



World Leader in Precision Testers

***SUPPORTING
TEST EXCELLENCE
@
CLIC & KANAUE***

***HILEVEL
TECHNOLOGY, INC.***



HILEVEL TECHNOLOGY, INC.

www.hilevel.com



38 Years of Excellence In Test Systems

Presentation Agenda

1. Company Overview
2. HiLevel Products Overview
3. Product Specifications
5. Quality & Service
6. Demonstration
7. Summary & Questions

Company Overview

- Founded in 1979
California Corporation
Privately Owned
- HiLevel Worldwide Office Locations...

**we are
where you are**

HiLevel Office Locations

Portland



San Jose



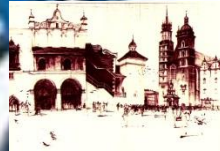
Orange County



Indianapolis



Krakow



Belarus



Germany



Japan



China



Taiwan

Malaysia



Prime Resource: Customers

Over 100 Customers Worldwide

- U.S. Navy (FA/Characterization)**
- Nasa (Production test - USA)**
- Freescale (Failure Analysis)**
- Northrop Grumman (Production Test)**
- Rockwell (Production/FA/Characterization)**
- ISE/ChipX (Production - USA)**
- Progate (Production - Taiwan)**
- SMIC (Production - China)**



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Our Mission

*To Provide This Industry
with a Sensible Solution:*

*The Most Cost-Effective Compact Failure
Analysis Tools & High-Precision Production
Tools Ever Made!*



GRIFFIN III



ETS788



**GRIFFIN III
HYBRID**

*Mixed-Signal
Available*

MAX2



DC3

Curve Master™





**HiLevel system direct docked to wafer sorter for
MultiSite Testing**



Precision Test System

The Griffin III is for:

Production Testing

Failure Analysis

Design Verification

Device Characterization

Deepest Capture Memory

Up to 200/100MHz

500MHz Clocks

High Precision DC PMU

Digital & Mixed Signal, up to 512 pins





**Precision
Test System**

Powerful Tester Features

- Up to 16 sites for Multi-site testing
- Full “Next Cycle” Operation

Data Valid for the full next cycle

- 64M vector memory *and* 64M capture memory
- Real-Time Failure counter
- Sophisticated Acquisition compression
- High-speed Acquisition Search

Search 64M of capture in <3 sec

- Up to 128 scan chains and up to 8Gbit scan depth

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GRIFIN

Precision Test System

Marketplace

Automotive
Devices

Aerospace
& Military

Communications
& Controllers

Consumer
Products



Pin Electronics Card



32 independently controlled pins; format control, timing select; drivers, receivers, PMU/32, 1A DUT Power, programmable loads, 5mV resolution



GRIFIN

Precision Test System

Advantages

*Fully optimized
cost for higher
ROI*

*Powerful
Characterization
Tools*

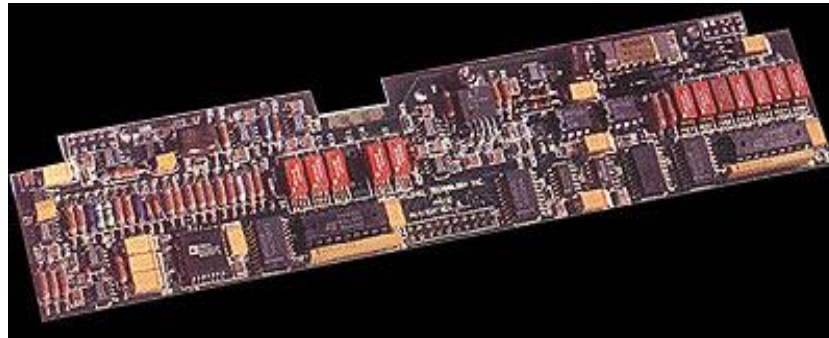


*Quiet & Reliable
Design*

*Efficient MultiSite
for true concurrent
device testing*

Multiple DC PMU

- One PMU per 32 pins
- +/- 150mA of Force current
- -8V to +8V at 5mV resolution





***Precision
Test System***

Differentiations

- True parallel test architecture
- Great repeatability & trustworthy test results
- Proven Quality & Reliability
- Focus on forward-compatibility
- User friendly intuitive design
- Modular design of MX2 option
- Zero-Footprint
- Portable, Quick, and Easy Setup Process





GRIFFIN

Precision Test System

Innovative



Intuitive

In Step With Technology



ETS788

Test System

HILEVEL's ETS788 Test Station combines the most popular features of our ETS series testers with the modern technology and precision of our Griffin systems. This means that true APG memory test and single vector pattern generator commands are available with the latest high performance pin electronics and precision DC Parametrics.



