



AEM

Testing  
Innovation

# AEM 9M2022 Investor Update

November 4, 2022



# Disclaimer

This is a presentation of general information relating to the current activities of AEM Holdings Ltd. (“AEM”). It is given in summary form and does not purport to be complete.

This presentation may contain forward-looking statements which are subject to risks and uncertainties. Actual future performance, outcomes and results may differ materially from those expressed in these forward-looking statements as a result of a number of risks, uncertainties and assumptions. Representative examples of these factors include (without limitation) general industry and economic conditions, interest rate trends, cost of capital and capital availability, competition from other companies, shifts in customer demands, customers and partners, changes in operating expenses, governmental and public policy changes, and the continued availability of financing.

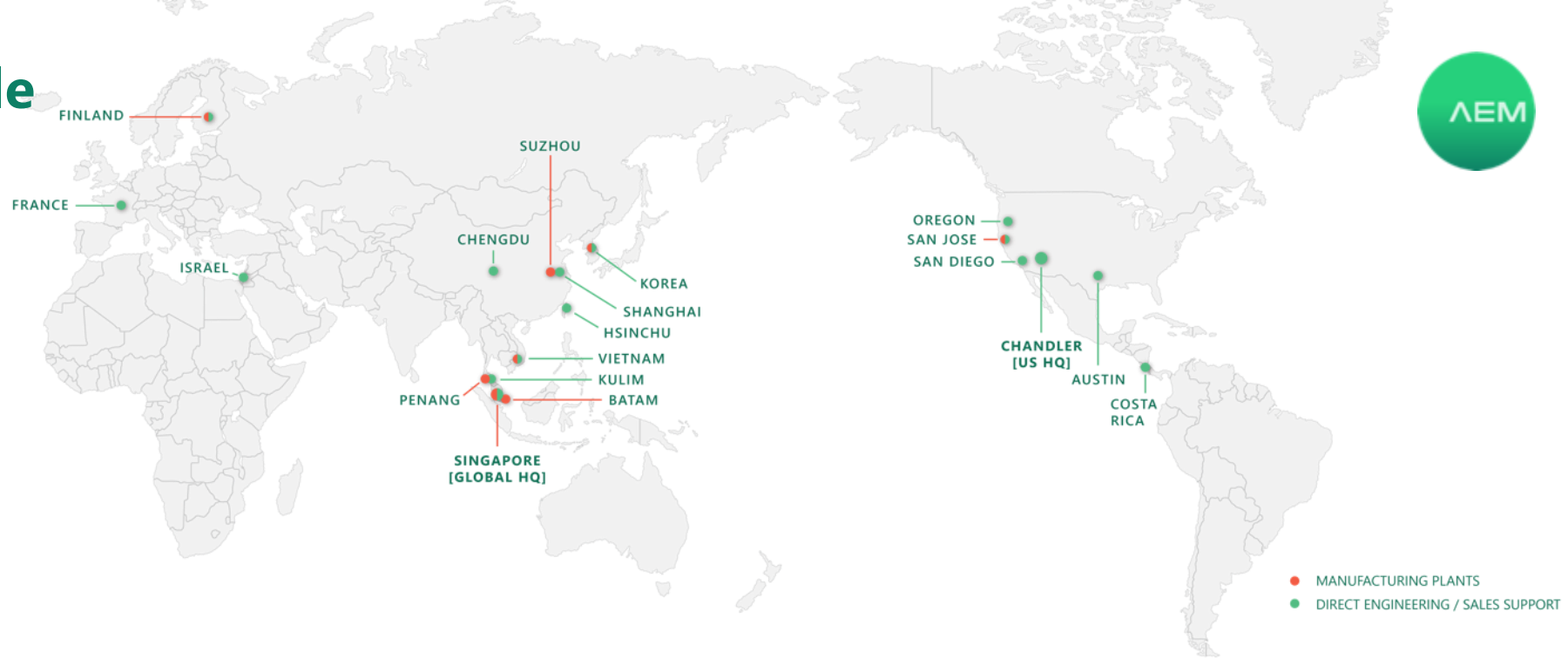
Accordingly, such statements are not and should not be construed as a representation as to the future of AEM, and are not intended to be profit forecasts, estimations or projections of future performance and should not be regarded as such.

No reliance should therefore be placed on these forward-looking statements, which are based on the current views of the management of AEM. The presentation is also not to be relied upon as advice to investors or potential investors and does not take into account the investment objectives, financial situation or needs of any particular investor. AEM accepts no responsibility whatsoever with respect to the use of this document or any part thereof.

**In this presentation, all \$ dollar amounts are in Singapore dollars unless otherwise specified.**

# AEM Corporate Profile

AEM is a global leader in the fast growing **Test 2.0** market, delivering application-specific intelligent system test and handling solutions for semiconductor and electronics companies serving the advanced computing, 5G, and AI markets.



