

AEHR TEST SYSTEMS



Setting the Test Standard for
Tomorrow

December 2014
Nasdaq: AEHR

Safe Harbor Statement

This presentation contains forward-looking statements that involve risks and uncertainties relating to projections regarding industry growth and customer demand for the Company's products. Actual results may vary from projected results. These risks and uncertainties include without limitation, acceptance by customers of the ABTS™ and FOX™ technologies, the Company's development and manufacture of a commercially successful wafer-level test and burn-in system, world economic conditions, the timing of the recovery of the semiconductor equipment market, the Company's ability to maintain sufficient cash to support operations, and the potential emergence of alternative technologies, which could adversely affect demand for the Company's products in fiscal year 2015. See the Company's recent 10-K and 10-Q reports filed with the SEC for a more detailed description of the risks facing the Company's business. The Company disclaims any obligation to update information contained in any forward-looking statement to reflect events or circumstances occurring after the date of this presentation.

Aehr Test Systems Company Overview

Leading provider of **systems that reduce the cost of testing and reliability screening of integrated circuits (ICs)** used in today's cutting edge technology.

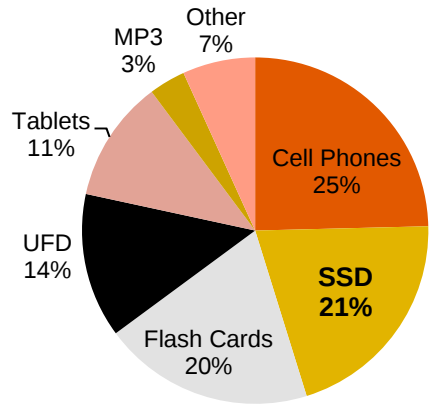
- Listed on **NASDAQ: AEHR**
- HQ in Fremont, CA
- 76 employees
- **2,500 systems** in production worldwide
- **Current TAM:** \$100 million annually
- Fiscal year ends May 31:
 - **FY13 rev:** \$16.5M, up 6%
 - **FY14 rev:** \$19.7M, up 19%
- **New emerging IC test markets:**
 - **SSD Flash** testing market: **new \$200-\$300 million** annual market opportunity
 - **Emerging Automotive IC** testing market: **new \$50-\$75 million** annual market opportunity
 - **Wafer Level Reliability** testing market: **new \$50 million** annual market opportunity
- New emerging test markets **driving expanded TAM** to **\$400 - \$500 million**

Substantial Emerging Opportunities

- **New Emerging IC Test Markets:**
 - **SSD Flash manufacturers** (\$200 - \$300 million annual TAM opportunity):
 - Samsung
 - Intel
 - Micron
 - Hynix
 - Toshiba
 - SanDisk
 - **Emerging Auto IC manufacturers** (\$50 - \$75 million annual TAM opportunity):
 - nVidia
 - Qualcomm
 - Broadcom
 - Sierra Wireless
 - Toshiba
 - Intersil
 - TI
 - Renesas
 - Linear Technology
 - **Wafer Level Reliability testing market** (\$50 million annual TAM opportunity):
 - TI
 - Fujitsu
 - Renesas
 - Infineon
 - Freescale
 - Intel
 - JDSU
 - Samsung
 - Global Foundries

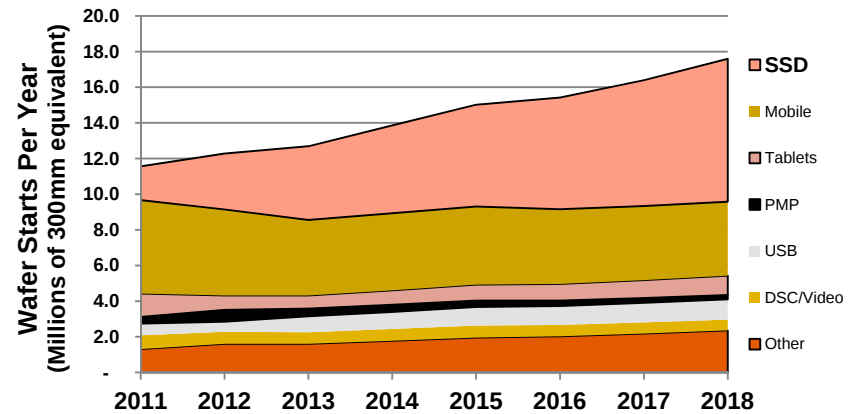
SSD Flash Cycling Market

NAND Application Share (2013)



