

## SOFTWARE RELEASE NOTE # 36

September 30, 2017

To: All LabExpress and RFXpert units

Re: Latest Software Release 4.2.3.2

**EMSCAN is pleased to provide all LabExpress and RFXpert customers with a new software release.**

**Units under warranty will receive it for free; units no longer under warranty can obtain the software upgrade by purchasing a Customer Care Package (p/n 3000-0122). Please contact your local representative or contact us via our web site: <https://www.emscan.com/contact-us/>**

**PLEASE MANUALLY UNINSTALL ALL PREVIOUS RFXpert SOFTWARE APPLICATIONS BEFORE INSTALLING 4.2.3.2.**

- 4.2.3.2 major new features
  - Performance
    - Substantial performance improvement of the Swept Frequency scan
    - Substantial performance improvement of the Very-Near-Field data
      - Far-Field display now lags the Very-Near-Field data
  - Far-Field-Correction Window (FFCW) i.e. correcting for the finite aperture effect
    - Overestimated gain has been corrected
    - Pattern has improved at the horizon
    - The far-field correction window (FFCW) and the near-field window (NFW) are combined into a single setting “Radiation Pattern Correction” which is on by default
  - TIS Proxy
    - If you know the Conducted Sensitivity value of the DUT, RFXpert will estimate the TIS of the DUT without going through a time-consuming test plan
    - The current version of RFXpert TIS calculations does averaging of the gain pattern before combining it with the receiver sensitivity. This average gain pattern is also known as efficiency, so TIS is simply the conducted receiver sensitivity plus the antenna efficiency.
    - This calculation is not a direct measure of the receive performance which is why EMSCAN calls it a TIS proxy. It can still be a good approximation when the conducted RF values of the device are known. It also is a very fast measurement.
    - Aggregated node TIS uses the conducted sensitivity from the top node i.e. first node
  - CTIA
    - Total Radiated Power (TRP) measurements using a phantom head and hand are an important performance requirement for mobile device manufacturers and wireless service providers. Therefore, CTIA has developed a Test Plan for Mobile Station Over the Air (OTA)

Performance with specific test results. These test results are now available in the RFXpert report generator when one does a Fixed Frequency scan with the phantom head and hand kit on the RFX2

- o Manual Power Profile

- It is now possible to create a profile from an unsupported power meter directly in the RFXpert application; the Excel tool that required in the past is no longer needed. In this case, manual measurements are done for each frequency set in the Swept Frequency Settings and entered manually through the Create/Edit function by using the Manual menu

- o 4.2.31 other updates

- o R&S ZNB8 and Keysight N5227A supported
- o Separation can be easily modified post capture
- o Any offset applied to the selected PRAD data is now displayed. No “hidden” adjustment
- o Control + F3 recalculates data and refreshes all views
- o Fast data list sorting
- o Near-Field-Window (NFW) is on by default
  - The near-field window (NFW) and the far-field correction window (FFCW) are combined into a single setting “Radiation Pattern Correction” which is on by default
- o If a configuration file not present in the PC, it will no be possible to open a data file
  - One can load the configuration file from a folder directly, rather than download it from the RFXpert
- o When you do aggregate node, the auto-scale is now using the max of either top or bottom not just max of top as before
- o One can’t modify the settings of any Aggregate Node settings and sub-node settings
  - Delete the sub-nodes then update the sub-nodes and finally copy and paste back into the Aggregate Node
- o Improved instrument driver management
- o Smoother graphics updates