



What is the memory size used by the Mixed-Signal Probe?

2024-10-24 - Comments (0) - Tracing

The Mixed-Signal Probe is an add-on module for the CombiProbe 2, μ Trace® and PowerTrace-III that adds a 12-channel logic analyzer, 6 voltage channels and 2 current channels. Refer for more information to https://lauterbach.com/mixed_signal_probe.html

The memory is shared 50:50 between trace and Mixed-Signal probe. The number displayed **CAnalyzer.SIZE** or **CIProbe.SIZE** is however displayed in the unit of "records", and what a record is depends on the type of trace. For the Mixed-Signal-Probe, a record is always 32 bits and contains a timestamp with either an analog sample or the values of all digital signals.

Example: if the Mixed-Signal Probe is used together with a μ Trace®, then it gets half of the trace memory, i.e. 128Mbyte as the μ Trace® as 256Mbyte trace memory. The displayed size in TRACE32 for the Mixed-Signal-Probe is then $128\text{Mbyte} / 32 \text{ bits} = 32\text{M}$.

For digital signals, the Mixed-Signal Probe records signal changes (transients). The trace recording time depends thus on the number of times the recorded signals change. In the worst case, the signal would change with every sample. It is also possible to exclude a signal transient detection with the command

NAME.Set CIProbe.01 < some_name > NoTransient

TRACE32 additionally supports STREAM mode for the Mixed-Signal Probe: If the setup generates less than about 35 Mi records per second on average, the data can be transferred to the host on the fly with the μ Trace® acting as a large FIFO.