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ALIARO Solution Brief

Functional Testing xMove Gobi Mini HIL

Perform functional tests on your powerful desktop functional tester from ALIARO and NI. Easy to connect and with our open API it is easier to connect to your existing test framework than ever. Our re-configurable and multi-functional I/O´s will greatly enhance your testing capabilities

Application

- Unknown test object parameters or changeable configuration
- Perform functional tests using manual and/or automated test cases
- Share the test environment between multiple projects
- Running smaller real-time applications or projects with NI VeriStand

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By using pre-defined scripts, the user can re-configure physical pins on the test system to be either an analogue or digital signal. Fault insertion is default on all pins.

You can also decide if it should be an input or output signal. The test system consists of a compact chassis with ALIARO's flexible and modular interface modules, Gobi, to enable extraordinary capabilities.

ALIARO offers the advantage of integration expertise and custom engineering from when implementing the test system to your test lab environment.

About Aliaro

Aliaro is an established test solution & HIL provider and NI Silver Alliance Partner with offices in USA, UK, China, and Sweden. Together with NI, they design modular, flexible, and cost-efficient solutions for testing and HIL that enable customers to work with open and changeable devices where rapid changes are allowed.

Contact Aliaro to learn more about how NI & Aliaro can help you increase product quality and accelerate testing timelines.

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NI + ALIARO = PERFORMANCE

The hardware and software from NI are used by customers world-wide to create high-performance solutions.

The ALIARO Functional Tester helps you develop and test multiple products and designs in a safe, robust and reliable environment.

The combination of NI and ALIARO technologies helps you increase the usage of your investment and improve quality.
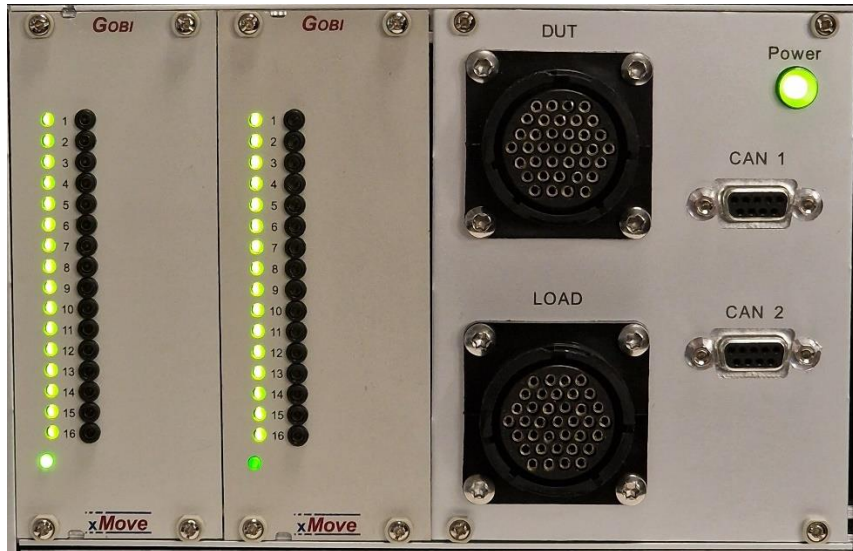
The standard configuration for the Functional Tester consists of 32 flexible channels with 2x 37 pin mass interconnects for Power and loads and 2 DSUB9.

Signal Types	
Total of physical channels	32
Prob of physical channels	32 (individual channels)
Led indication for physical channels	32 (Green, Red, Orange)
Configurable Analog Input	Up to 16
Analog Output	4 (quantity can be modified)
Configurable Digital Input	16 (quantity can be modified)
Configurable Digital Output	16 (quantity can be modified)
Load	32
Fault insertion	32
Amount of bus nodes	1 (quantity can be modified)
External DUT Power connection	Yes (AUX1/AUX2)
Physical dimensions (W x H x D)	(230 x 180 x 540 mm)
Physical weight	≈ 10kg
Software Support	LabVIEW, TestStand, VeriStand, Pythons

NOTE Above is the default setup but system can be integrated with a 4 slot or 8 slot CompactRIO

ni Gold Partner
SYSTEM INTEGRATION

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The solution is based on the NI / ALIARO platform and delivered by ALIARO

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Technical data

General	
Controller	Xilinx Artix-7 XC7A200T
Processor speed	1.91 GHz Quad-Core
Processor cores	4
Operating system	NI Linux Real-Time (64-bit))
Communication	Ethernet
RAM	2 GB
Temperature range	Lab conditions
Voltage (max) per channel	+/- 60 V
Current (max) per channel	16 Amps
Amount of flexible I/O	32
Fault insertion on all channels	Open circuit Short to +Batt Short to - Batt Short between signals

Bus communication	
Available CAN	1
Maximum rate CAN	1 Mbps
Maximum-rate CAN FD	5 Mbps
RS-232 Serial Port	1
Maximum baud-rate	921,600 b/s
RS-485 Serial Port	1
Maximum baud-rate	921,600 b/s
Ethernet Port	2
Network interface	10Base-T, 100Base-TX, and 1000Base-T Ethernet
USB Host	2
Compatibility	USB 2.0, Hi-Speed USB 3.1 Gen1, SuperSpeed
Maximum data rate	480 Mb/s / 5 Gb/s

Measurement system – Digital	
Digital Inputs	16 differential
Input range	0 V to 24 V
Sample clock frequency	0 MHz to 10 MHz
Digital Outputs	16 differential
Sample clock frequency	0 MHz to 10 MHz

Measurement system – Analog	
Simultaneous Analog Inputs	16 single-ended or 8 differential
ADC resolution	16 bits
Input range	±10 V, ±5 V, ±2 V, ±1 V
Timing resolution	12.5 ns
Sample rate (per channel)	233 kS/s
Analog Output	4
DAC resolution	16 bits
Range	±10 V
Sample rate	100kS/s/channel
Current drive	±3 mA/channel maximum
Amplifier (add-on)	<200mA/channel

Reconfigurable FPGA	
Type	Xilinx Artix-7 XC7A200T
Number of flip-flops	269,200
Available block RAM	13,140 kbits
Number of DMA channels	16
Number of logical interrupts	32

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