In Step With Technology



ETS788

Test System

- Up to 16 sites for Multi-site testing
- True APG Memory Test
- Precision DC PMU
- Real-Time Failure counter
- Test rate up to 55/110MHz
- Dual Comparators per pin
- Sophisticated Acquisition compression
- High-speed Acquisition Search
Search 64M of capture in <3 sec
- 4M vector memory and 64M capture memory





GRIFFIN III HYBRID

Production Test System

AC & DC Tester

The Griffin III Hybrid is for:

Production Testing

Failure Analysis

Design Verification

Device Characterization

Deepest Capture Memory

Up to 200/100MHz

500MHz Clocks

High Precision DC PMU

Digital & Mixed Signal

High pincount - up to 1152 pins

Lowest cost per pin



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GRIFFIN III
HYBRID

**Production
Test System**

Powerful Tester Features

- Up to 4 sites for Multi-site testing (160 pins per site)
- Up to 128 channels per board
- Static vector on DC channels with I sink/source
- Four DC PMU units per DC128 board
- Multiple power supplies for modern devices
- 64M vector memory *and* 64M capture memory
- Real-Time Failure counter
- Sophisticated Acquisition compression
- High-speed Acquisition Search

Search 64M of capture in <3 sec

- Up to 32 scan chains and up to 8Gbit scan depth



GRIFFIN III
HYBRID

***Production
Test System***

Marketplace

**Automotive
Devices**

**Aerospace
& Military**

**Consumer
Products**



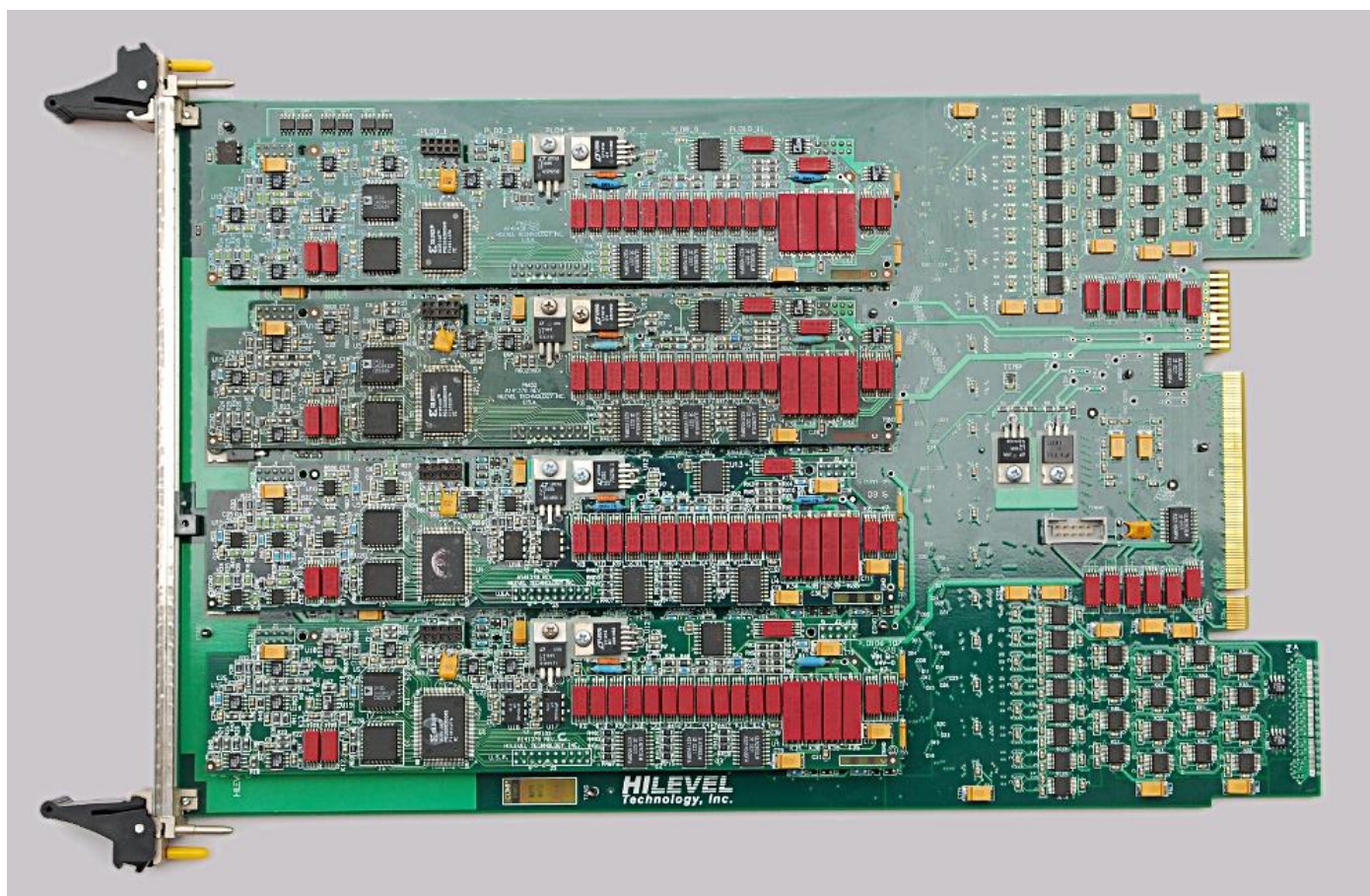
**Communications
& Controllers**



GRIFFIN III
HYBRID

*Production
Test System*

DC128 board





GRIFFIN III HYBRID

Production Test System

Advantages

High pincount
in compact
footprint



Powerful
Characterization
Tools

Quiet & Reliable
Design

Multiple PMUs per
board for true
concurrent
device testing

Summary of Benefits

- ATE Power
- Fraction of ATE Cost
- “Zero-Footprint” yet high pin count
- Portable
- Quick, Easy Setup & Process
- Windows 7 or 10 Operating System
- Minimum Operator Training Required
- Relaxed Environmental Requirements



**All New Analog
Resources for
Griffin Series
Test Systems**



Modular Design

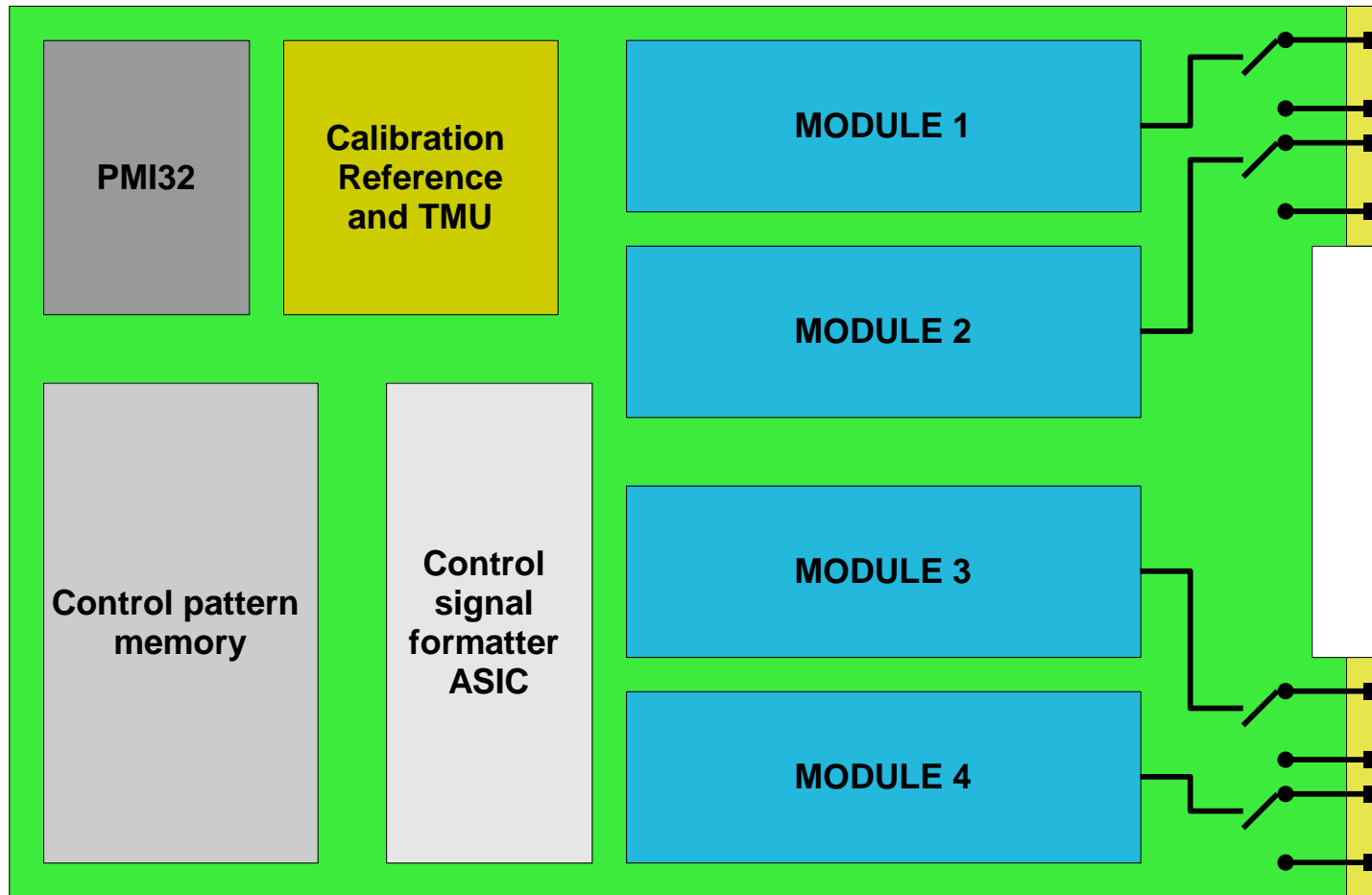
Mix/Match analog resources:

