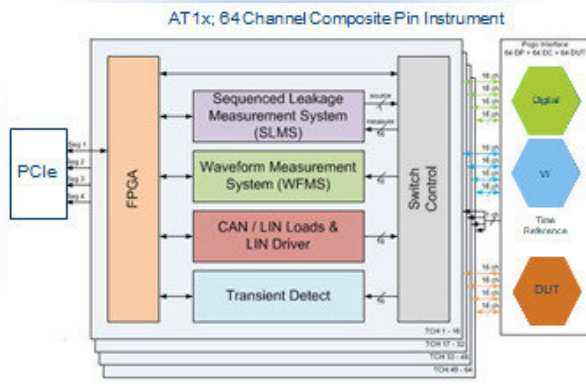


DIAMOND_x SERIES AT_{1x}



Automotive Test Composite Pin

Highlights:

- Composite Pin Instrument allowing for testing CAN and LIN, that conforms to SAE standards required for these automotive products
- Reduced loadboard complexity through CAN and LIN loads and LIN driver, along with integrated switch paths for multiple resources to DUT pin connections
- Transient detect capability to capture perturbations at the device in program development or production test

Features:

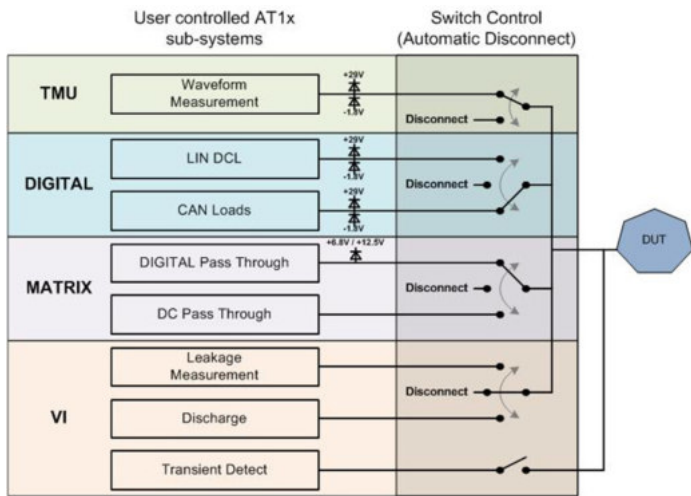
- 64 DUT channels
- Digital pin pass through connections for DPIN 96 and GX_{1x}
- DC analog pass through for performance VIs, like the VIS16
- Waveform Measure System
- LIN bus loads and Driver
- CAN bus loads
- Sequenced Leakage Measure System
- Transient detect

The AT_{1x} is a composite pin instrument focused on testing automotive electronics, specifically CAN and LIN bus devices. The instrument enables a single pin resource to provide all the DC, analog and digital stimulus required for performance testing to validate proper operation of devices implementing these buses. Capacitive and resistive loads are available and ensure the devices are tested under proper load conditions.

The instrument is able to support time measurement; rise time, fall time and pulse width using the integrated sampling Waveform Measure System.

Leakage testing is performed using the Integrated Sequenced Leakage Measurement System.

DIAMOND_x SERIES AT_{1x}



Switch Topology for AT_{1x} Automotive Test Composite Pin Instrument

- 64 DUT Channels
- 200 MHz BW Waveform Measurement System
- AC & DC Path Switching to DUT
- Leakage Measurement System that is Sequenced and support +100 V and -100 V
- Transient detection that enables monitoring for unexpected voltages or currents at the device under test

Unlike other high voltage digital test options the AT_{1x} provides integrated CAN and LIN features. These features remove the need to provide loads, switches and driver typically placed on the loadboard. This can take away the need to place more than 100 components in a quad site set up. This simplifies layout of the loadboard, reducing design time, lowering costs and improving operational reliability.

Key Specifications

Feature	Specification	Feature	Specification
SLMS Force Voltage Programming	0 to +100 V 0 to -100 V	Force Voltage Resolution Force Voltage Accuracy	3.13 mV nominal ±(50 mV + 0.4%)
SLMS Current Measure (Inmeasure Range)	-12.7 mA to +12.7 mA	SLMS Current Resolution Accuracy	99 nA nominal ±(750 nA + 0.3% I _{measure} + 10 nA * V _{force})
WFMS Voltage Range (S.E.)	0 V to +28 V	Voltage Accuracy, Single ended	±4 mV typical ±15 mV worst case
Voltage Range (Diff)	-28 V to +28 V	Voltage Accuracy, Differential	±6 mV typical ±20 mV worst case
WFMS Bandwidth Sampling Rate	200 MHz Typical 50 Msps	WFMS Memory/Ch Fastest Tr/Tf	8 K 5 nSec

