

RFI Measurement of Miltech Embedded Box PC

By :- SSK, PAR, SBB

Following are the test result of RFI measurement done for Miltech Embedded Box PC.

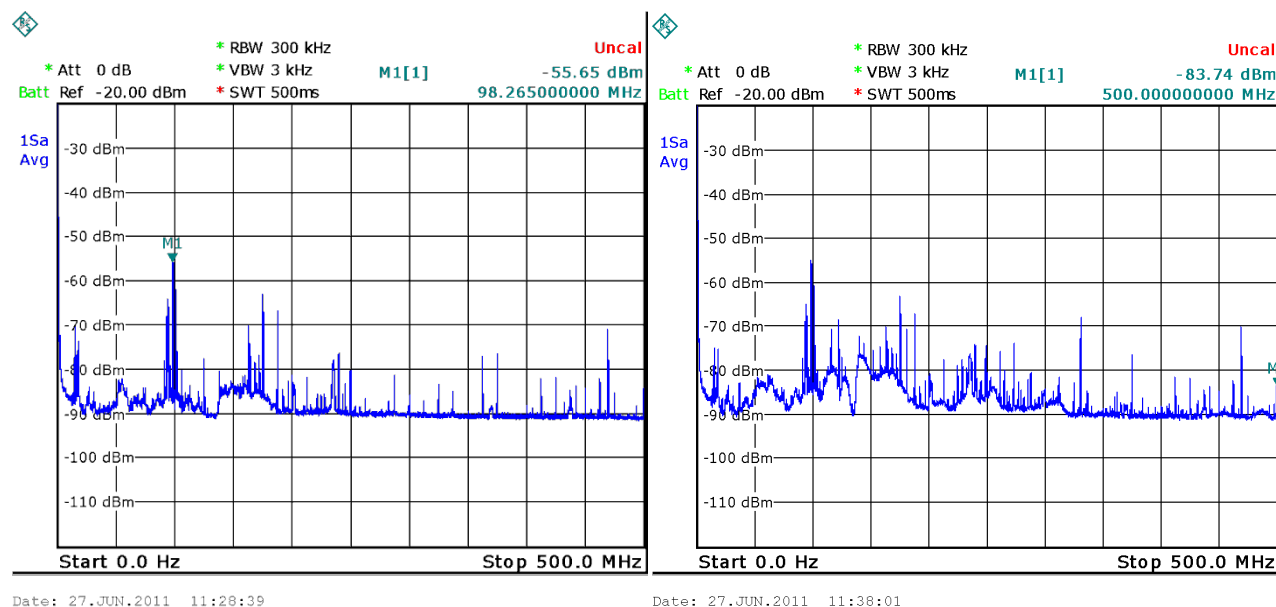
Test Procedure:

1. Measurement done at 3 meter distance with Rx LPDA antenna.
2. Log periodic antenna with 20dB amplifier used as receiver.
3. We observed RFI in 0-500MHz and 500-1000MHz frequency band for Miltech Embedded Box PC from back direction.

Specifications :- Specifications of Embedded Box PC are as follows

- Form Factor ATX - Processor Supports Dual Core Pentium 4/D with 533/800/1066MHz FSB
- RJ45 ×2, RS-232 ×3, RS-232/422/485 ×1, Universal Serial Bus 4

