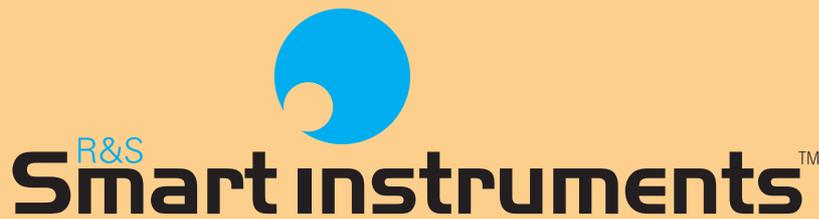


Family 300 – the strategy for the future



A number of Rohde & Schwarz products of the lower price class, which are notable for their excellent price/performance ratio and compact design, will in future be marketed under the R&S Smart Instruments™ label. Owing to innovative technical solutions, these products offer a level of performance that was previously available only with instruments of higher price classes. Another new feature of R&S Smart Instruments™ is that they can be purchased not only from local Rohde & Schwarz representatives but also directly on the Internet or via selected distributors.

The Handheld Spectrum Analyzer R&S FSH3 for mobile applications introduced in News from Rohde & Schwarz, No. 175, was the first product from the series of R&S Smart Instruments™. The next unit is the Spectrum Analyzer R&S FS300, a bench model (page 20), which will soon be followed by other members of Family 300, one of them a signal generator (FIG 5).

Further information at www.smart.rohde-schwarz.com

- ◆ **Identical housing** All instruments based on the Family 300 concept have an almost identical face, a 5.4-inch VGA TFT display, front-panel control elements, protective guards and a handle that can be adjusted to different positions. Only the connectors at the front and rear panel vary depending on the instrument type.
- ◆ **Uniform operating concept** Operation of all instruments is very similar and based on the high-end units from Rohde & Schwarz. Most operations are menu-controlled so that no device-specific keys are needed. Only the four unit keys have different labels.
- ◆ **Modular design** Despite the small dimensions, each unit comprises up to five slots for measurement modules. In the Spectrum Analyzer R&S FS300, only two slots are occupied. This allows enough room for the development of other measuring instruments.
- ◆ **USB interfaces** The USB host interface provided as standard links the instruments to the PC world. The bus ensures high data transmission rates at low cost (see box on page 23). Other peripherals (e.g. a printer) can be addressed via another USB interface.

Ambitious goals ...

Rohde & Schwarz aimed high with its Family 300: To develop a hardware and software platform that can be manufactured in large numbers at low cost and that offers excellent performance and versatility for a great number of applications. The implementation of highly diverse measuring instruments for mobile and network-independent use, for laboratory purposes or for integration into systems should not be a problem either. The new instrument generation should also be able to communicate with a PC and other peripherals.

... attained with Rohde & Schwarz precision

To meet all these requirements within the budget, Rohde & Schwarz developed a completely new and uniform concept, taking the successful platform strategy used in car production as a model. It was worth the effort: The modular design of the Family 300 instruments and the use of uniform components enable cost-efficient production of a wide variety of high-quality instruments. And all that at a low price that could not be achieved in the past. The main characteristics of the new generation are:

Powerful design for versatile applications

The sturdy exterior housing protects the modules against shock and other mechanical stress. In addition, each model is individually encapsulated. Since the instruments do not contain a hard disk, they can also be used, for instance, in vehicles without any loss

in reliability. Another advantage of the spectrum analyzer is its low power consumption of no more than 35 W. The heat produced in the instrument is dissipated to the outside by a sophisticated fan system so that the modules always keep a "cool head".

Users particularly appreciate the bright 5.4-inch TFT colour display which can also be used in vehicles, for instance. The brightness of the display enables you to read measurement results easily even under adverse lighting conditions.

This great versatility makes the new measuring instruments ideal for a large number of applications:

- ◆ **In the lab** With the aid of the adjustable handle, the instrument can be set up at almost any angle on the lab bench. To make optimum use of available space, several instruments can be stacked.
- ◆ **Mobile use** Despite the sturdy mechanical construction of the housing, the instruments are small, of low weight and can be easily carried to any site by means of the handle.
- ◆ **Rackmounting** Family 300 instruments occupy only half the width of a 19-inch frame, i.e. two instruments can be inserted next to each other. They take up three height units and have a seated depth of approx. 300 mm.

Robert Obertreis



FIG 5
The new Signal Generator R&S SM 300 (right) is another member of the Family 300 and will be available soon. It has the same "face" as the Spectrum Analyzer R&S FS 300.

