Breakout Session

Intel 12th Gen. Core Processors Embedded Platforms

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Accelerating I/O Transition by Intel 12th Gen. Core Processors

16 Cores Alder Lake-S
8 Cores Alder Lake-P

- DDR5 1.8x Bandwidth (vs. DDR4)
- 12th Core i9 1.9x Graphics Performance (vs. 10th Gen)
- PCIe Gen. 5 2x I/O Throughput (vs. PCIe Gen. 4.0)

AIMB-288E
THIN Mini-ITX Extended

AIMB-588
MicroATX

MIO-5377
3.5” SBC
Advantech IT/OT Total Security
Comprehensive cybersecurity solution to prevent attacks, stop damage and restore operation

Extended Detection & Response (XDR)
- Anti-phishing & malware protection
- Secure email attachments/links
- Device Monitoring and Management
- Network segregation & protection

Endpoint Detection & Response (EDR)
- Container and software updates
- Secure Device Identity Protection
- OT behavior analysis & threat detect
- Ransomware Protection & Recovery
- OOB Management & control

WISE-DeviceOn
Edge AI Suite
Instant User Experience & Fast AI DevOps

Empower ADVANTECH Device at Edge AI

5 Times↑
Intel CPU computing power

+AI Chips
High coverage support on more AI accelerators

5 Mins↓
90% time reduced to build up settings

1 Click
Edge AI inference benchmark and demo
Game-changing Linux IoT Experience

**Ubuntu Desktop**
- Full-blown graphic UI OS, Rich application support

**Ubuntu Core**
- Light-weight command-line OS, Optimized for IoT sensor devices

**Certified**
- Each licensed hardware must pass Canonical certification process

**Secure**
- Tri-weekly Security Update to fix critical/embargo & regular CVEs with long-term support

**X86 & RISC**

*Upsell Hardware-only Customers*

*Expand to new Business Landscape*
Target Applications

1. High-Medical Imaging Equipment
2. GPU-Accelerate Service Robot
3. Standard & Rapid EV-charger/Kiosk
4. Outdoor Rugged Service Robot
AI-Assisted Medical Imaging

Intel 12th Gen. Core
High Performance and Efficiency

PCIe Gen. 5 x16 slot
Latest throughput technology enable data analytics

DDR5 Memory
High bandwidth accelerate data delivery

Four Ethernet Ports
x3 2.5GbE and x1 GbE ports

AI Demo Utility and Remote Management
Advantech Edge AI Suite & WISE-DeviceOn

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**GPU-Accelerated Edge Computing**

- **Intel 12th Gen. Core**
  High performance and efficiency computing core

- **DDR5 Memory**
  High bandwidth accelerate data delivery

- **MXM Integrated**
  MXM integrated kit delivers Graphics Performance

- **Compact & THIN**
  All-in-One slim design simply deployment
  *Dimension 190 x 170mm*

- **Optimized Thermal Design**
  Future-proof for high computing workload

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More than Sufficient for Service KIOSK

12th Intel Gen. Core Desktop
Hybrid Architecture up to 16-Core (8P+8E)

Multiple & High-Quality Displays
eDP 4K@60/5K@120, Dual HDMI1.4 for Dual-Side

High-Speed Storage & Redundancy
Dual NVMe (Gen.4/Gen.5) w/ Intel VMD Support
Reduce Maintenance Effort (NVMe RAID)

Advantech iManager Reliability
Out-of-Band Watchdog, Temperature, & Power Manageability

OS Bundled & Remote Management
Window10 IoT Certified & WISE-DeviceOn

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Rugged Outdoor Robot Application-Oriented

12th Intel Gen. Core Mobile
Hybrid Architecture up to 12-Core under TDP= 28/15W

Huge Sensor I/O Coverage for Robot
4 UART, 3 I2C, 2 CANBus @ 1Mbps w/ Software APIs

Low Latency Connectivity
Readiness on WiFi6E & 5G Support & Modules

Rapid I/O for Machine Vision
2.5GbE, USB3.2 Type-C & Thunderbolt, PCIe Gen4 NVMe

Reliable Design for Various Scenes

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Advantech Product Offering

AIMB-588

MIO-5377
Thank you for watching!
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