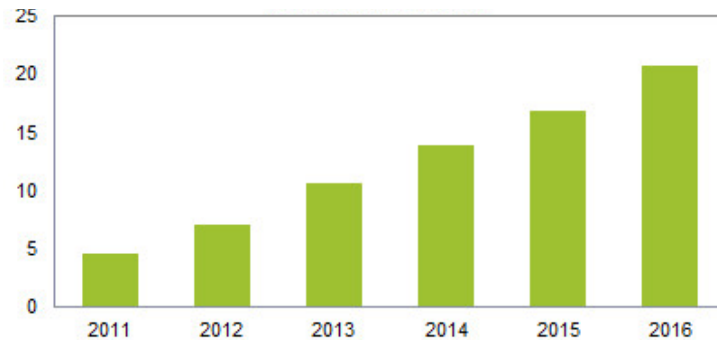
Source: Storage Look, 2013

NAND Wafers by Application

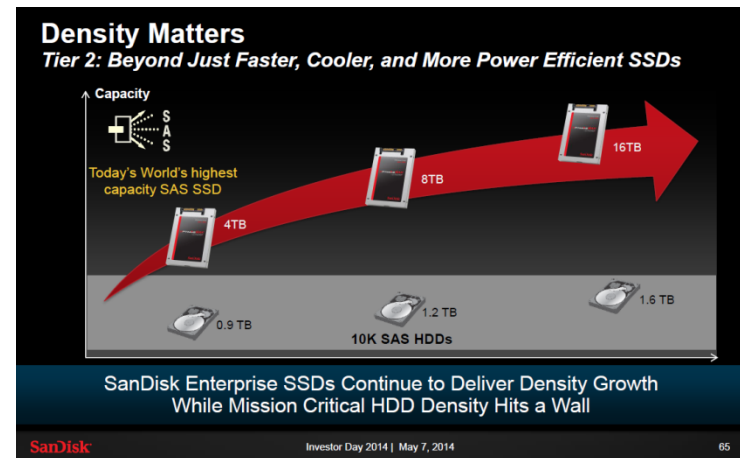


Source: VLSI Research 2014

Worldwide SSD Revenue (\$B)



Source: HIS iSuppli Research, 2013



SSD Flash Wafer Level Cycling Yield Savings

NAND FLASH SSD – Stacked die yield loss w/o WLBI

Die Stack	Effective Final Yield for Stacked Die Package								
16	98.4%	92.3%	85.1%	78.5%	72.4%	66.7%	61.4%	56.6%	52.0%
12	98.8%	94.2%	88.6%	83.4%	78.5%	73.8%	69.4%	65.2%	61.3%
8	99.2%	96.1%	92.3%	88.6%	85.1%	81.7%	78.4%	75.2%	72.1%
4	99.6%	98.0%	96.1%	94.1%	92.2%	90.4%	88.5%	86.7%	84.9%
1	99.9%	99.5%	99.0%	98.5%	98.0%	97.5%	97.0%	96.5%	96.0%
	Per Die Yield								