- 16 bit AWG
- 24 bit AWG
- 16 bit digitizer
- 24 bit digitizer
- High-voltage digital pins





Block Diagram



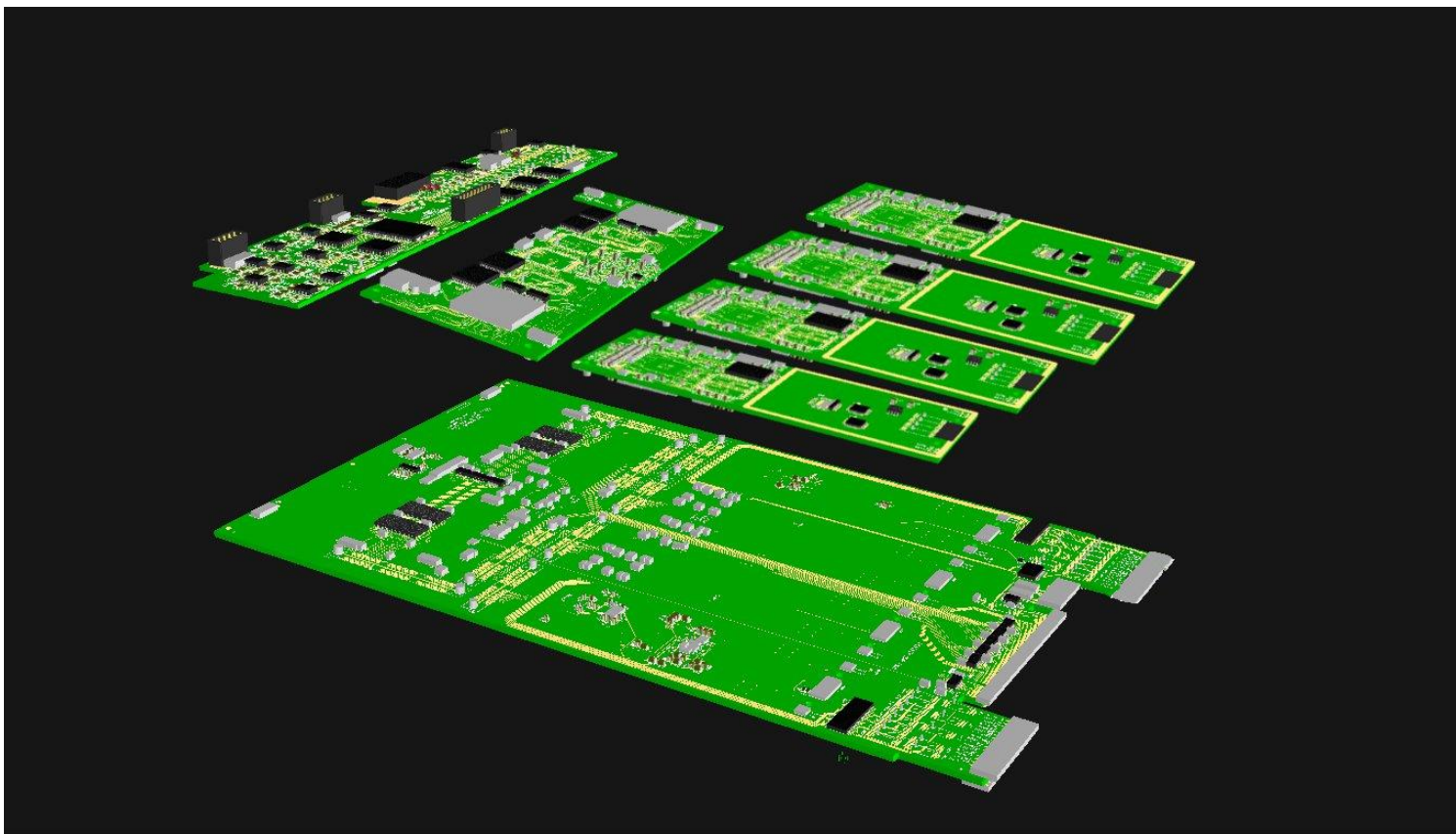


Configuration

- Install MX2 in PE slots of G3 or G3H
- Signals accessed via normal pin interface, no cables
- Mix and match any resources:
 - Three 24-bit AWG and one 24-bit Digitizer, or
 - Two 16-bit AWG, one 16-bit Digitizer and one 24-bit Digitizer, or
 - One 24-bit AWG, one Hi-V module and two 24-bit Digitizers, or
 - One of everything
 - Mix in any combination



