Safe Harbor Notice

Except for the historical information contained herein, the matters addressed in this presentation are forward-looking statements that involve certain risks and uncertainties that could cause actual results to differ materially, including but not limited to weather, impact of competitive products and pricing, industry-wide shifts in the supply and demand for semiconductor products, rapid technology change, semiconductor industry cycle, and general economic conditions.

Except as required by law, Andes undertake no obligation to update any forward-looking statement, whether as a result of new information, future events or otherwise.
Table of Contents

01 Company Overview
02 Operation Results
03 Product Applications
04 New Products and Ecosystems
05 Concluding Remarks
Company Overview

http://www.andestech.com
**Andes Highlights**

- Founded in March 2005 in Hsinchu Science Park, Taiwan, ROC.
- Well-established high technology IPO company
- Over 370 people; 80% are engineers.
- TSMC OIP Award “Partner of the Year” for New IP (2015)
- Founding Premier membership in the RISC-V International Association (RISC-V Foundation) (2020)
- AI Global Media Award “Most Outstanding Embedded Processor IP Supplier” (2020)
- Hsinchu Science Park Innovation Award - AndesCore™ NX27V (2020)
- EE Awards - “Taiwan-Product Award” & “Asia-Company Award” (2021)

**Andes Mission**

- Innovate performance-efficient processor solution for low-power SoC

**Emerging Opportunities**

- Smart and Green electronic devices
- Cloud Computing and Internet of Things and Machine Learning
Business Status Overview

- **300+** commercial licensees
  - Geographically distributed in Taiwan, China, Korea, Japan, Europe, and USA
  - **600+** license agreements signed

- **AndeSight™ IDE:**
  - **24,000+** installations

- **Eco-system:**
  - **500+** partners

- **12B+** Accumulative SoC Shipped
Operation Results
4Q22 Revenue Analysis

YoY +15 %  QoQ +14.2 %

(NT$ thousands)

320,000
310,000
300,000
290,000
280,000
270,000
260,000
250,000
240,000

269,054  271,137  309,517

4Q21  3Q22  4Q22
22 Q1-Q4 Revenue Analysis

(NT$ thousands)

<table>
<thead>
<tr>
<th></th>
<th>Q1-Q4 2021</th>
<th>Q1-Q4 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>YoY</td>
<td>+13.7%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>819,778</td>
<td>931,821</td>
</tr>
</tbody>
</table>

YoY +13.7%
22 Q1-Q4 Top 10 Customers Analysis by Revenue

Top 10 Customer Contributed 58% Revenue

(NT$ thousands)
4Q22 Royalty Analysis

QoQ -15%

YoY -17.8%

(NT$ thousands)

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>4Q21</td>
<td>62,772</td>
</tr>
<tr>
<td>3Q22</td>
<td>60,745</td>
</tr>
<tr>
<td>4Q22</td>
<td>51,613</td>
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</tbody>
</table>
22 Q1-Q4 Royalty Analysis

YoY -1.7%

(NT$ thousands)

Q1-Q4 2021: 233,676
Q1-Q4 2022: 229,725
22 Q1-Q4 Top 10 Royalty Contributors Analysis by Application

Top 10 Royalty Customers Contribution Analysis: 86%

(NT$ thousands)
22 Q1-Q4 Revenue Analysis by Payment Model

- License Fee: 60%
- Running Royalty: 24%
- Maintenance: 15%
- Others: 1%
22 Q1-Q4 Revenue Analysis by Region

- Taiwan: 36%
- USA: 32%
- China: 25%
- Korea: 2%
- Europe: 4%
- Japan: 1%
22 Q1-Q4 Revenue Analysis by Product
4Q22 Revenue Analysis - RISC-V

(NT$ thousands)

<table>
<thead>
<tr>
<th></th>
<th>4Q21</th>
<th>3Q22</th>
<th>4Q22</th>
</tr>
</thead>
<tbody>
<tr>
<td>V3</td>
<td>79,614</td>
<td>53,880</td>
<td>92,331</td>
</tr>
<tr>
<td>RISC-V</td>
<td>189,440</td>
<td>217,257</td>
<td>217,186</td>
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</tbody>
</table>

