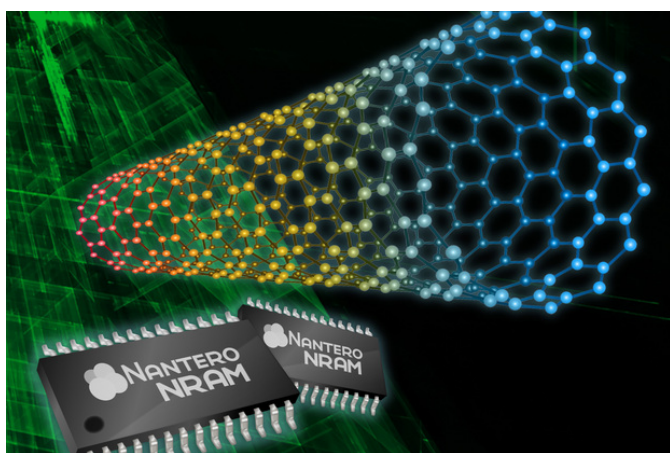


## Fujitsu to Start Producing Nano-RAM

Written by Marco Attard  
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Fujitsu gets the first license for the mass production of Nano-RAM (NRAM)-- a non-volatile memory technology promising a 1000x performance boost over DRAM together with NAND-style data storage capability.



Developed by Nantero, NRAM is based on carbon nanotube (CNT) technology, tiny carbon strings with 50x the strength of steel, half the density of aluminium and better thermal and electrical conductivity than any other material currently available, all while having 1/50000th the diameter of a human hair.

The companies say NRAM technology is tested to endure 100 billion program/erase cycles, and is able to retain data for over 1000 years at temperatures reaching 85 degrees Celsius, or over 10 yrs at 300 degrees Celsius. Latency reaches DDR4 levels at 50ns.

According to Fujitsu, memory made using CNTs features non-volatile properties as well as high density and random access. The first NRAM product should offer 256Gbit capacity and should hit the market in 2018, with production involving a 55nm lithography process. Eventually Fujitsu hopes to move to a 40nm process at a later stage, and Nantero has another fab partner working on 28nm lithography. .

Nantero sees 2 potential markets for NRAM-- stand-alone non-volatile memory such as NRAM DIMMs and super-fast non-volatile memory for embedded devices. The first NRAM products should hit the market on 2019 at the earliest from Fujitsu and other Nantero foundry partners.

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