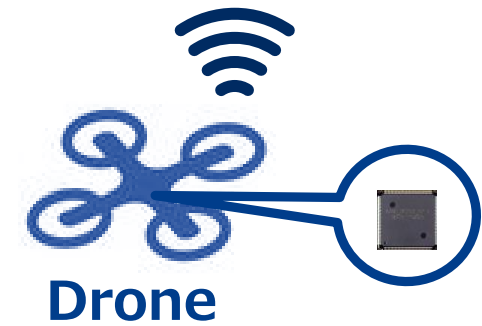
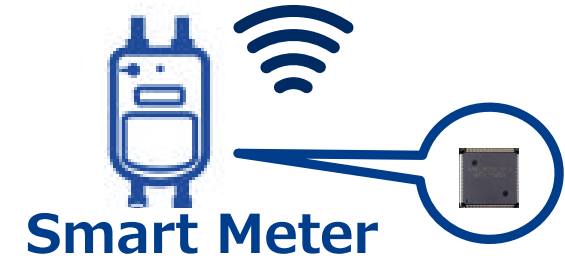
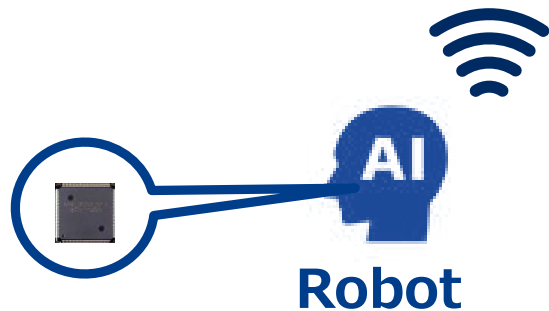


Atom Switch FPGAs to help save power on various devices

**Tadahiko Sugibayashi
NanoBridge Semiconductor, Inc.
Founder and CEO**

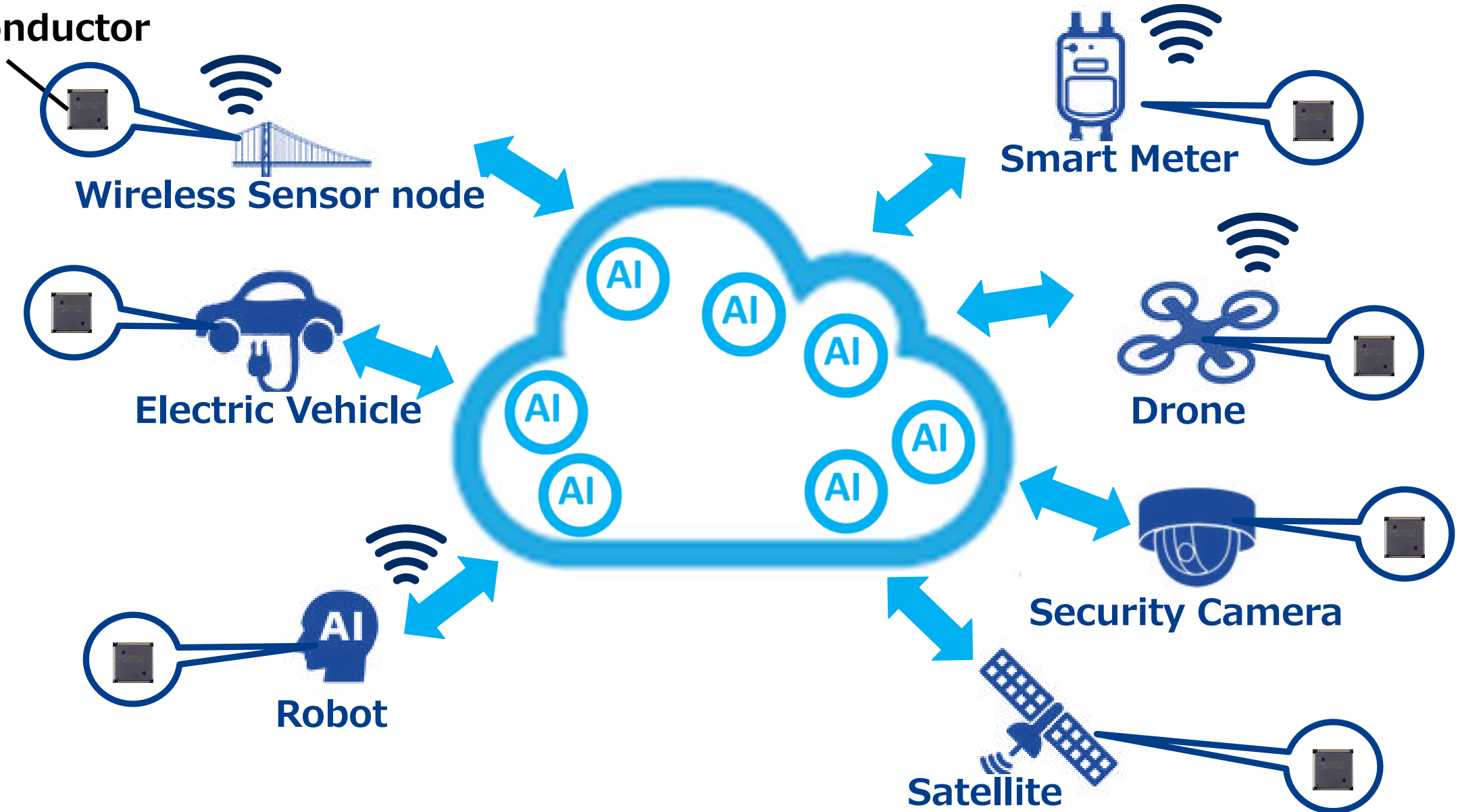
Edge Devices in Sustainable Digital Society