30% | 20% | 30% | 70% | 80% | 70%
Product Applications

http://www.andestech.com
V5 Adoptions: From MCU to Datacenters

❖ Edge to Cloud
  ■ ADAS
  ■ AIoT
  ■ Blockchain
  ■ FPGA
  ■ MCU
  ■ Multimedia
  ■ Security
  ■ Wireless (BT/WiFi)

❖ 40nm to 3nm

❖ Many in AI

■ Datacenter/server AI accelerators
■ SSD: enterprise (& consumer)
■ 5G macro/small cells

Cloud

Personal

IOT Edge

5G Macro

5G Macro/small cells

SSD: enterprise (& consumer)

Datacenter/server AI accelerators
Andes RISC-V Cores Adopted in SoC

- Single core
- 2-8 cores
- > 30 cores
- > 100 cores
- > 1000 cores
New Products and Ecosystems

http://www.andestech.com
Andes RISC-V Product Roadmap

RV32/RV64
- Cache-Coherent 1-4 Cores
- Linux with FPU/DSP
- Fast/Compact with FPU/DSP Automotive Grade

Vector Ext.
- 27-Series:
  - Vector Ext. MemBoost
  - NX27V
  - A27/AX27
  - A27L2/AX27L2
  and more.

Superscalar
- 45-Series:
  - Dual Issue Vector Ext. MemBoost
  - N45/NX45/D45
  - A45/AX45
  - A45MP/AX45MP
  - NX45V, AX45MPV
  (1024-bit VPU, 1-8 Cores)
  and more.

Out of Order
- 60-Series:
  - > 2.5 GHz
  - > 2x per-GHz performance of 45-Series
  - AX65

Leading positions:
❖ The 1st company offering commercial RVP DSP CPU
❖ The 1st company offering the most updated spec of commercial RVV vector processor
❖ The 1st RISC-V core certified with ISO 26262 full compliance
❖ Tools for RISC-V custom extension: ACE
AX45 Can Do More (vs. 64bit A-series)

### Coremark/MHz

- **A53**: 4.18
- **Andes AX45**: 5.63
  - **1.35x**

### Dhrystone/MHz

- **A53**: 2.3
- **Andes AX45**: 3.27
  - **1.42x**

**AX45**
- 8-stage In-Order Dual Issue
- Widely adopted by industries in many applications
- **Performance is better**!
  - Coremark/MHz: **1.35x**
  - Dhrystone/MHz: **1.42x**
Target Applications for 27, 45, 60-Series

- AI/Deep Learning
- AR/VR
- 5G
- Networking
- Storage
- Video Surveillance
- ADAS
- V2X (Vehicle to Everything)
- IVI (In-Vehicle-Infotainment)

Metaverse, HPC and more...
The Andes AX60 Processor Series

- A new generation of AndesCore™
  - Advanced Performance 13-stage Out-of-Order Superscalar Multicore
  - Latest RISC-V Architecture
  - Supported by Andes Long-term Roadmap
    - AX65 as the first member of the AX60 series
    - More products based on the AX60 micro-architecture planned, including for automotive functional safety

- AndesCore™ AX65
  - Offering performance surpassing CA72
  - > 2.5 GHz, > 2x per-GHz performance of AX45MP
  - Engaging with early customers
AndesCore AX65: 1st Member of AX60-Series

- 64-bit, RV64GCBK
- 8-core Multiprocessor
- 13-stage OoO Pipeline
- 128-entry Reorder Buffer (ROB)
- 4-wide Frontend Decoder
- 8 Execution Pipeline engines
- 2-level Branch Target Buffer (BTB)
- TAGE-L Branch Predictor
- 1024-entry 4-way L2 TLBs
- 64 KB, 4-way Private I/D Caches
- 8 MB, 16-way Shared Cache
- 256-bit AXI4, MMIO and IOCP Buses
Andes is Driving Innovations in Automotive

with Industry’s 1st RISC-V ISO 26262 Fully Compliant Core, N25F-SE

In-Cabin Radar

CMOS Sensor

Auto TDDI

Auto MCU

Auto Storage

Taking RISC-V® Mainstream
Thank You

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