

AEHR TEST SYSTEMS



Setting the Test Standard for
Tomorrow

December 2015
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 2016. 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 Investment Highlights

- Technology trends driving transformation in burn-in test process, migrating functional test from packaged parts to wafer level
 - Stacked die for SSD NAND flash
 - Small, hard-to-handle sensors in high value systems (mobile phones, tablets, wearables, IoT)
 - Automotive Infotainment and Advanced Driver Assistance Systems
- Aehr has proprietary technology, capabilities, and IP to address wafer level burn-in opportunity
 - No incumbent ATE in these markets
- Aehr is working with leading customers to commercialize wafer level burn-in technology – recently announced significant new customer win and key new products under development with customer commitments/NRE with revenue shipments in current FY'16
- Management has experience driving new product adoption and relationships in the semiconductor test industry to achieve strong market penetration
- Operating infrastructure to address significant customer opportunities and drive dramatic profitability growth

Aehr Test Systems

- **ABTS** Advanced Burn-in and Test System platform for packaged parts introduced in 2009 with latest version ABTS-P/Pi introduced in 2012/13 (Replacement for successful **MAX** Burn-in System)
- Successfully developed Wafer Level Burn-in solution for DARPA contract in early 2000s with proprietary **WaferPak** full wafer contactor
- Introduced **FOX-1** (single) and **FOX-15** (Multiple) full wafer test and burn-in systems in 2007/2008
- **FOX-15** uses Aehr Test **WaferPak** contactors (recurring revenue stream)



ABTS Installation



FOX-1 Installation



FOX-15 Installation

Aehr Test New Product Lineup

- Worked with 3 of top 10 semiconductor manufacturers in the development of the **ABTS** and **ABTS-P** systems to address reliability qualification and high volume production burn-in of automotive devices and Application Processors
- Worked with multiple lead customers in the definition / development of the new **FOX-1P** full wafer test and burn-in system
- Worked with multiple NAND manufacturers in the definition / development of the new **FOX-XP** multi-wafer system for Flash memory test and burn-in
- Currently engaged with several customers on new confidential applications for wafer level burn-in of **sensors and transceiver devices**



ABTS-P Burn-in System



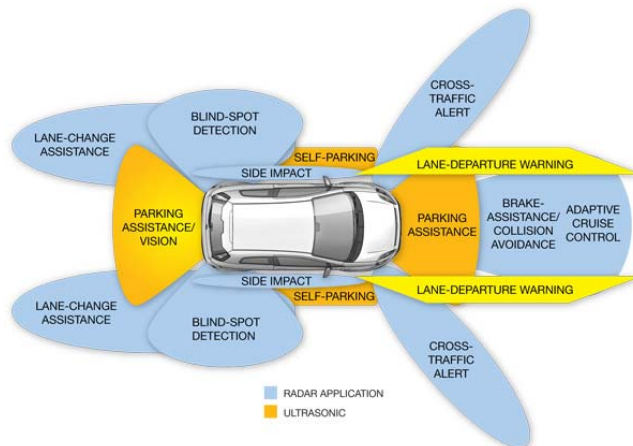
FOX-1P Test System



FOX-XP Multi-Wafer Test System

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**



*Automotive Sensors and
Advanced Driver Assistance Systems*



Apple CarPlay



ABTS Production Test & Burn-in Floor





Wafer Level Test & Burn-in 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

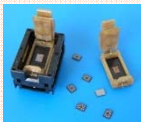
2002

2006

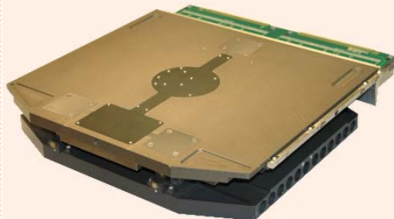
2009

2014/15

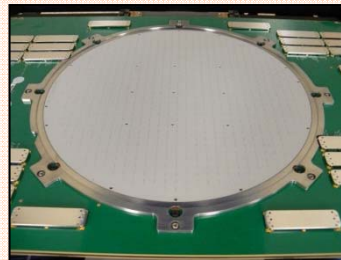
Contactors



Singulated Die
Contactor/Carrier



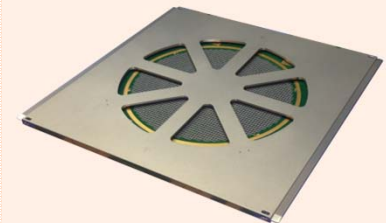
200mm Wafer
WaferPak Cartridge



300mm Wafer
WaferPak Contactor



200mm Wafer
WaferPak Cartridge



300mm Wafer
WaferPak Cartridge



Patents and IP Protected Wafer Level Test & Burn-in Innovations



- WaferPak temperature control methods
- Vacuum & pressure-based WaferPaks
- Maintaining probe contact over temp
- Electrical components in WaferPak
- Individual DUT power supplies
- Per Die Current Protection
- Redundant power supplies
- Portable WaferPaks
- and more . . .