Semiconductor



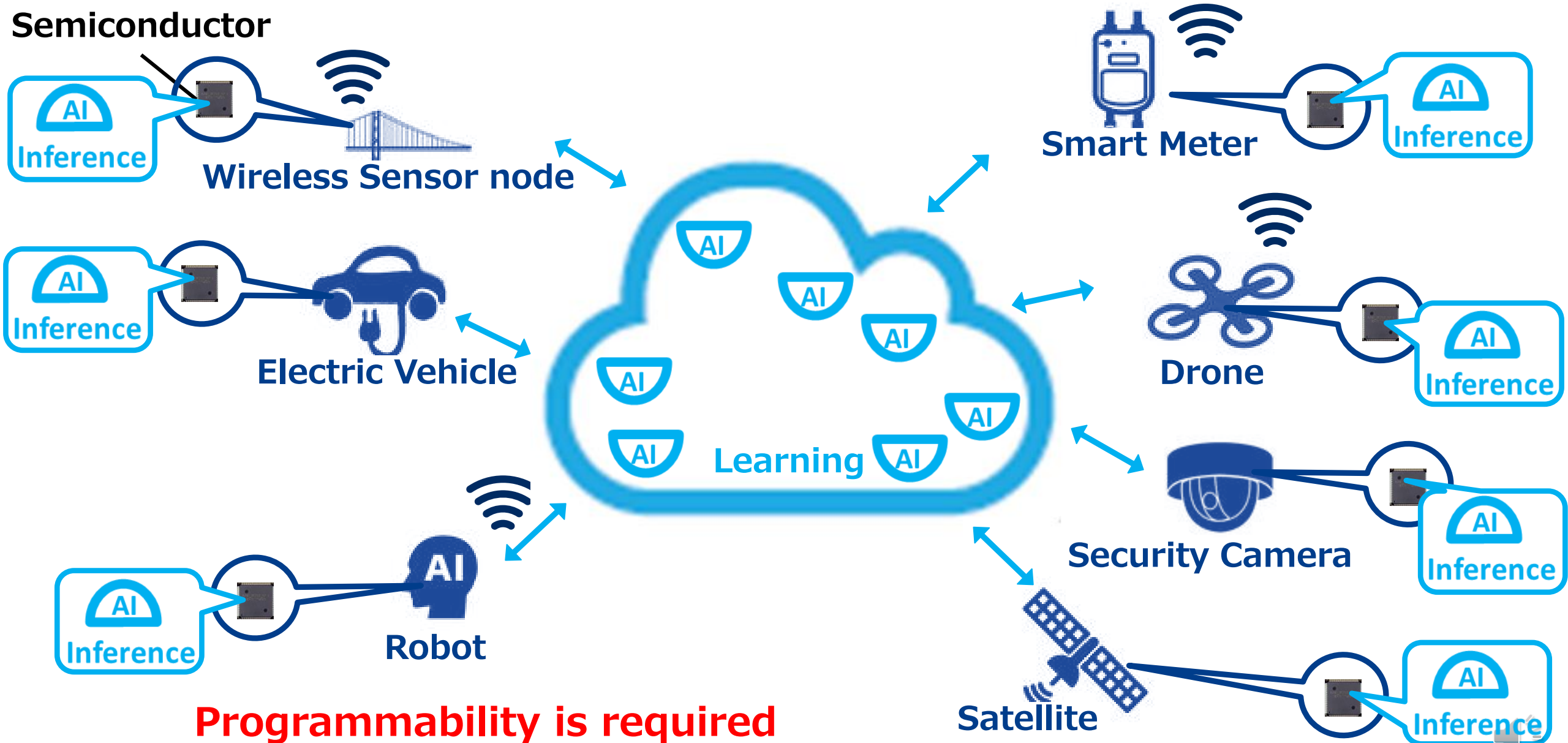
AI in Cloud

Semiconductor



Inference portion of AI in each edge device

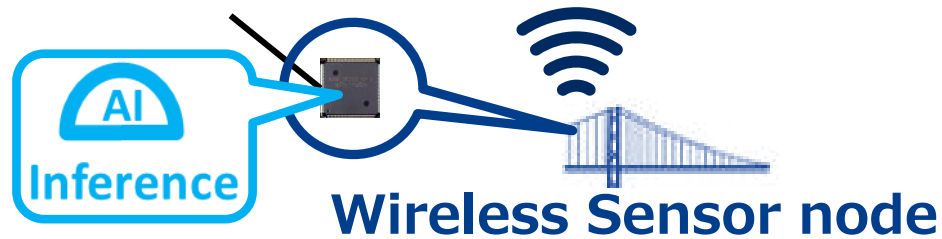
Semiconductor



Programmability is required

Semiconductor for AI processing

Semiconductor



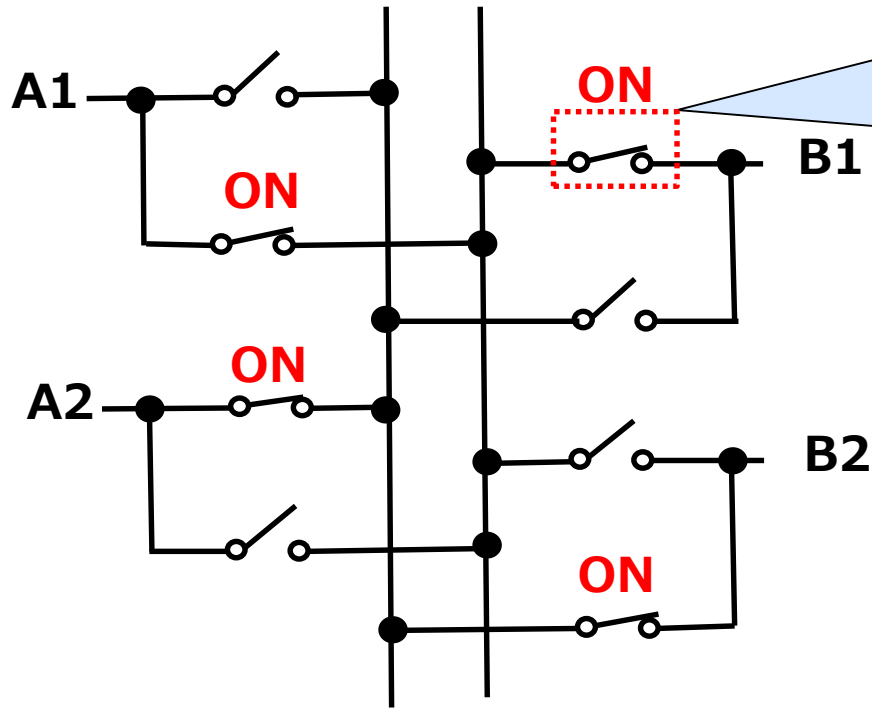