8 Die Stack Yield Loss
w/o WLBI:

98.5% – 92.3% → **6%**

97.5% – 85.1% → **12%**

96.5% – 74.4% → **22%**

NAND FLASH SSD – Stacked die yield loss w/ WLBI

Die Stack	Effective Final Yield for Stacked Die Package								
16	99.4%	99.0%	98.5%	98.0%	97.5%	97.0%	96.5%	96.0%	95.5%
12	99.4%	99.0%	98.5%	98.0%	97.5%	97.0%	96.5%	96.0%	95.5%
8	99.4%	99.0%	98.5%	98.0%	97.5%	97.0%	96.5%	96.0%	95.5%
4	99.4%	99.0%	98.5%	98.0%	97.5%	97.0%	96.5%	96.0%	95.5%
1	99.4%	99.0%	98.5%	98.0%	97.5%	97.0%	96.5%	96.0%	95.5%
	99.9%	99.5%	99.0%	98.5%	98.0%	97.5%	97.0%	96.5%	96.0%
	Per Die Yield								

16 Die Stack Yield Loss
w/o WLBI:

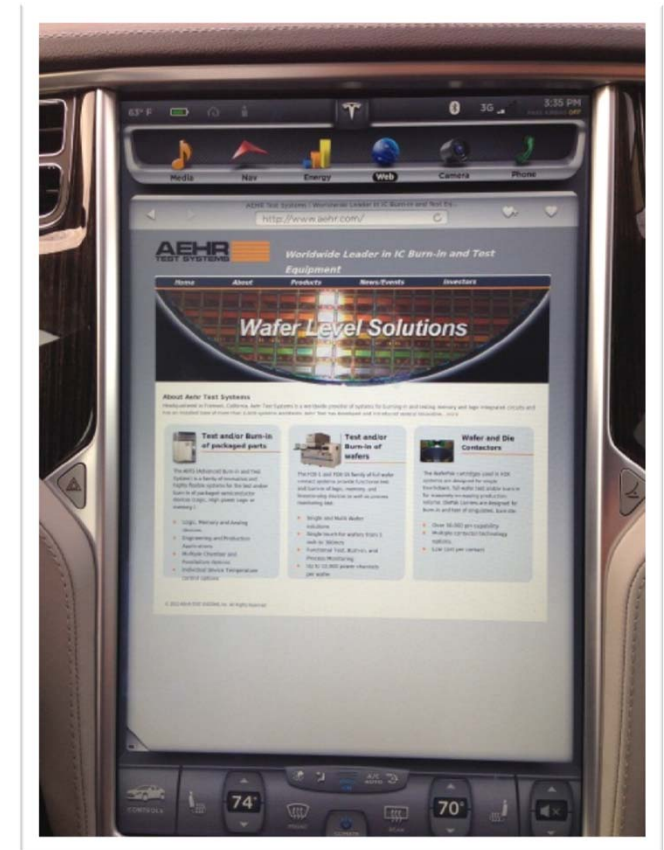
98.5% – 85.1% → **13%**

97.5% – 72.4% → **25%**

96.5% – 61.4% → **35%**

Emerging Auto IC Test Market Opportunity

- **Automotive IC growth** in sensors, control, information, and entertainment has **substantially higher requirements** for initial quality and long term reliability



Emerging Auto IC Market Drivers

New Automotive Technology Driving Automotive IC Test Market Growth



Our Products

ABTS

Packaged Part Test & Burn-in Systems



Cost-effective, reliable and highly configurable Test & Burn-in Systems

FOXTM 15

FULL WAFER CONTACT

Multiple Wafer Test & Burn-in Systems and Contactors



Unique solution for test & burn-in for KGD and automotive applications

FOXTM 1P

FULL WAFER CONTACT

Single Wafer Test & Burn-in Systems and Contactors



Reduced cost of test with high throughput parallel test at wafer probe

AEHR
TEST SYSTEMS

Significant Worldwide Customer Base



Over 2500 Systems Shipped Worldwide

(Partial Customer List)