Multi-Wafer Production Test & Burn-in



Wafer Level Burn-in: Why Now?

NAND Flash Market

- Stacked die for SSD dramatically exacerbates any die yield issues
- Finding yield issues post packaging on one die results in scrapping the entire package
- Very costly to stack more than 4 die due to these yield issues

Wafer level burn-in eliminates packaged part yield issues and enables higher storage densities

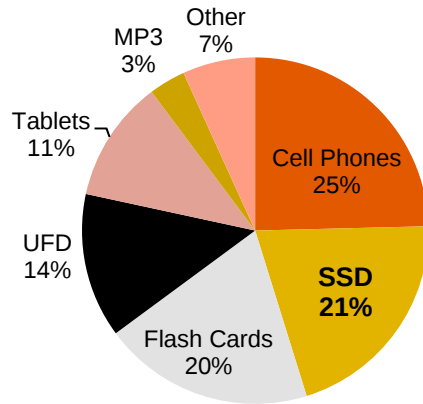
Automotive, Mobile, and IoT Sensors

- Sensors for smart phones, wearable devices, and tablets are often not packaged, too small and/or too difficult to handle on an individual basis
- Sensor failure in an expensive system has enormous costs

Wafer level burn-in can cost effectively provide burn-in, cycling, and aging of sensors for high reliability

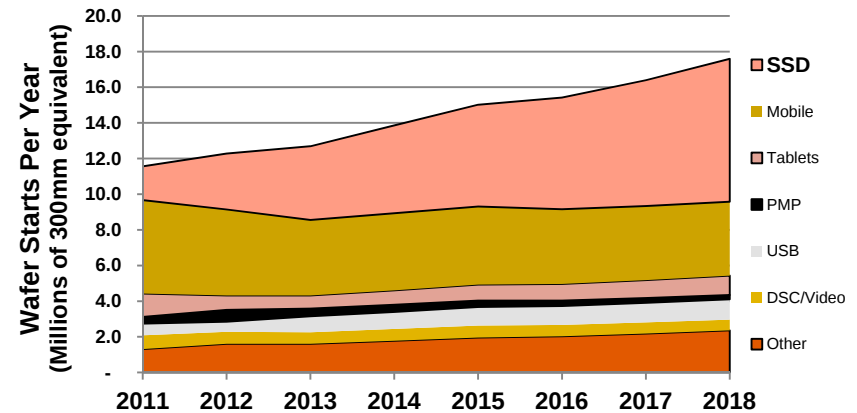
NAND Flash Market

NAND Application Share (2013)



