

HILEVEL TECHNOLOGY, INC.

ETS788 & ETS788L Test Station



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. Combining the benefits of cost-effective production testing with engineering analysis, the ETS788 achieves faster time to market by providing test results quickly and smoothly from design to manufacturing release.

Cut the cost of test today with the ETS788 system from HILEVEL

ETS788

Presto

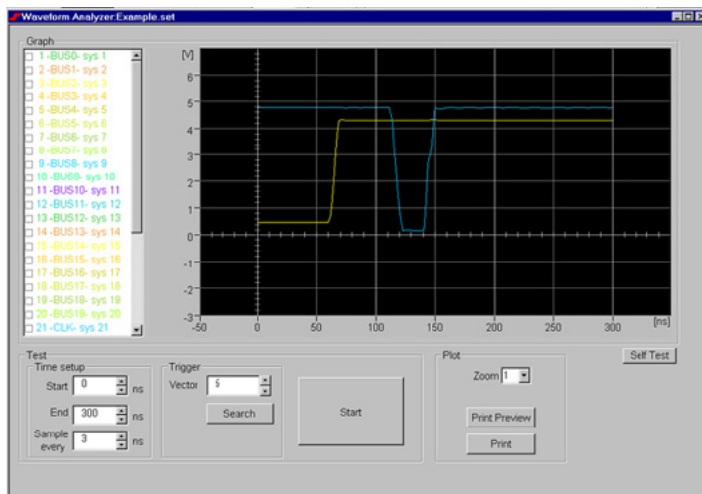
Simply The Best For Test

Our Presto Test Solution software brings real intuition to test development and operation. Running under Microsoft Windows, Presto places all of the powerful features of the ETS788 right at your fingertips. Tried and true Engineering tools have been expanded to include powerful new features. And Presto's Production Operator Console provides an easy user-friendly platform, so crucial for Manufacturing. Presto takes full advantage of Windows power with context-sensitive help, true graphics, and versatile user customizing.

The screenshot displays the Presto software interface with the following components:

- Menu Bar:** File, View, HILEVEL, Vector, Analysis, SingleStep, Window, Help
- Toolbar:** Standard Windows-style icons for file operations and test execution.
- Left Panel (Main):** A vertical navigation menu with icons for Main, Test Setup, Vectors, Analysis, DC PMU, AC PMU, Shmoo Plot, DUT Continuity, Pin List, Translators, and Mixed Signal.
- Test Setup:Untitled Panel:**
 - Pin Setup:** Includes fields for Group Name, Display (Binary), Header Mode (Group Name), Pin Direction (DUT Output), Stimulus Format (NRZ), Logic Levels (Low Level: 0.000V, High Level: 3.000V, Threshold: 1.500V), Parallel Load (50Ω @ 0.000V), and Programmable Load (IOL: 0.0mA, IOH: 0.0mA, Commutation: 2.000V).
 - Power Setup:** Features a table for Supply #1-4 with Output and Limit values, and buttons for Sequencing (Power-Up: 1 2 3, Power-Down: 3 2 1), Measure (Single, Continuous...), and On/Off Delay per Supply (0 milliseconds).
 - DC Pin Setup:** Includes an Assign button.
 - MultiSite Setup:** Includes MultiSite and Expand buttons.
 - Run Setup:** Includes Test Rate (Freq: 10.000, Period: 100.000), Stop on... (Vector), Stop (4096), Last Vector (4096), Clock Source (Internal), Sequencing (Sequential), Stop Mode (Halt), Scan Test (Disabled), and Modes (Mixed Signal, HS Clock).
- Bottom Panel:** For Help, press F1; Vectors Examiner; Vector Fail Count; NUM; Stopped (with a green indicator).

The ETS788 provides the accuracy and resolution so crucial to device characterization. 50ps timing generator resolution provides superior characterization power for timing measurements. Clocks can be generated at twice the data rate using our powerful Timing On-the-Fly feature. Wafer Sort applications and full IC Handler control are supported by HILEVEL's "Auto Test" – a fast and easy Production Test automation tool. High throughput lowers cost-per-test for high volume production. Memory Test for process analysis, and Oscilloscope and Curve Trace for failure analysis are standard features. Translation and file import tools, real-time editing and quick display manipulation give our testers the reputation as the easiest to learn and quickest to setup.



The ETS788 operates at speeds up to 50MHz bi-directional data rate with 50picosecond resolution for up to 512 independently programmable pins (max 256 pins for ETS788L). The system configuration includes Presto operating software, Automation C Tools for Production, a high-performance Windows PC Workstation, USB interface, 32 globally assignable timing generators and multiple DCPMUs, along with active programmable loads per pin.

APG Memory Test

Patented HILEVEL-designed ASICs provide a highly-integrated solution for lowering the cost of memory test. Multiple APG operations are defined (including multiplication of pseudo random numbers) using *HATGOL - Hilevel Algorithmic Test Generation Oriented Language*. Effectively, the APG is a "per bit" operation. A salient feature of the HiLevel APG is the "Adaptive Addressing Method".



Road Ready!

Do you require a very portable system for exposure testing or other FA purposes? Then the ETS788L with optional Road Ready travel case is for you. Simply latch on the front and rear covers and you are ready to go.



