Weebit Nano achieves significant speed and efficiency results with 300nm 4Kb memory array cells

Last milestone before 40nm development target

16 Oct, 2017 – Weebit Nano (ASX: WBT), an Israel-based semiconductor company that is seeking to develop the next generation of memory technology, is pleased to report the achievement of 4Kb (Kilo Bit) array results on 300nm cells, with 100 per cent yield on selected arrays, signifying the health of the company's technology. This means that the results achieved on a single cell demonstrating low energy and fast write speed have been replicated on a 4Kb memory array cell structure.

This is the final significant step toward the company's next goal – a 40nm ReRAM Silicon Oxide working cell by the end of 2017, which the company remains on track to meet.

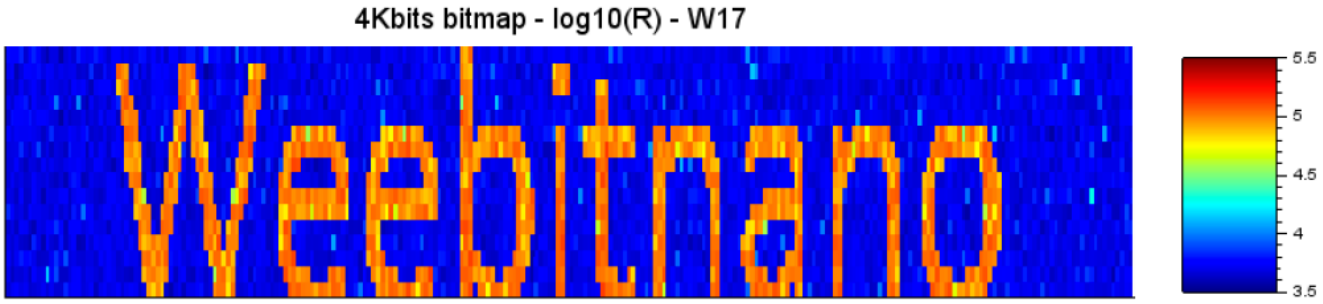
The successful experiment was performed on 300nm 4Kb memory array cell structures under a variety of testing and process conditions. An experimental wafer demonstrated a 100 per cent pass rate (zero fails) for "forming" (initialising) and "set and reset" (writing and erasing) distributions, after several program and erase cycles. These results indicate that Weebit Nano's technology is easily able to distinguish between written and erased memory, thereby demonstrating unified memory behavior within a large array population. Preliminary speed tests have demonstrated "write" speeds 100 to 1000 times faster than traditional 3D Flash technology while using significantly lower energy.

Commenting on the results, **Coby Hanoch, CEO of Weebit Nano**, said: "After extensive characterisation of 300nm cells, we have now achieved a significant step forward by successfully scaling up to the 4Kb array structure. Memory products are measured by how fast data can be stored into the memory cells and how narrow their resistivity distribution is, which enables it to easily distinguish between the writing and erasing of cells. Not only have we verified very fast writing speed and that our resistivity distribution on the wafer was very narrow, we were also able to demonstrate that the cells can be grouped into a standard 4Kb array without interfering with each other.

"We are very enthusiastic about the results achieved across the 300nm miniaturised wafers and look forward to replicating these results across 40nm scaled devices over the coming months", said Mr. Hanoch.

The 4Kb array characterisation results were achieved in Leti's pre-industrialisation facilities in Grenoble, France, and show great promise for Weebit Nano's technology to be applied to high capacity storage devices, in particular in Artificial Intelligence and cognitive computing applications.

Contact
Office: +972-9-7797832
info@weebit-nano.com
www.weebit-nano.com



Demonstration of data saved in Weebit Nano's 300nm 4Kbit array (Reset cells in orange)

Looking forward with confidence

With the miniaturisation process well underway towards 40nm cells, and with high yielding memory array results, Weebit Nano is looking forward with confidence. The company is making significant progress with its unique Silicon Oxide ReRAM memory technology, and remains on track to achieve its 40nm working cell target by the end of 2017, followed by scaling up the capacity of its cells to Mega Bit array blocks.

While maintaining 100 per cent yield may not be guaranteed in 40nm dimensions and below, Weebit Nano is very encouraged with the results and excited about the future.

For further information, contact:

Investors
Eric Kuret
Market Eye
P: +61 3 9591 8904
E: eric.kuret@marketeye.com.au

Media
Tristan Everett
Market Eye
P: +61 3 9591 8905
E: tristan.everett@marketeye.com.au

About Weebit Nano Limited

Weebit Nano is a leader in the development of next generation computer memory storage, and plans to become the new industry standard in this space. Its goal is to address the growing need for a significantly higher performance and lower power data storage technology. Weebit Nano's ReRAM technology is based on fab-friendly Silicon Oxide, allowing the company to rapidly execute, without the need for special equipment or preparations. The Company secured several patents to ensure optimal commercial and legal protection for its ground-breaking technology.

Weebit Nano's technology enables a quantum leap, allowing semiconductor memory elements to be significantly cheaper, faster, more reliable and more energy efficient than the existing Flash technology. Weebit Nano has signed an R&D agreement with Leti, an R&D institute that specialises in nanotechnologies, to further develop SiOx ReRAM technology.

For more information please visit: http://www.weebit-nano.com/