Novel Magnonic Holographic Memory Device

Tech ID: 24707 / UC Case 2014-617-0

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	9,767,876	09/19/2017	2014-617

IMAGES

Prototype of holographic memory device

http://ucrtoday.ucr.edu/20613

BRIEF DESCRIPTION

Background: Image processing and speech recognition are a few operations that challenge computer memory devices. Replacing a computer memory device is not the solution, but rather, finding ways to complement its activity is a more successful route.

Description: UCR researchers have created a prototype of a magnonic holographic memory (MHM) device that provides unmatched data storage capacity and data processing capabilities in electronic devices. This device uses spin waves instead of optical waves, which allow for a higher energy storage. This MHM does not replace the computer memory device, but rather complements it and allows for a new and better performing generation of memory devices.

ADVANTAGES

- Better image recognition

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OTHER INFORMATION

KEYWORDS

Logic devices, optical waves, energy storage, image processing, magnonic holographic memory device

CATEGORIZED AS

- **Computer**
  - Hardware
- **Engineering**
  - Other

RELATED CASES

2014-617-0

- Speech recognition
- Data processing
- Allows for fuller devices with greater storage energy
- High processing rate with low energy consumption

SUGGESTED USES

- Improved Computer logic and memory devices
- Next generation logic devices
- Compatible with conventional electronic devices

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