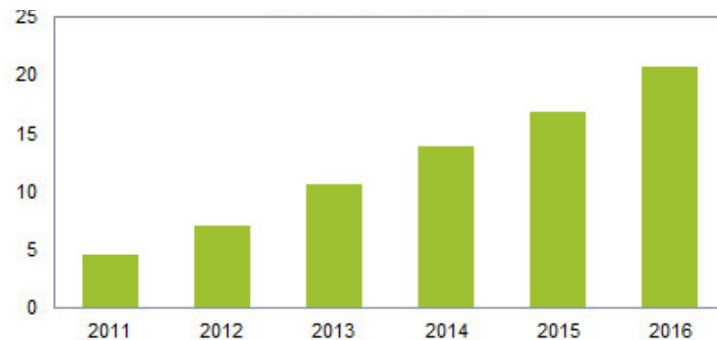
Source: Storage Look, 2013

NAND Wafers by Application

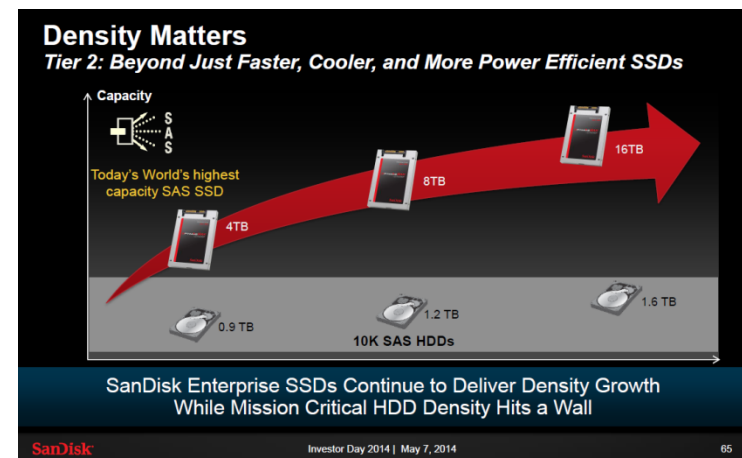


Source: VLSI Research 2014

Worldwide SSD Revenue (\$B)