3D view



Easy GUI setup

MX Setup :Untitled

AWG16-12A DIG16-12B AWG24-12D

Name

☒ Enable

Loopback Local

☒ Bypass LPF

Cutoff freq. 10 kHz

Range ± 0.75 V

Output Offset 0.000 V

Output Single Ended

Impedance 600 Ohm

Down

414
410
415
411

Analog Sample Memory Program

AWG24-12D

Available 1048000

1 MS

0 MS

Add Remove Generate

Value	Parameter Name



DC³

**DC Parametric
Test System**
with Curve Trace

Co-Optive DC Parametric Tester

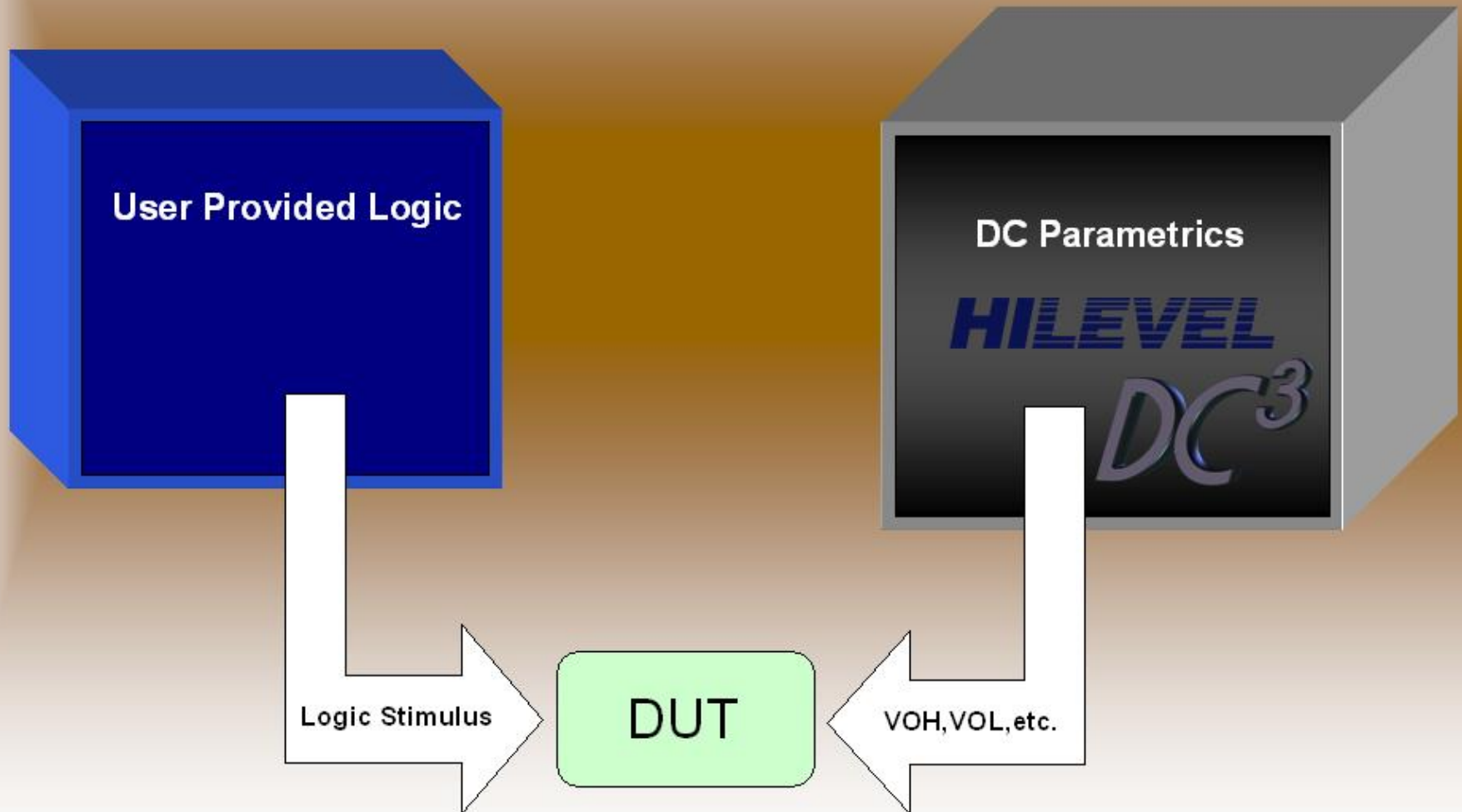
- DC and Continuity for Low-Cost Production Test
- Up to 2,048 pins
- Up to 64 sites
- High-Precision PMU
- Integrate with your own logic resources...



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DC³ Co-Optive Tester

In partnership with *YOUR* logic





Precision Curve Tracer

Low-Cost Curve Tracer for Failure Analysis

- Up to 2048 pins
- Expandable in 128-pin increments
- High Precision DC PMU
- Proven and modern technology and architecture
- Verify device authenticity



