

LOTUS-X1 Characterization System

The LOTUS-X1 is a high-precision electronic characterization system for integrated circuits. Designed for R&D professionals and doctoral researchers, it enables accurate measurement and generation of small voltage and current signals for IC validation and testing.

Mechanical & Physical

- Weight: 2.8 kg
- Dimensions: 35.05 × 25.5 × 5.55 cm
- Enclosure: Anodized aluminum
- Mounting: Custom rail compatible

Power Requirements

- Adapter: CE-certified 12V DC (4A) external power supply

Compliance & Certifications

- Certifications: CE, FCC, ICES

Included Accessories

- Box Contents: Ethernet cable, power supply



PSMUs (Pulses Source Measure Unit)

Voltage	32 APMU channels, ± 5 V, Resolution: 366 μ V
Current	Ranges: 100 nA to 1 mA, Resolution: 12.2 pA ~ 122 nA, Max output: 16 mA
Sampling Speed	Max: 25 ns
Memory Length	1 M @ 100 ns, 8192 @ 25 ns
Timings	Min pulse: 40 ns ~ 200 ns (± 1 V ~ ± 5 V), Min read pulse: 300 ns, AWG/APG: 200 KHz ~ 500 KHz, Time resolution: 160 MHz (6.25 ns)

GPIOs (General Purpose I/Os)

Channels	32 high-speed
Buses	1x I2C, 1x to 8x SPI
Voltage	0.8 V ~ 5 V (variable), Resolution: 3.7 mV
Timings	Max frequency: 160 MHz, Time resolution: 6.25 ns

Power Supplies (PS)

Variable Supplies	3x (0.8 ~ 5 V @ 100 mA), 1x (2.5 ~ 5 V @ 100 mA), Resolution: 23.4 mV
Fixed Supplies	+8 V (500 mA), -8 V (500 mA)

Processing Units (PUs)

FPGA	8192 – 1 M memory buffer, 160 MHz frequency
CPU	4 Gb RAM, 1 Gbps Ethernet