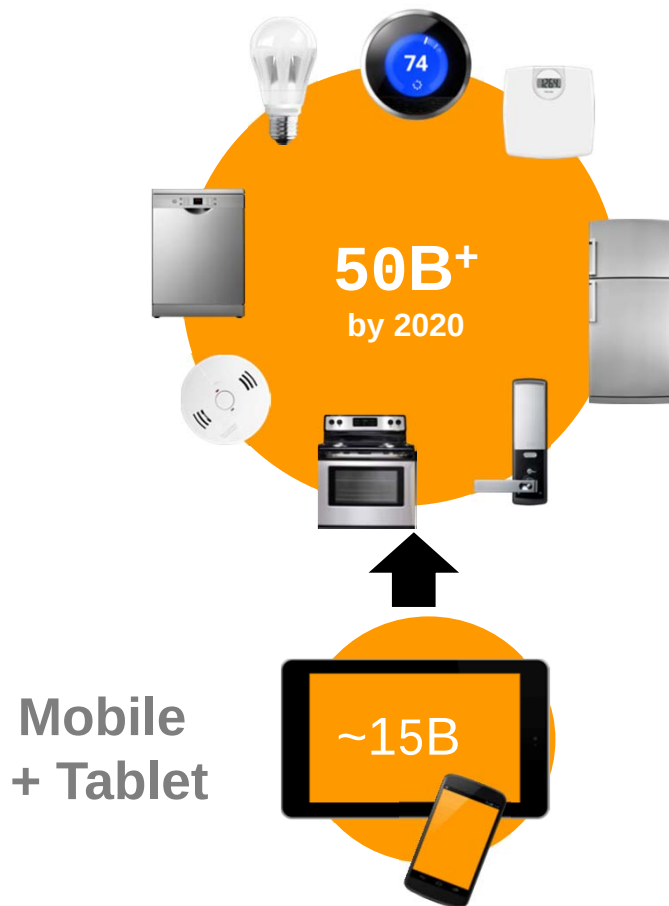


Source: IHS iSuppli Research, 2013

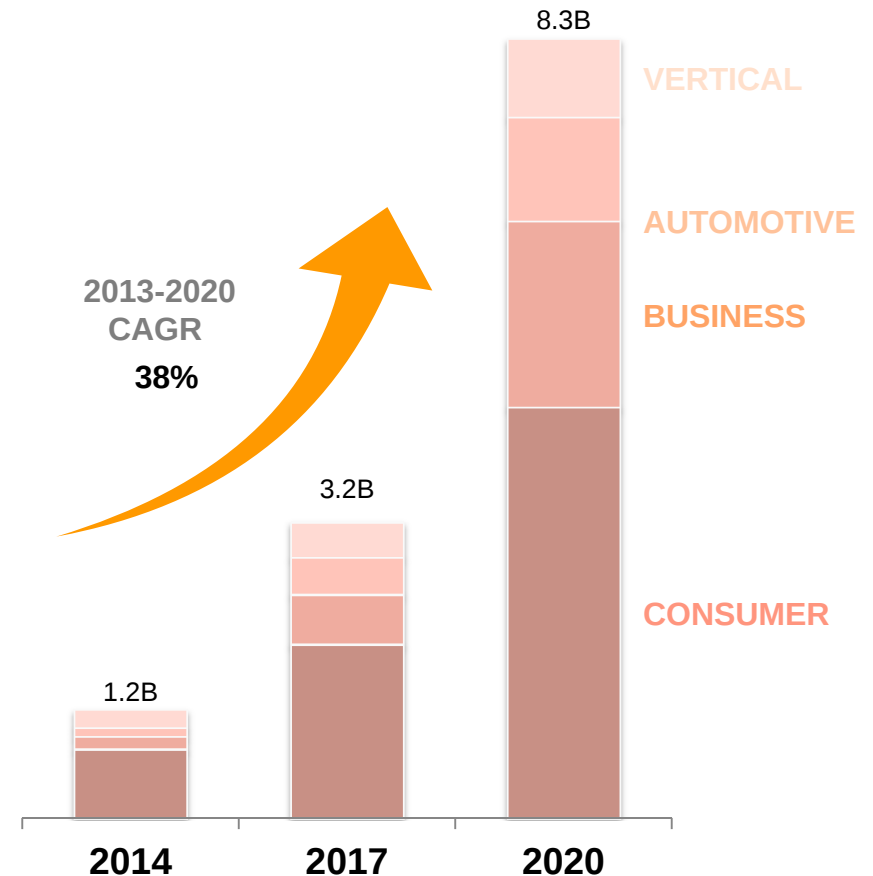


Sensors / IoT Market Opportunity

Total Connected Devices*



Units Shipped by Year**

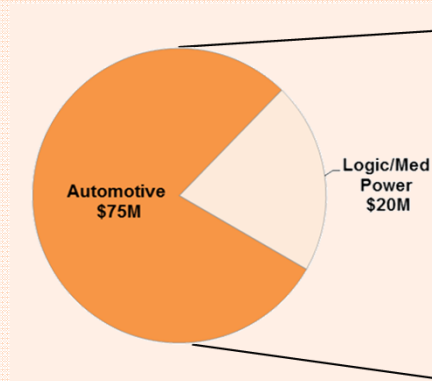


Aehr near term opportunities include Consumer & Automotive Sensors

Source: * IDC May 2014, * Cisco 2012, ** Gartner October 2014

Wafer Level Burn-in & Test

Packaged Part Burn-in Market



\$95M TAM

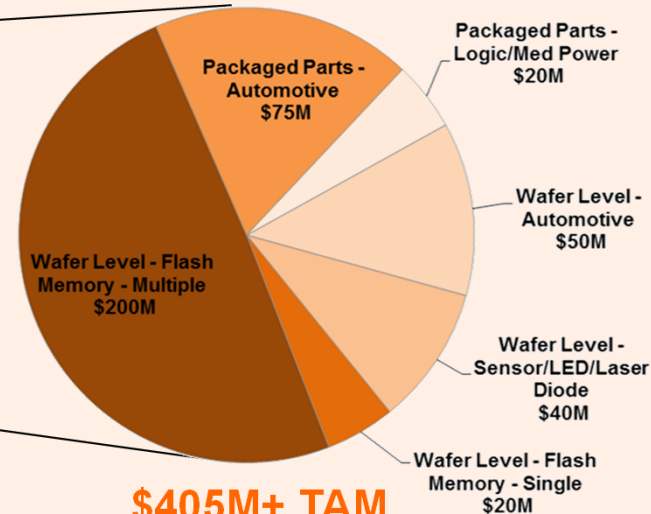
**PP Automotive IC
Production Burn-in
*Burn-in & Test Systems***

\$50M - \$75M TAM

**PP Logic/Med Power IC
HTOL / Reliability Burn-in
*Burn-in & Test Systems***

\$20M TAM

New Markets: Wafer Level



\$405M+ TAM

**PP & WL Automotive IC
Production Burn-in
*Burn-in & Test Systems***

\$115M TAM

**Flash Memory IC
Production Test & Burn-in
*Burn-in & Test Systems /
WaferPaks***

**\$20M TAM Single Wafer
\$200M+ TAM Multi-Wafer**

**WL Sensor/LED/Laser Diode
Production Burn-in / Aging
*Burn-in & Test Systems /
WaferPaks***

>> \$40M+ TAM

**DRAM Memory IC
Production Test & Burn-in
*Burn-in & Test Systems /
WaferPaks***

\$TBD TAM

FOX-1P Single-Wafer Test System

FOX-1P System in Aehr Test Fremont CA Facility



FOX-1Ps with Dual Stage Wafer Prober



FOX-1Ps in Manufacturing Line

FOX-XP Multi-Wafer Test System

FOX-XP Development in AeHR Test Fremont CA Facility



FOX-XP Engineering Workstation



FOX-XP Production Test Cell

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