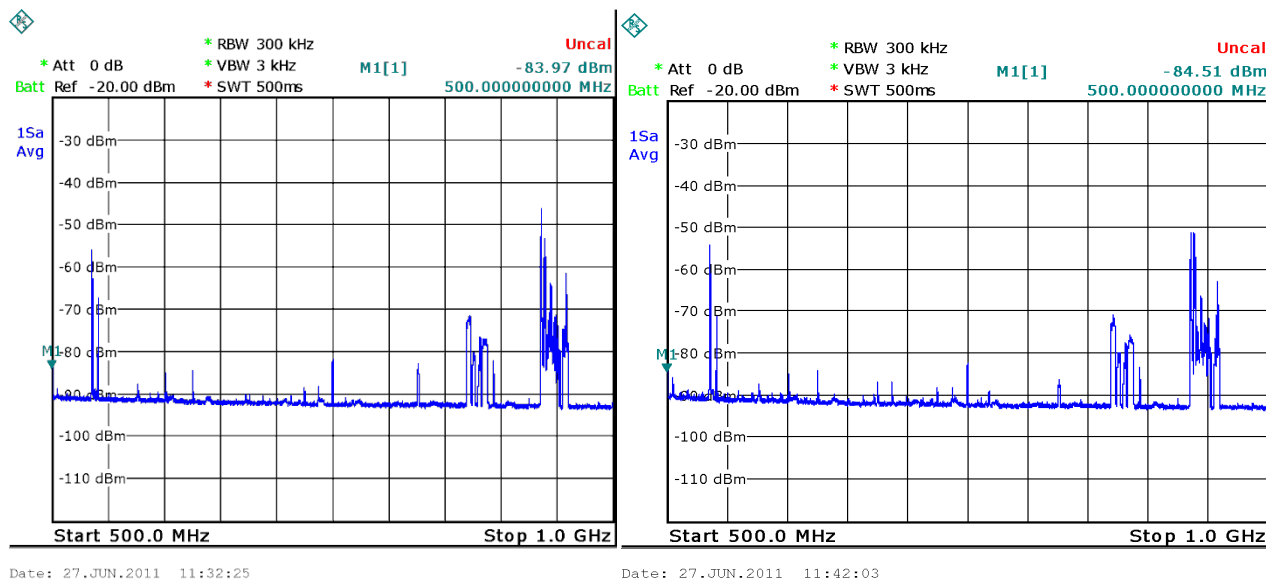
Measurement Result :-



All OFF

Miltech Embedded Box PC ON

Fig.:1 :- Above figure shows after Power ON Miltech Embedded Box PC the increase in noise level from 50MHz to 350MHz frequency band as well as there is so many discrete lines occurs. (Measurement done at NCRA,Pune.)



All OFF

Miltech Embedded Box PC ON

Fig.:2 :- Above figure shows after Power ON Miltech Embedded Box PC some discrete line occurs in 500-1000MHz frequency band. (Measurement done at NCRA, Pune.)

Modified Embedded Box PC, GMRT-Khodad.

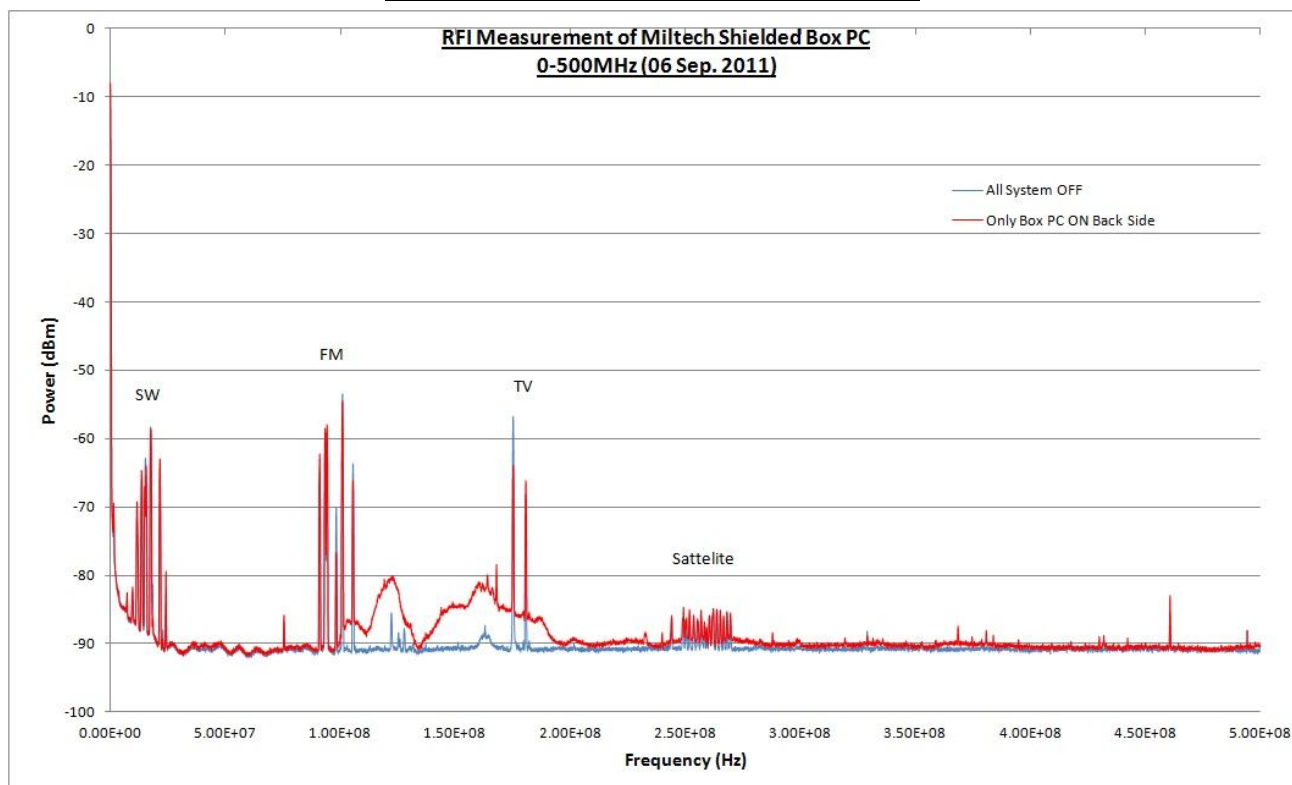


Fig.3 :- Above figure shows after Power ON Miltech Embedded Box PC the increase in noise level from 100-200MHz frequency band. (Measurement done at GMRT, Khodad.)