Aehr Burn-in & Test Innovations

Memory



ATS-12000
Dynamic
Burn-in

1977



MBT
Test During
Burn-in

1980s



MTX
APG Functional
Test & Burn-in

1990s



ABTS-M
APG Functional
Test & Burn-in

Today

Logic



ATS-12000
Dynamic
Burn-in



ATX
Monitored
Burn-in



MAX
Monitored
Burn-in



ABTS-L/P
Functional
Test & Burn-in

Addressing Test & Burn-in Needs



ABTS
Advanced Burn-in
and Test System

ABTS Family of Packaged Part Test & Burn-in Systems

- Automotive, Mobile Processors, Video/Graphics, 4G Comms, High Power SOCs, and Memory ICs
- Proprietary family of high performance thermal chambers
- Turn-key solution for individual temperature control of each device under test

ABTS / MAX Production Test Floor





Full-Wafer Test Roadmap

Systems



14 200mm Wafers
Active Thermal Control



Single 300mm Wafer
Liquid Thermal Control



15 300mm Wafers
Liquid Thermal Control



Single/Multi 300mm Wafers
Active Thermal Control

1995

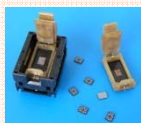
2002

2006

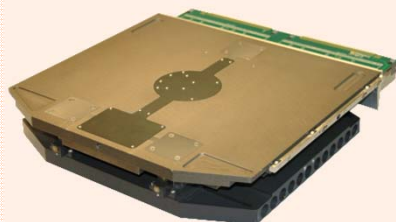
2009

2014/15

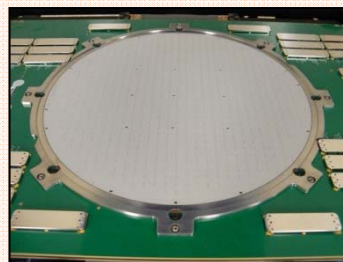
Contactors



Singulated Die
Contactor/Carrier



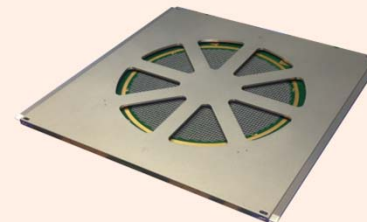
200mm Wafer
WaferPak Cartridge



300mm Wafer
WaferPak Contactor



200mm Wafer
WaferPak Cartridge



300mm Wafer
WaferPak Cartridge



Multi-Wafer Test & Burn-in

- **Cost-effective Solution for Producing Known-Good-Die (KGD)**
 - Stacked and Multi-Chip Packages
 - Zero-defect tolerant applications
- **Wafer Level Reliability test of automotive, communication, and mission critical ICs**
 - Move packaged part test and burn-in to wafer test
 - Highest reliability and handling for zero PPM targets
- **SSD Flash Wafer Level Cycling**
 - Significantly Improves yield on Stacked Package Devices
 - Reduces wafer sort and final test costs by allowing functional test to be done at burn-in



High Volume Manufacturing Floor





FOX-1P Family of Single Wafer Test & Burn-in Systems

- **Lowest Test Cost Per Wafer** – More test is moving from packaged parts to wafer for stacked die applications
- **Industry-first Universal Channel Architecture** - Thousands of resources enable full-wafer test
- **Optimized for DFT, BIST, and Higher Parallelism**
- **Automotive ICs** – Full wafer functional, stress, and burn-in test of automotive ICs
- **Discrete and Embedded Memories** – Low cost full wafer test of discrete or embedded memories

FOX-1 Production Test Floor



Investment Considerations

- **Current TAM of \$100 million expanding to \$400 - \$500 million**
- **New emerging IC test markets have no incumbent test providers:**
 - **SSD Flash testing market (\$200 - \$300 million annual TAM opportunity)**
 - **Emerging Auto IC testing market (\$50 - \$75 million annual TAM opportunity)**
 - **Wafer Level Reliability testing market (\$50 million annual TAM opportunity)**
- **New FOX product line uniquely positions AEHR to take advantage of substantial new IC test markets in 2015 and beyond**

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