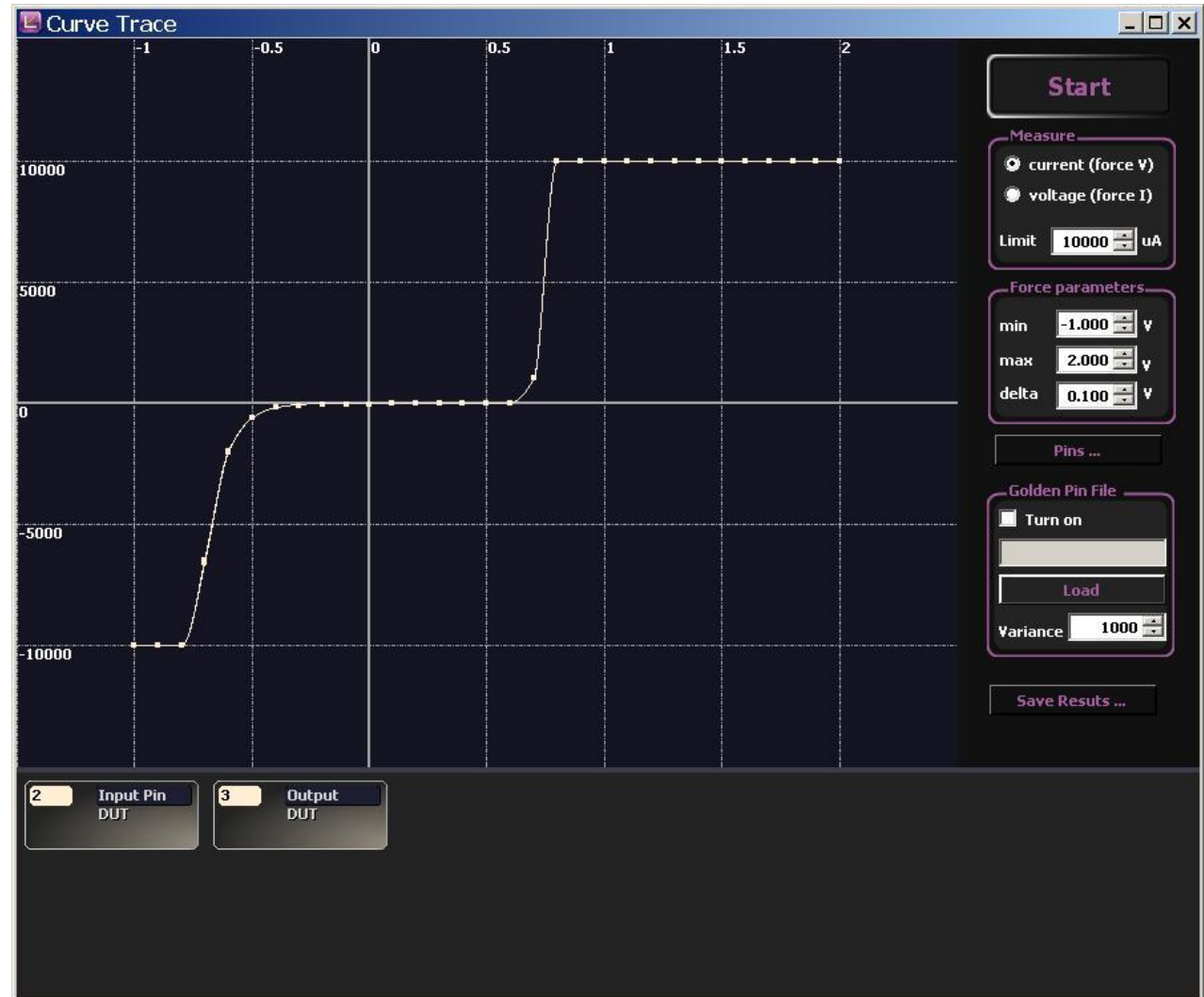
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Precision Curve Tracer

Curve Trace

- Easy setup
- User definable parameters
- View by current or voltage
- Windows 7 platform





Precision Curve Tracer

Curve Trace

Golden Pin

User-defined variance is applied to a known-good device. Then the saved values can be loaded for comparison to more devices





Precision Curve Tracer

DC-HiV

Curve Tracing with High Voltage

- $\pm 120\text{V}$ up to 200mA
- $\pm 30\text{V}$ up to 1A
- Maximum power 25W
- 8 outputs per board
- Mix with DC128 boards



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**Typical MTBF of 16,000 hours
for Pin Electronics cards**

For example, a pin electronics card could
operate continuously for up to three years
without failing

TQM Indicators

