

Real time application data measurement with the SmartFab Box

Quantum leap in application analysis

System availability, cost efficiency and scheduled maintenance are the key focus for many users. PULS therefore provides users with detailed advice on choosing the optimum power supply for their specific applications. To expand this service, PULS has developed the unique SmartFab Box.

The SmartFab Box is an innovative diagnostics tool developed by PULS to make the power requirements and thermal conditions in systems and installations transparent. The SmartFab Box allows users to check and specify their power budgets directly on their own systems; live and completely securely. This unique user service provides assistance in choosing the right power supply and avoiding excessively large power reserves.



Figure 1: SmartFab Box – Diagnostics tool for measuring application data

Live information directly from the application

The SmartFab Box is a compact, portable case with integrated diagnostics technology. The Box can be loaned free of charge from PULS for short periods, leased for longer periods or purchased – the choice is based entirely on the user's needs.

The case is equipped with several interfaces that can be connected to temperature, current and voltage sensors. The interfaces can measure the following application data:

- Voltages and currents on the input and output
- Power outputs (primary and secondary)
- Input transients

- Power factor
- Temperatures in the application and environment

To commission the SmartFab Box, all that is required is an AC mains connection and an LTE/3G mains cover.

The Box anonymously secures all application data on a cloud server in Germany via a VPN connection. The data is exchanged via the LTE/3G mobile phone network so no connection to the local company LAN is required. In developing the SmartFab Box, care has been taken to ensure that it is non-invasive at all times; i.e., it has no effect on the application, either during installation or during measurements. This means complete operational security at all times.

The live analysis of the data on the desktop or notebook can be easily carried out via an online dashboard that can be called up via www.loadprofiling.com. Access to the dashboard is password-protected and can only be viewed by the respective user and the PULS support team.



Figure 2: SmartFab Box dashboard for analysing application data

The web-based dashboard programmed by PULS, uses clear graphics to show the user information on output and power requirements as well as the thermal conditions on his/her system. Conclusions can then be drawn based on these values: How big is the load on the system? At what times are the system loads the biggest? How much can be saved in CO₂ and operating costs using an efficient power supply? PULS has specifically developed widgets to provide the relevant answers to these questions.

Loadable comparisons between different power supply solutions

With the SmartFab Box, users can do more than just read the power requirement of their applications. It also allows comparisons between different power supplies. Therefore, evidence of the energy and cost efficiency of the devices can be provided under actual application-specific conditions. This means that users can

calculate the return-on-investment (ROI) for the power supplies, for example, representing a huge benefit for the selection phase. Customers can have access to reliable evidence of the statistics and no longer have to rely on the calculations or experiential values supplied by the manufacturer. .

PULS offers a unique user service

Users can evaluate their data themselves at any time via the dashboard. In the event of queries or recommendations relating to the results, PULS customer service is available to give advice.

With the SmartFab Box, PULS offers a service that is currently unique in the marketplace. Understanding of the applications performance is taken to a new level. The SmartFab Box will help many users find the perfect power supply solution for their systems: reliable, efficient, the perfect size and as low maintenance as possible.

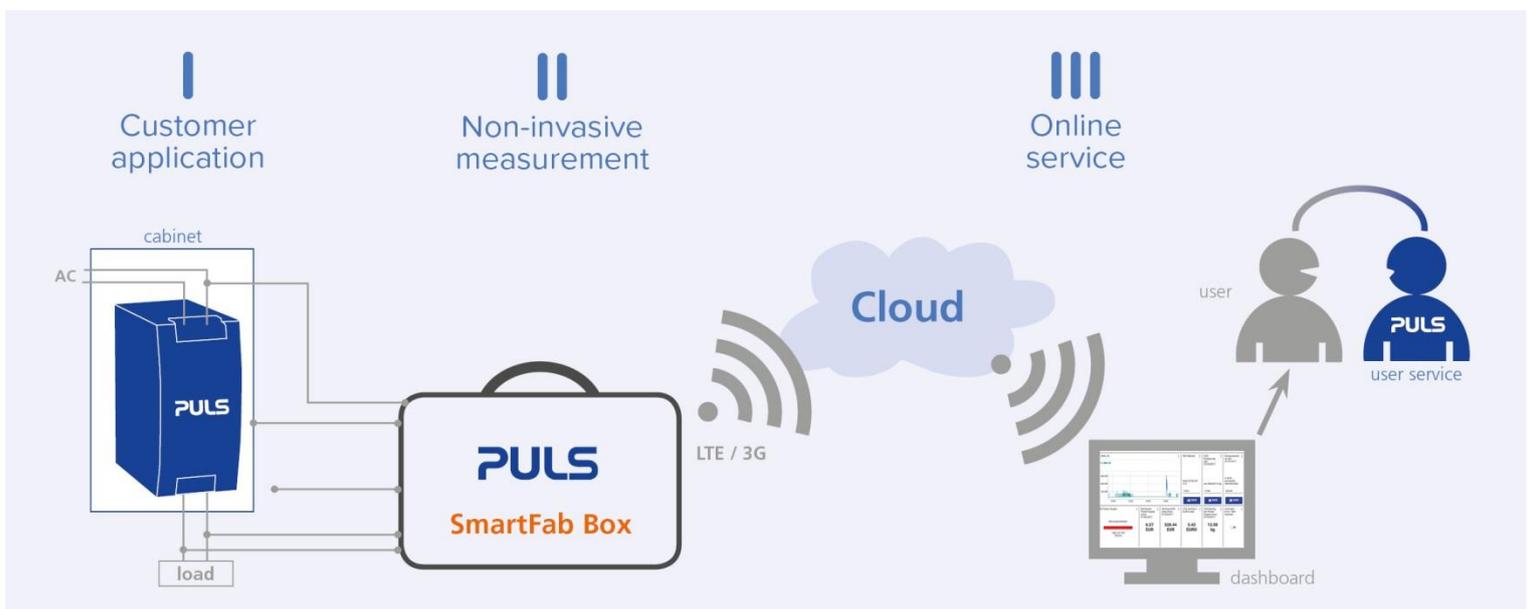


Figure 3: How the SmartFab Box works.