# Step 3: Select application modules and accessories

## **Application modules**

Application modules are purchased as stand-alone products and can be purchased at the time of initial MDO3000 purchase or at any future time. The optional application modules functionality is offered free for a 30-day trial period. This free trial period starts automatically when the instrument is powered on for the first time.

Application modules have licenses which can be transferred between an application module and an oscilloscope. The license may be contained in the module; allowing the module to be moved from one instrument to another. Or, the license can be contained in the oscilloscope; allowing the module to be removed and stored for safekeeping. The license can be transferred back to the module for use in another MDO3000 oscilloscope. Transferring the license to an oscilloscope and removing the module permits the use of more than two applications simultaneously.

MDO3BND

Application module that enables all of the functionality of the MDO3AERO, MDO3AUDIO, MDO3AUTO, MDO3COMP, MDO3EMBD, MDO3FLEX, MDO3LMT, MDO3PWR and MDO3USB application modules in a single module. Save money when multiple serial bus debug and analysis application modules are required and easily move the entire set of functionality from one

MDO3AERO

Aerospace Serial Triggering and Analysis Module. Enables triggering on packet-level information on MIL-STD-1553 buses as well as analytical tools such as digital views of the signal, bus views, packet decoding, search tools, and packet decode tables with time- stamp information.

Signal Inputs - Any Ch1 - Ch4, Math, Ref1 - Ref4

Recommended Probing - Differential or single ended (only one single-ended signal required)

**MDO3AUDIO** 

Audio Serial Triggering and Analysis Module. Enables triggering on packet-level information on I2S, LJ, RJ, and TDM audio buses as well as analytical tools such as digital views of the signal, bus views, packet decoding, search tools, and packet decode tables with time-stamp information.

Signal Inputs - Any Ch1 - Ch4, any D0 - D15

Recommended Probing - Single ended

**MDO3AUTO** 

Automotive Serial Triggering and Analysis Module. Enables triggering on packet-level information on CAN and LIN buses as well as analytical tools such as digital views of the signal, bus views, packet decoding, search tools, and packet decode tables with time- stamp information.

Signal Inputs - CAN or LIN: Any Ch1 - Ch4, any D0 - D15

Recommended Probing - CAN: Single ended or differential; LIN: Single ended

MDO3COMP

Computer Serial Triggering and Analysis Module. Enables triggering on packet-level information on RS-232/422/485/UART buses as well as analytical tools such as digital views of the signal, bus views, packet decoding, search tools, and packet decode tables with time-stamp information.

Signal Inputs - Any Ch1 - Ch4, any D0 - D15

Recommended Probing - RS-232/UART: Single ended; RS-422/485: Differential

MDO3EMBD

Embedded Serial Triggering and Analysis Module. Enables triggering on packet-level information on I2C and SPI buses as well as analytical tools such as digital views of the signal, bus views, packet decoding, search tools, and packet decode tables with timestamp information.

Signal Inputs - I<sup>2</sup>C or SPI: Any Ch1 - Ch4, any D0 - D15

Recommended Probing - Single ended

MDO3FLEX

FlexRay Serial Triggering and Analysis Module. Enables triggering on packet-level information on FlexRay buses as well as analytical tools such as digital views of the signal, bus views, packet decoding, search tools, packet decode tables with time-stamp

Signal Inputs - Any Ch1 - Ch4 (and any D0 - D15 when MDO3MSO option is installed; single-ended probing only)

Recommended Probing - Single ended or differential

MDO3USB

USB Serial Triggering and Analysis Module. Enables triggering on packet-level content for low-speed, and full-speed USB serial buses. Also enables analytical tools such as digital views of the signal, bus views, packet decoding, search tools, and packet decode tables with time-stamp information for low-speed, full-speed, and high-speed USB serial buses.

Signal Inputs - Low-speed and Full-speed: Any Ch1 - Ch4, any D0 - D15; Low-speed, Full-speed, and High-speed: Any Ch1 - Ch4, Math, Ref1 - Ref4

Note: High-speed decode support only available on 1 GHz models.

Recommended Probing - Low-speed and Full-speed: Single ended or differential; High-speed: Differential

## **Datasheet**

MDO3PWR Power Analysis Application Module. Enables quick and accurate analysis of power quality, switching loss, harmonics, safe

operating area (SOA), modulation, ripple, and slew rate (dl/dt, dV/dt).

MDO3LMT Limit and Mask Testing Application Module. Enables testing against limit templates generated from "golden" waveforms and mask

testing using custom masks.

### Recommended accessories

## **Probes**

Tektronix offers over 100 different probes to meet your application needs. For a comprehensive listing of available probes, please visit www.tektronix.com/probes.

TPP0500B 250 MHz, 10X TekVPI® passive voltage probe with 3.9 pF input capacitance
TPP0500B 500 MHz, 10X TekVPI® passive voltage probe with 3.9 pF input capacitance
TPP0502 500 MHz, 2X TekVPI® passive voltage probe with 12.7 pF input capacitance

TPP0850 2.5 kV, 800 MHz, 50X TekVPI® passive high-voltage probe

TPP1000 1 GHz, 10X TekVPI® passive voltage probe with 3.9 pF input capacitance

TAP15001.5 GHz TekVPI® active single-ended voltage probeTAP25002.5 GHz TekVPI® active single-ended voltage probeTAP35003.5 GHz TekVPI® active single-ended voltage probeTCP002050 MHz TekVPI® 20 Ampere AC/DC current probeTCP0030A120 MHz TekVPI® 30 Ampere AC/DC current probeTCP015020 MHz TekVPI® 150 Ampere AC/DC current probe

TDP0500500 MHz TekVPI® differential voltage probe with ±42 V differential input voltageTDP10001 GHz TekVPI® differential voltage probe with ±42 V differential input voltageTDP15001.5 GHz TekVPI® differential voltage probe with ±8.5 V differential input voltageTDP35003.5 GHz TekVPI® differential voltage probe with ±2 V differential input voltage

THDP0200 ±1.5 kV, 200 MHz TekVPI® high-voltage differential probe

±6 kV, 100 MHz TekVPI® high-voltage differential probe

±750 V, 200 MHz TekVPI® high-voltage differential probe

#### **Accessories**

**TPA-N-PRE** Preamplifier, 12 dB nominal Gain, 9 kHz - 6 GHz

TPA-N-VPI N-to-TekVPI adapter

**119-4146-00** Near field probe set, 100 kHz - 1 GHz

119-6609-00 Flexible monopole antenna
077-0981-xx Service manual (English only)

**TPA-BNC** TekVPI<sup>®</sup> to TekProbe<sup>™</sup> BNC adapter

TEK-DPG TekVPI Deskew pulse generator signal source

067-1686-xx Power measurement deskew and calibration fixture

SignalVu-PC-SVE Vector Signal Analysis Software