

# DIFC Dubai Based Startup Develops a Breakthrough Chip for Everyday Devices to Operate at Quantum Processing Speeds

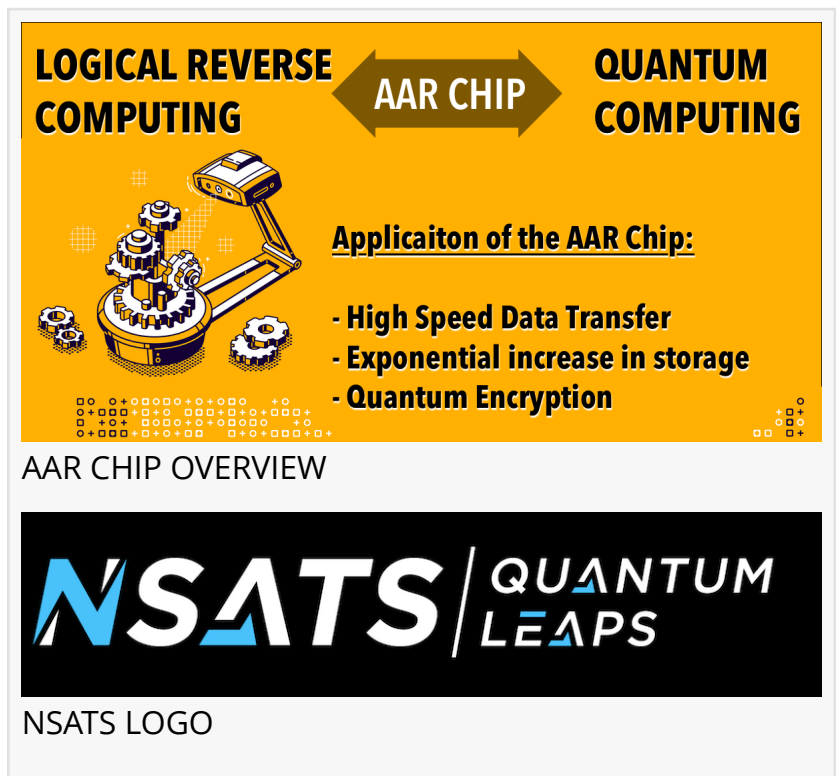
*Logical Reverse Computing breakthrough using Quantum Mechanic principles via the Advanced Arithmetic Rotations chip that achieves 'processor-less' processing.*

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/EINPresswire.com/ -- A startup based in DIFC, Dubai, National Scientific AI and Technical Systems Ltd (NSATS) has recorded a milestone that enables quantum processing on existing computing devices such as desktops, laptops, servers, mobiles, networking and storage devices. These devices may soon be upgradeable using the novel Advanced Arithmetic Rotations (AAR) chip to achieve innovations such

as quantum computing on classical/existing devices and Logical Reverse Computing or LRC. This enables any classical machine to achieve applications such as, exponential increase in storage, high speed data transfer between two wired or wireless nodes, quantum encryption and hyper fast processing that is not limited by Moore's law.

The AAR chip converts classical data into quantum representation which in-turn enables other auxiliary chips to implement logical reverse computing and quantum applications. Essentially the AAR chip in conjunction with a mesh of boards, auxiliary chips and circuits can soon enable an electronic circuit such as ones embedded within everyday devices to process, store and manage data using reversible chips and quantum mechanical principles. The AAR and its auxiliary chips may be seamlessly integrated as an add-on across classical interface to achieve LRC without upgrading the inline computing, technical or electronics infrastructure. Traditionally LRC restricts itself to a zero-energy sum computation gate however, the AAR amalgamates quantum mechanics and LRC to achieve multi-swap gate processors that process quantum representations of classical data input.




**LOGICAL REVERSE COMPUTING** ← **AAR CHIP** → **QUANTUM COMPUTING**

**Applicaiton of the AAR Chip:**

- High Speed Data Transfer
- Exponential increase in storage
- Quantum Encryption

AAR CHIP OVERVIEW



NSATS LOGO

Research teams lead by [Dr Ankur Srivastava](#) at the Technical Excellence Centre, National Scientific AI and Technical Systems Ltd at the Dubai International Financial Center (DIFC) have recorded this breakthrough and are now working to optimise this for generic, critical, and embedded deployment. The team is currently working to release the AAR chip and auxiliary boards that will result in a “process-less” processor. This achieves LRC as the mesh of chips can detect an input from an output and vice versa without a traditional processor and breaks free from Moore’s law as it deploys quantum logic but operates in the classical realm.

Dr Ankur Srivastava further clarified that this release should not be confused with thermal reverse computing. As of now we can confirm that logical reversible computing has been achieved and we are on the long path to achieve total reverse computing. This milestone will serve as an off chute to generate a product line as it is an exciting discovery that allows classical data to be treated using quantum logic.

National Scientific AI and Technical Systems is working towards releasing the AAR chip with auxiliary chips so that they can be embedded with existing workflows to derive real world applications of compression, encryption and processing. Limited demonstrations will be showcased to interested stakeholders in Q2 of 2023.

Dr. Ankur Srivastava further expressed excitement on being located in Dubai, especially at the DIFC that is emerging as a global hub of startups in the area of artificial intelligence and computing. He praised the DIFC’s tech hub efforts that attract startups from the around the world to setup an innovation lab to power the next round of global innovation.

National Scientific AI and Technical Systems is working in the areas of reverse computing, quantum computing and materials, information theory, and artificial intelligence on quantum machines. For more information reach to us at [reception@nsats.com](mailto:reception@nsats.com)

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