HILEVEL's Road Ready travel case operates like a piece of luggage, with built in wheels and a telescoping handle. When you reach the lab you can just remove the front and rear covers and use the ETS788L right in the case if you wish. Whether going to the top of a mountain or deep underground, the Road Ready travel case will get you there.

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TEST RATE

Max Clock Rate: 100MHz
 Max Data Rate: 50MHz
 Resolution: 25kHz
 Accuracy: .01% of programmed value

TIMING

Timing Generators: 32, Globally Assigned
 Time Sets on the fly: Yes
 Range: Entire clock cycle + 10ns
 Resolution: 50ps
 EPA (Edge Placement Accuracy):
 Standard Calibration: ±1ns
 Precision Calibration: ±700ps

PIN ELECTRONICS

All pins Input or Output or Bidirectional

DRIVERS

Min/Max Channels:
 ETS788: 32/512
 ETS788L: 32/256
 Pin To Pin Skew: +/- 500ps
 VIH: (VIL + 250 mV) to 6.5V
 VIL: -1.5V to 6.0V
 Resolution: 5mV
 Rails: 1 pair per pin
 Accuracy: +/- 10mV
 Sink/Source Current: 50mA/50mA
 Slew Rate: 2V/ns
 Total Capacitance: (Lumped + Continuous) <50pF

RECEIVERS/COMPARATORS

Range: -1.5V to +6.5V
 Resolution: 5mV
 Rails: 1 per pin
 Accuracy: +/- 10mV

DC PARAMETRIC MEASUREMENT UNIT

Force Current Range: -150 mA to +150 mA
 Resolution & Accuracy: Range Dependent

Current Ranges

± 200 nA
 ± 2 µA
 ± 20 µA
 ± 200 µA
 ± 2 mA
 ± 20 mA
 ± 150 mA

Resolution

10 pA
 100 pA
 1 nA
 10 nA
 100nA
 1uA
 10uA

Accuracy

± 0.4% of Value + 40 pA
 ± 0.3% of Value + 400 pA
 ± 0.2% of Value + 4 nA
 ± 0.2% of Value + 40 nA
 ± 0.2% of Value + 400 nA
 ± 0.3% of Value + 4 uA
 ± 0.4% of Value + 40 uA

PROGRAMMABLE PATTERN GENERATOR

Modes: Sequential, Programmed
 Program Mode Commands: Jump, Conditional Jump, Call, Conditional Call (four levels of Nesting), Return, Conditional Return, Loop (Repeat), Page (16 bit pages), Set Counter Value, Decrement Counter, Clear Fail Status, Trace mask On / Off, Pattern Match function.

VECTOR DEPTH

4M behind every pin
 Memory Test Mode: Up to 2G
 Acquisition Memory: 64M per pin
 Program Memory: Equal to vector depth

DATA FORMATS

NRZ Non-return to zero
 R0 Return to zero
 R1 Return to one
 RI Return to inhibit
 RC Return to compliment
 (Surround by compliment)

DC PARAMETRIC MEASUREMENT UNIT

One DCPMU per 32 pins
 Force Voltage Range: -8V to +8V
 Resolution: 1mV
 Accuracy: 0.2% ± 2mV
 Voltage Measurement Range: -8V to +8V
 Resolution: 1mV
 Accuracy: 0.2% ± 2mV

Current Measurement Range: ± 150 mA
 Resolution & Accuracy: Range Dependent

DUT POWER SUPPLIES

PS1

Range: 0 to +8V, 0 to 2A

Resolution: 10mV, 5mA

Accuracy: +/-15mV

PS2 & PS3

Range: +/-16V, 0 to 1A

Resolution: 5mV, 5mA

Accuracy: +/-15mV

PS4

Range: 4A @ 0 to 3.7V

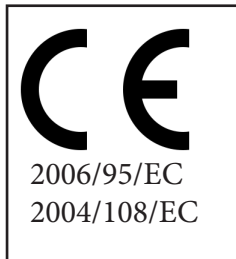
Resolution: 5mV, 5mA

Accuracy: +/-15mV

Current Measurement Resolution

Range dependent.

Best resolution is 1 nA.



WORKSTATION AND SOFTWARE

OS: Windows

Automation: ACT (Automation C Tools),
TexTest for ASCII test control,
or HILEVEL AutoTest (GUI)

Controller: PC Windows workstation, and
HILEVEL Presto software

ENVIRONMENTAL

Power

110VAC single phase:

Max 8A @ 128 pins

Max 15A @ 256 pins

220VAC single phase:

Max 5A @ 128 pins

Max 9A @ 256 pins

Max 15A @ 512 pins

Temperature

60 to 90 °F (16 to 32°C)

Relative Humidity

20 to 80%

Dimensions

ETS788: H20.0" X W 17.25" X D 17.25"

ETS788L: H13.0" x W17.25" x D17.25"

Weight

ETS788

128pin - 90 lbs

256pin - 120 lbs

512pin - 150 lbs

ETS788L

128pin - 75 lbs

256pin - 105lbs

Call 1-800-HILEVEL for pricing and demonstrations.

Specifications subject to change without notice.

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