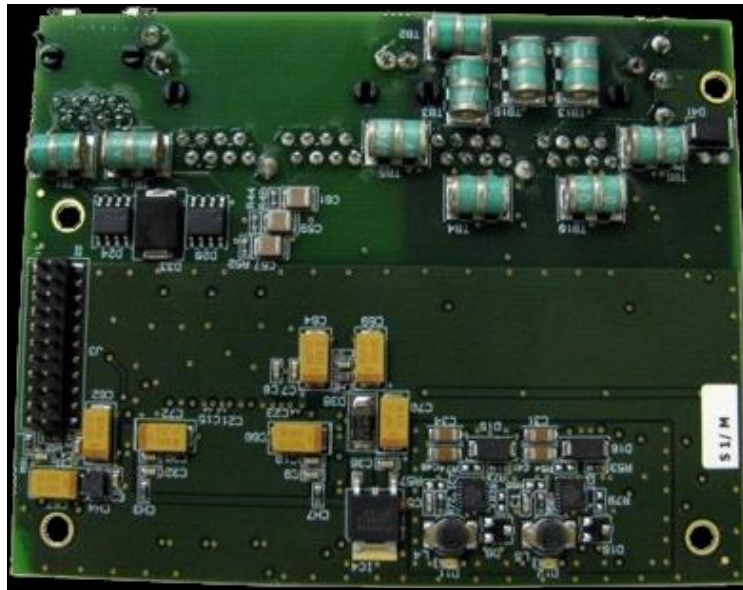


9. ETHERNET SWITCH

9.1 UPPER SIDE OF THE ETHERNET SWITCH PCB



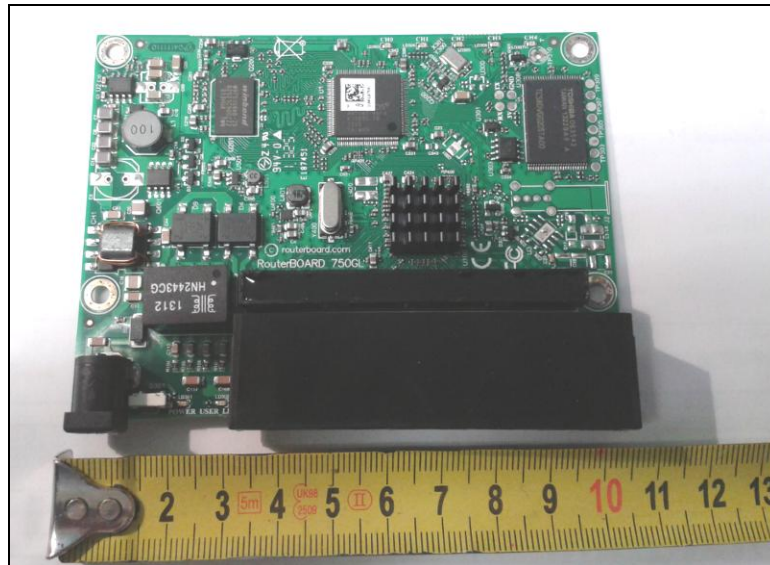
9.2 LOWER SIDE OF THE ETHERNET SWITCH PCB



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

