

# Crossbar RRAM Technology to be Featured at Flash Memory Summit 2014

RRAM Developments, Flash as an Enabler of IoT, and 3D Flash Explored
Across Three Crossbar Presentations and Panels

**SANTA CLARA, CA – JULY 29, 2014 –** <u>Crossbar, Inc.</u>, a start-up company pioneering a new category of very high capacity and high-performance <u>non-volatile memory</u>, will feature its RRAM technology across three panel presentations during next week's <u>Flash Memory Summit 2014</u> at the Santa Clara Convention Center in Santa Clara, CA. Presentations will cover new developments in RRAM technology as well as the applicability of RRAM to new markets including the Internet of Things. In addition, Crossbar will discuss developments in 3D NAND and how RRAM breaks through the barriers in scaling 3D Flash to high densities in high volume.

# **Presentation 1: Overcoming Challenges in 3D Architecture Memory Production**

**Session description:** As NAND Flash process geometries continue to shrink towards the 10nm range, the third dimension provides a crucial degree-of-freedom to increase the density/capacity per chip and/or device. This session provides unique insights for preparing your organization for the future of NVM storage in the third dimension.

- Who: Dr. Sundar Narayanan, Vice President of Technology
- What: Dr. Narayanan will discuss the challenges with 3D NAND and how RRAM is a viable
  alternative 3D flash that uses a simple process, existing toolset and stacking architecture that builds
  one layer at a time. With RRAM, Logic fabs can convert to memory fabs with minimal overhead
  and implement 3D Flash using RRAM.
- When: Tuesday, August 5, 2014 from 9:45 10:50 a.m. PST

## Presentation 2: Breakthrough 3D RRAM Technology

**Session description:** RRAM development keeps progressing, with companies using a variety of approaches to pursue potential applications in high capacity storage, mid-range nonvolatile caches and low cost embedded solutions. This session offer views on the current state of RRAM technology, target applications, and the road to commercialization.

- Who: Hagop Nazarian, Vice President of Engineering and Co-Founder
- What: Mr. Nazarian will discuss Crossbar's breakthrough and patented 1TnR Selectivity technology
  that enables super-dense, low latency, low power data storage systems. This technology represents
  a critical milestone toward commercializing terabyte scale memory arrays on a postage stamp size
  chip.

• When: Wednesday, August 6, 2014 from 3:10 – 4:25 p.m. PST

## Presentation 3: Flash and the Internet of Things

**Session description:** The Internet of Things (IoT) has been described as the largest opportunity of the next decade. But what is IoT? What role does Flash memory play in enabling it? The panelists in this session will discuss why the merger of sensors, microcontrollers and Flash memory into a mesh of things will improve life for all humankind.

- Who: Cliff Zitlaw, Product Architect
- What: Mr. Zitlaw will discuss how RRAM technology will deliver radical innovations in the connected device world, through very high capacity, very fast non-volatile storage that can be easily integrated with logic onto a single chip, can operate for years without a battery change and can withstand extreme temperatures.
- When: Thursday, August 7, 2014 from 4:10 5:30 p.m. PST

## **Expert at the Table Session (Beer/Pizza Roundtable)**

**Session description:** Crossbar will chair an open roundtable session where participants can discuss developments in RRAM technology. These sessions are open to all conference attendees.

- Who: Dr. Sundar Narayanan, Vice President of Technology
- When: Tuesday, August 5, 2014 from 7:00 8:30 p.m. PST

#### About Crossbar, Inc.

Founded in 2010 as a Kleiner Perkins Caufield & Byers incubation, Crossbar, a start-up based in Santa Clara, California, is the inventor of a new class of non-volatile RRAM memory technology. Designed to usher in a new era of electronics innovation, Crossbar will deliver up to a terabyte (TB) of storage on a single-chip the size of a postage stamp, with very low power, very high performance and compatibility with standard CMOS semiconductor manufacturing tools, processes and infrastructure. As the exclusive holder of resistive RAM (RRAM) patents from the University of Michigan, Crossbar has filed 125 unique patents, with 50 already issued. Crossbar recently completed its Series C financing round of funding with investments from Artiman Ventures, Kleiner Perkins Caufield & Byers, Northern Light Venture Capital, the University of Michigan, SAIF Partners, Korea Investment Partners, CBC-Capital and Tao Invest. For more information, visit www.crossbar-inc.com or follow us on Twitter, LinkedIn and Google+.

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