- ISO 9000 Certification
- Support of Motorola's Six Sigma Process
- U.S. Navy Federal Supply Class (FSC)
("All Green" Classification)
- Complete Northrop Grumman Supplier
Q.C. Survey & Plant Inspection
- CSA certified (ETS)
- CE marking



Support and Maintenance

- **One Year Warranty - Parts & Labor**
- **Patented Service-friendly Design**
- **Individual access to System Boards**
- **Easy Access to Power Supplies and Fans**



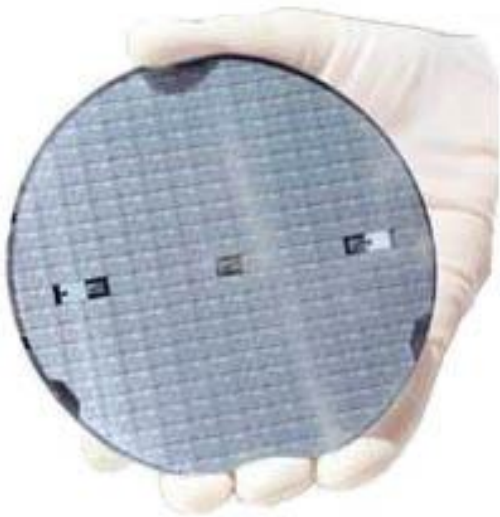
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Summary of Benefits

- Excellent Customer Support since 1979
- Quick & Flexible “Small” Company
- A History of Compatibility
- Latest Technology
- Proven Quality
- Unmatched Price/Performance

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Thank you!

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