	CPU	FPGA
AI processing	Hardware & Software	Hardware
Power Efficiency	Low, due to software decoding	High

Market size:
>\$20B in 2030

Atom Switch further improves efficiency

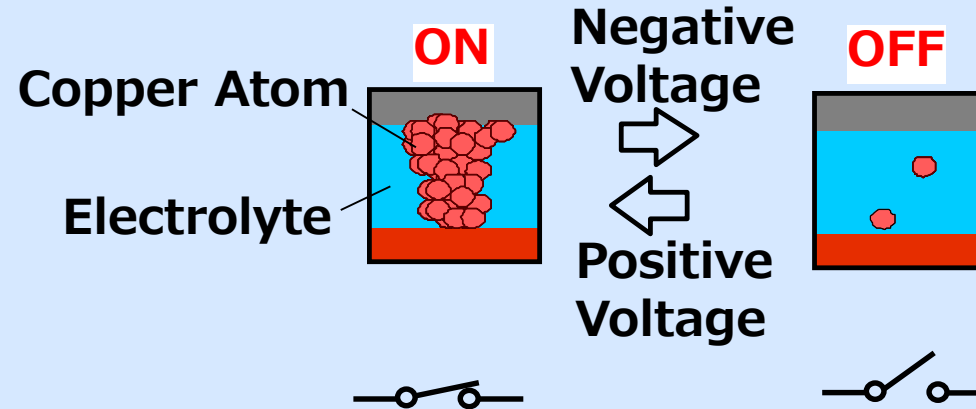


Signal Wiring Switching with Atom Switch



A1 connects with B2.
A2 connects with B1.

