

A central graphic of a glowing blue AI chip with intricate circuit patterns radiating outwards. The chip is set against a dark background with large, overlapping circular shapes in shades of blue and gold. The overall aesthetic is futuristic and technological.

AI

T A U

 Deeper-I

**Accelerate Intelligence, Anytime, Anywhere**



## Product Introduction

The TAU.Sodimm is a scalable NPU board designed for next-generation edge computing, allowing seamless integration into various systems through its SO-DIMM slot. Equipped with Deeper-I's high-performance Tachy-BS402 NPU SoC, it accelerates complex deep learning computations in real time. Its flexible interface and modular expandability cater to diverse customer needs.

## Key Features & Strength

### ○ Outstanding Scalability

This board offers exceptional modular expandability, allowing for easy adaptation across various industries and applications. The X2X inter-chip communication technology enables smooth connections among multiple modules, ensuring rapid data transmission, high processing speeds, and robust stability.

### ○ Universal SO-DIMM Compatibility

Designed in the SO-DIMM form factor, the Sodimm board is directly compatible with systems featuring a standard SO-DIMM slot, making integration with existing infrastructure straightforward. This design supports quick system upgrades and flexible expansion.

### ○ Comprehensive Interface Support

Supporting SPI, I2C, UART, GPIO, PWM, and more, it easily connects with various IoT devices, sensors, and high-resolution cameras, offering versatile interaction capabilities.

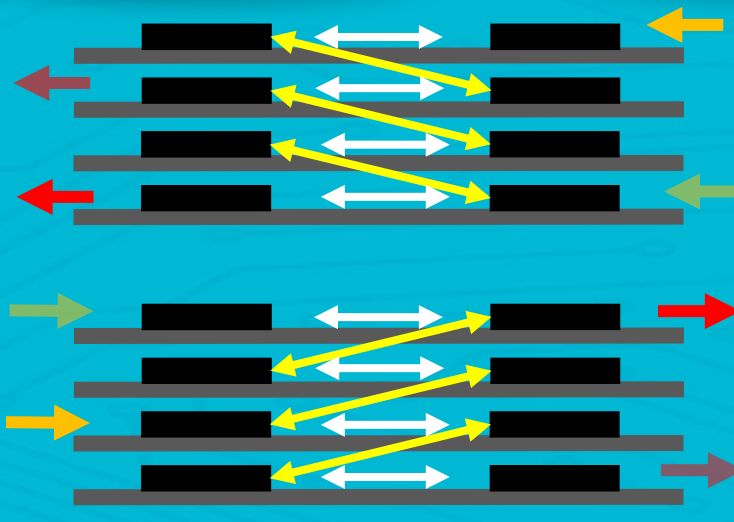
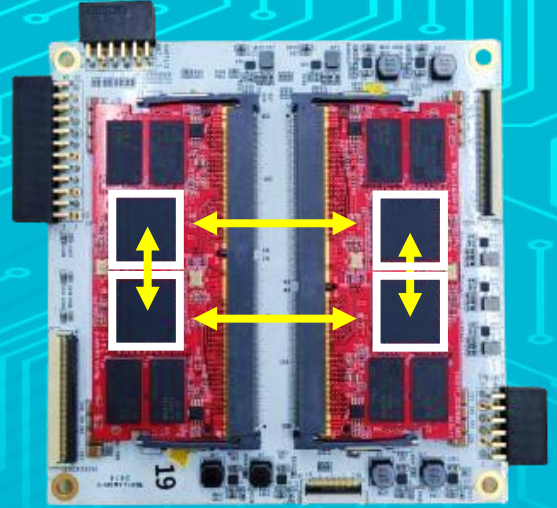
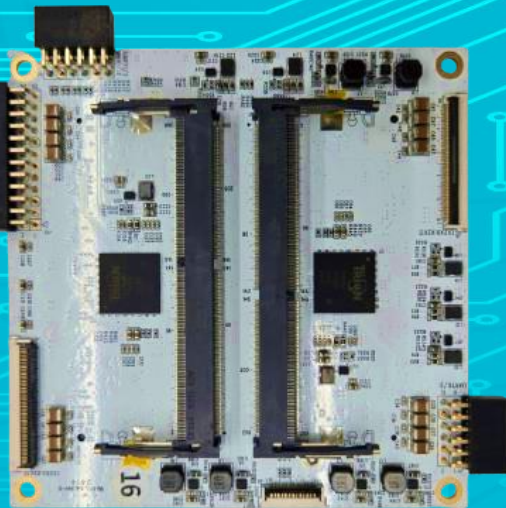


### ○ Edge AI Optimization and Real-time Inference Acceleration

Combining the Tachy-BS402 NPU and ARM Cortex A5 CPU, the Sodimm board executes high-performance deep learning inference in real-time in edge environments. Designed to minimize power consumption, it facilitates rapid data analysis and instant feedback, making it ideal for compact edge AI applications.

### ○ Compact Form Factor with Extensive Expandability

The compact design of the Sodimm allows easy integration into diverse embedded systems. Multiple modules can be combined to enhance computational performance, ensuring compatibility with various small devices and mobile equipment. This scalability offers a robust foundation for building customized solutions across industries and environments.



- : X2X
- : X2X
- : Sodimm
- : BS402
- : Input
- : Output

## Product Specifications

Specification	Details
Board Model	TAU Sodimm
NPU	Tachy-BS402, 300MHz dual-core NPU, Black Swan 1.0 deep learning engine
CPU	ARM Cortex A5, 400MHz quad-core
Memory	2 x 512MB DDR3 RAM
Interfaces	SPI, I2C, UART, GPIO, PWM, SDIO, Nor Flash etc.
Power Supply	1.1V, 1.5V, 3.3V DC
Dimensions	69.6mm x 30mm x 3mm
Scalability	High-speed data transfer and modular expansion through X2X inter-chip communication

# Applications & Use Cases

TAU



**Compact Power, Limitless Potential**



# Golf

Optimized for golf swing analysis systems, the Sodimm board offers high-speed camera input and various sensor interfaces.

Through real-time data analysis and deep learning inference, it provides accurate swing data, enhancing training with instant feedback. The board's scalability supports additional analysis modules for custom swing analysis functions.



## Drone Autonomous Navigation

Designed to significantly enhance autonomous navigation, the TAU Sodimm collects and analyzes data from multiple cameras and sensors simultaneously, enabling real-time environmental awareness and responsiveness during flight.

The high-performance X2X interface and low-power design extend battery life and support long, stable drone flights.



## Smart Farm

The TAU Sodimm board enables real-time analysis of crop health and quality using spectrum imaging techniques like NDVI and thermal imaging. This enhances precision in monitoring crop growth and detecting defects.

Its SO-DIMM compatibility ensures seamless integration with existing systems, while the modular design supports scalability. The board's low-power operation makes it ideal for outdoor environments, and versatile interfaces (SPI, I2C, UART) allow easy connection with various sensors and equipment for smart farming.



# Smart Factory

The TAU.Sodimm board enables real-time data analysis from various sensors and machinery in smart factory environments, optimizing process automation and quality control.

Its X2X interface supports high-speed data transfer for uninterrupted communication with equipment, boosting production efficiency and process stability. Additionally, its modular expandability allows for flexible system configurations tailored to production line requirements.

**Innovation in edge technology  
creates a smarter tomorrow.**



**Customer Support**

- **Contact us:** [partner@deeper-i.ai](mailto:partner@deeper-i.ai)
- **Website:** <https://www.deeper-i.ai>