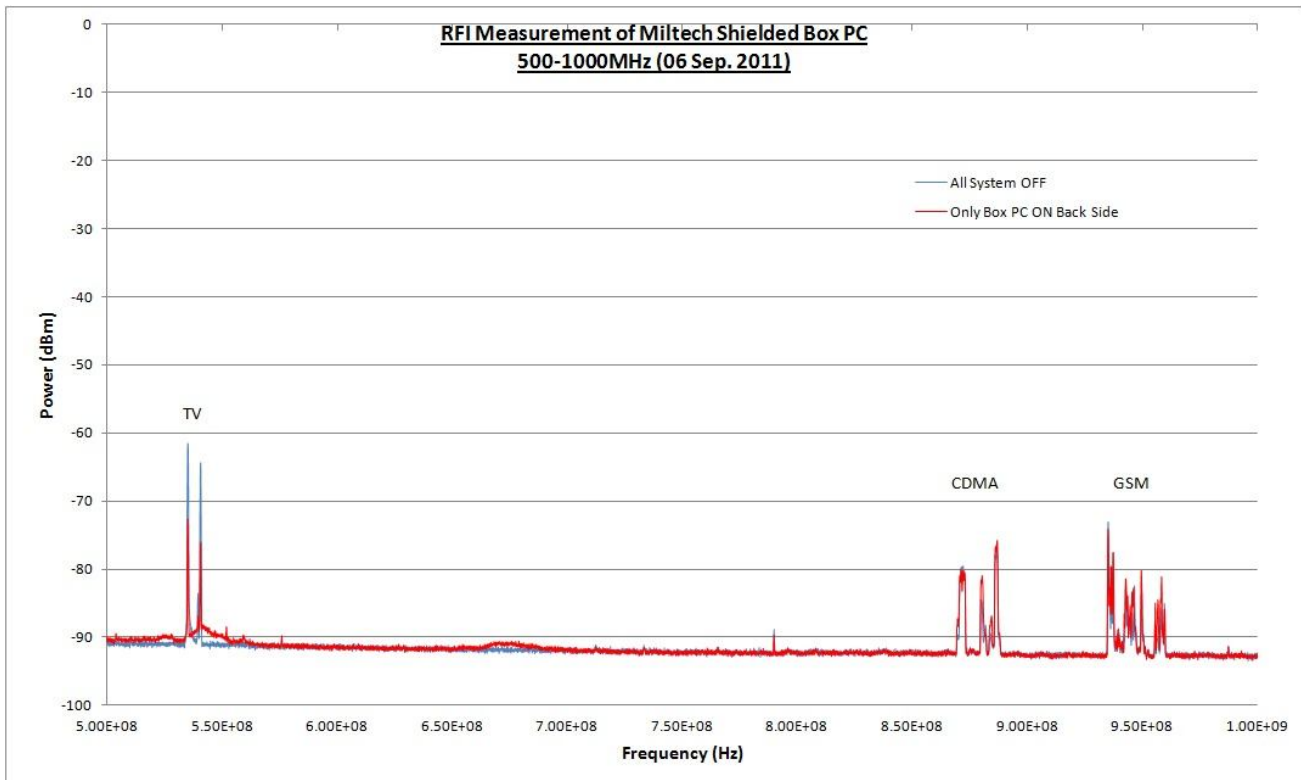
Modified Embedded Box PC, GMRT-Khodad.

Fig.4 :- Above figure shows after Power ON Miltech Embedded Box PC there is no any interference occurs in the 500-1000MHz frequency band. (Measurement done at GMRT, Khodad.)

Conclusion :- 1. Measurement result at NCRA, Pune shows there is increase in noise power level about 10dBm to 12dBm in the 0-350MHz band. Also it shows many discrete lines are present and covered up to 800MHz band.

2. Measurement result at GMRT, Khodad shows increase in noise power level upto 10dBm in the 100-300MHz band. Also the number of discrete lines and its level is reduced. This is due to the improvement in shielding of the cabinet done by M/S Miltech.

3. The cabinet needs more attention to reduce radiation coming out from connector interface panel. This can be done by providing shielded and filtered interface connectors also by paying more attention to keep minimum leakage through slots/gap.