CAN Newsletter Online

OSCILLOSCOPE

Analyzing Classical CAN and CAN FD

Yokogawa Test and Measurement announced that it has developed the DLM3000 series of mixed signal oscilloscopes with models for several bandwidths.

The product now includes a capacitive touchscreen that offers the same intuitive use found in smartphones (Photo: Yokogawa)

This series is a successor to the DLM2000 series of mixed signal oscilloscopes. The DLM3000 comes with added functions that meet the latest needs of customers who are developing technologies for electric vehicles (EVs) and power electronics. The offered variants support 200 MHz, 350 MHz, and 500 MHz. The provier has improved on the DLM2000 by redesigning the hardware and adding functions that improve performance. The DLM3000's functions meet the latest needs of companies that are developing EVs, advanced driver-assistance systems (ADASs), and inverter-related technologies.

To speed up the development of EVs and ADASs, the oscilloscope comes with a trigger function that supports the Classical CAN, CAN FD, and other in-vehicle standards for ADAS development. As both the waveform data captured with the trigger function and the signal analysis results can now be displayed on the same screen, users can identify at a glance the relationships between these two sets of data.

The models support either two-channel or four-channel input. Even when simultaneously measuring input from every channel, each of these models can maintain a maximum sampling rate of 2,5 giga sampling per second, two times faster than the DLM2000 series.

With the improved hardware design, residual noise has been reduced 50 %, the measurement sensitivity setting range has been extended to 500 µV, and the maximum input voltage has been extended to 300 volt root mean square. These features enable the DLM3000 to observe signal waveforms over a wider voltage range.

The high-speed measurement of signals over longer periods of time generates a great volume of data. The DLM3000 supports the USB 3.0 standard and thus is able to transfer large amounts of data at high speed for storage on a PC.

The device is able to store up to 500 M points of acquired data, which is twice that of the preceding Yokogawa oscilloscope series. With this function, the product history function can retain up to 100 000 waveforms, twice that of our preceding series. The number of waveforms that can be searched and compared has thus been doubled, for improved efficiency in debugging. Furthermore, a 60 GiB SSD*4 can be installed for additional data storage capacity.

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