#### 1. Company Overview

### Pebble-Square Japan

#### Low-power, Ultra-lightweight AI Semiconductor Chip Based on Non-volatile Memory



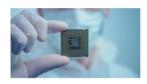
#### **Business Characteristics**

### Energy-efficient and high-performance AI semiconductor chips for edge inference

### 1. High-performance, energy-efficient AI chip using in-memory computing (analog-PIM)



- Develops advanced PIM core technology and multicore neural networks
- Achieves high performance and low power consumption with in-memory computation without data movement



### 2. Optimized for edge AI with neuromorphic architecture + high reliability



Reliable neuromorphic AI with analog computing and NOR flash architecture



#### **Matching Needs**

### Ideal profile of Tokyo companies

- Companies seeking advanced technologies in AI and IoT fields (E.g.: cloud service providers, automobile manufacturers, etc.)
- 2. Companies seeking high-performance Al solutions with limited resources (E.g.: startups and emerging technology companies)
- Organizations that prioritize safety and privacy protection (E.g.: municipal smart city projects, university research projects)
- 4. Individual consumers using smart home devices and wearable technology, especially in markets where personal data protection is highly prioritized

#### **Objective**

- 1. Technical sharing and information exchange
- 2. Building business partnerships
- 3. Contributing to the local community

#### Business Overview (Services/Products)

 Leads a new paradigm in computer architecture (PIM) with AI solutions utilizing edge AI chips



# ■ Development of ultra-low power CIM technology based on non-volatile memory (NVM) platform

- Develops high-performance compute-in-memory technology with ultra-low power consumption based on non-volatile memory (NVM)
- Develops business through realization of high-performance, low-power AI semiconductor designs and IP licensing

## ■ Ultra-lightweight, high-performance AI model development for ondevice AI

- Develops an ultra-lightweight, high-performance AI model optimized for smart homes and IoT devices
- Offers licensing for AI models compatible with various devices, enabling support across a wide range of fields

# ■ On-device Al infrastructure solution with enhanced personal information protection

- Provides on-device AI solutions with enhanced personal information protection in areas such as speech recognition, image recognition, drones, robotics, and healthcare
- Implements privacy-centric AI technologies to deliver a secure and safe AI platform