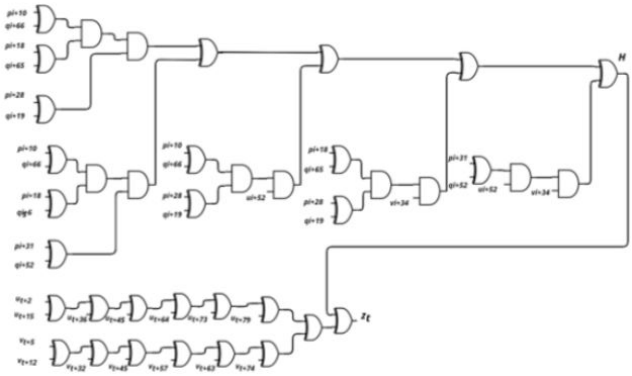
BITS Pilani
Pilani | Dubai | Goa | Hyderabad | Mumbai
An Institution of Eminence

विज्ञान एवं प्रौद्योगिकी विभाग
DEPARTMENT OF
SCIENCE & TECHNOLOGY
सत्यमेव जयते

BITS Pilani
TECHNOLOGY
ENABLING
CENTRE
DST Supported

PENDING

(IN202311039798)
A device and method for light weight stream cipher



NEED

As digital security threats rise, traditional encryption methods face challenges in lightweight, low-power devices. What if secure encryption could be achieved without sacrificing performance or device efficiency?

TECHNOLOGY OVERVIEW

This patent describes a lightweight stream cipher designed to provide efficient encryption with a 160-bit key and 128-bit IV. It uses linear and non-linear feedback shift registers to generate pseudorandom keystreams, enabling secure encryption on low-power devices.

TECHNOLOGY KEY FEATURES

The cipher offers a unique hardware-based encryption solution, balancing security with power and memory constraints. It uses a combination of linear and non-linear shift registers, ensuring robust encryption without sacrificing performance on small devices. The key features include an efficient 160-bit secret key, 128-bit IV, and a flexible bitwise encryption approach.

Read more here

MARKET ANALYSIS

The global IoT security market is projected to grow at a 24.3% CAGR, reaching $6.3 billion by 2034. Similarly, embedded systems security is expected to grow at a 10.5% CAGR by 2033, driven by an increasing number of connected devices and higher data privacy needs. Sources: Expert Market Research, Global Market Insights

Target Industries

, IoT security, embedded systems, consumer electronics. Product Integration: IoT device manufacturers, embedded systems OEMs, chipset providers. White-Label Solutions: Security platforms for IoT, smart device manufacturers. Joint Ventures: Custom R&D for IoT security, automotive telematics, and smart appliances. Global Licensing Potential: Manufacturers seeking technology transfer in IoT, embedded systems, and consumer electronics sectors.

AT A GLANCE

- SDG 9: Industry, Innovation, and Infrastructure, SDG 11: Sustainable Cities and Communities, SDG 16: Peace, Justice, and Strong Institutions

Technology is available for licensing/ co-development.

Reach out to Prof. Deepak Chitkara, Coordinator, BITS Technology Enabling Centre,
BITS Pilani Contact Details: tec.bits@pilani.bits-pilani.ac.in, 91 1596-255913

innovate achieve lead