Atom Switch



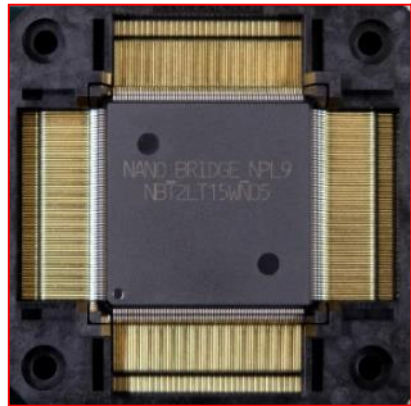
	FPGA	Atom Switch FPGA
Area size	1	0.25
Power Efficiency	1	10



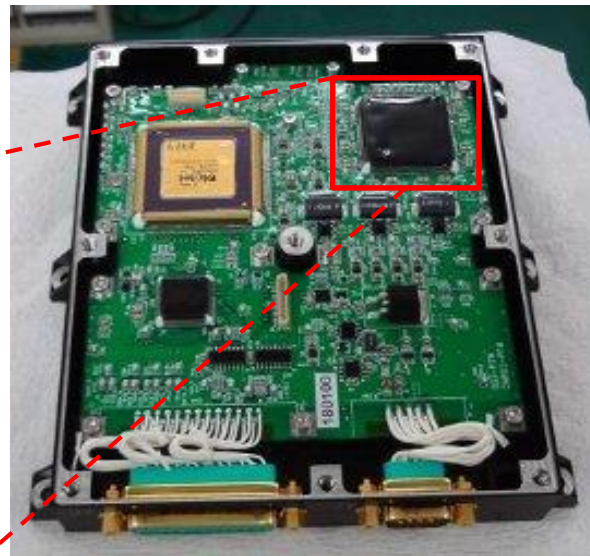
Atom switch FPGA demonstration on satellite

- ❑ NanoBridge is atom switch made by NanoBridge semiconductor
- ❑ Mission of the demo
 - Soft error evaluation of NanoBridge (NB) by circuit programmed on NBFPGA
 - Image compression processing of HD CMOS imager data by NBFPGA
 - Partially Programming of NB

Full success in 2020.

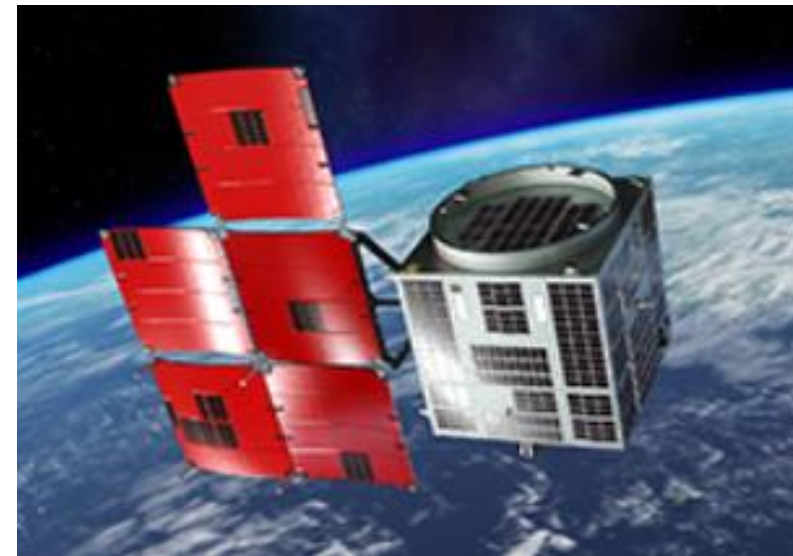


NBFPGA, supported by NEDO in fabrication



**Camera module
Equipped with NBFPGA**

©JAXA



**RAPIS-1,
Launched on Jan 18, 2019**

©JAXA

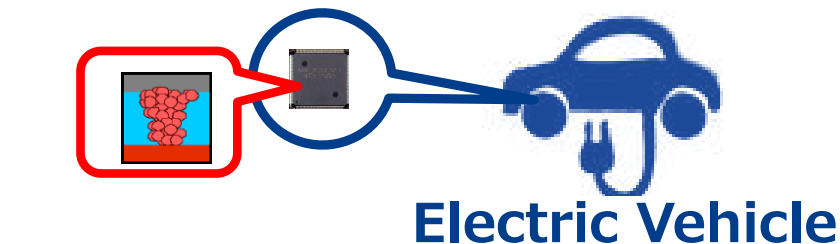


Edge Devices in Sustainable Digital Society

Semiconductor



Atom Switch



Atom Switch improves efficiency