## Leader in Fast Growing Test 2.0 Market

Test 2.0 growth is driven by advanced packaging & integrated logic. AEM has over **1,000** Test 2.0 tools in production



## Full Stack Technology

Delivering **composable** technologies and solutions for advanced, integrated semiconductor test needs



## Deploy at Scale

Critical delivery capabilities giving our customers a **reduced time to market**



## 2016-2022\* Rev. CAGR **51%**

9M2022 Results  
Revenue: **\$746.6M**  
PBT: **\$141.4M**  
FY2022 Guidance  
**\$820M to \$850M**



## Listed on SGX

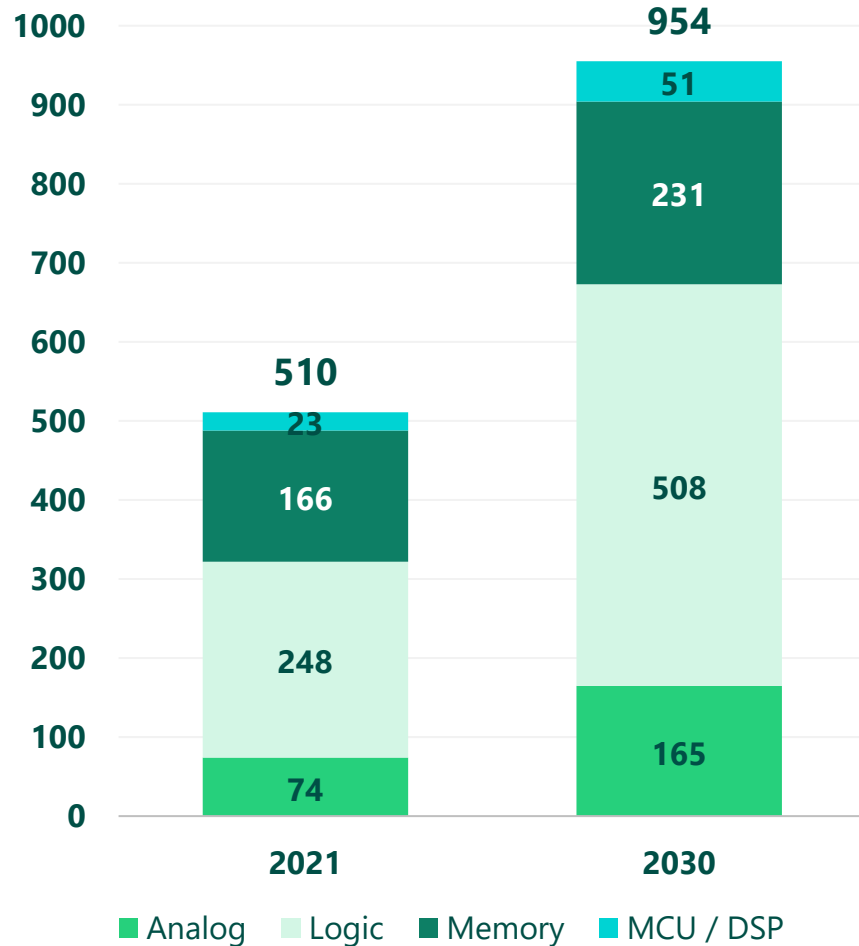
Market Cap: ~\$1.0B\*  
AEM Holdings Ltd.  
(SGD: AWX) (USD: XWA)

\* As at 4 Nov 2022

\* FY2022 guidance midpoint

# Mid- to long-term outlook is bright, with advanced packaging growing from 40% in 2020 to more than 60% in 2030

2021 vs. 2030 Market by Device Type (US\$B)



(Source: IC Insights)

## 1 Fundamental trends favor Test 2.0

- Advanced packaging forecasted to make up more than 60% of the packaging market by 2030, from 40% in 2020 (Source: The Insight Partners)
- Logic device revenue expected to double from US\$248B to US\$508B
- Intel’s process roadmap is aimed at obtaining process performance parity in 2024 and leadership in 2025 via RibbonFET, PowerVia, Foveros Omni and Foveros Direct, and eventually Intel’s 20A process node (Source: AnandTech.com)
- The West is expected to increase investments with a large part of assembly and test concentrated in SEA (Source: AEM analysis)

## 2 Consensus view that semiconductor market will grow to \$1tn by early 2030s

- Compute / AI, Automotive, data storage, and wireless are the key segments driving growth (Source: McKinsey & Co, IC Insights)
- Short-term geopolitical uncertainty may slow down China’s growth temporarily, but should drive increased investment in the West (Source: AEM Analysis)

## 3 300mm fab capacity to grow at a 10% CAGR from 2022 to 2025, with 9.2 million wafer per month

- Investments in new fabs / lines (~67) are expected to start between 2022 and 2025 (Source: SEMI.org)
- Back-end capacity has not yet seen an increase to accommodate front-end production increases (Source: SEMI.org)

# Industry Megatrends and Test Challenges

Driving Secular Growth In Test



Industry Megatrends



**5G**  
High-speed, low-latency, and omnipresent connectivity opens a vast array of new applications and use cases



**Artificial Intelligence**  
Growth of AI enables new business models and unlocks increasing value from data



**IoT & Cloudification**  
Proliferation of IoT enabled devices and the cloudification of data requires increased power in the cloud and at the edge

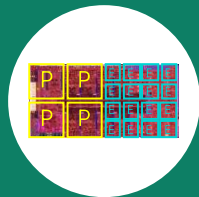


**Automotive**  
Electrification of vehicles, introduction of autonomous driving capabilities, and digitalization

Device Volumes Increasing



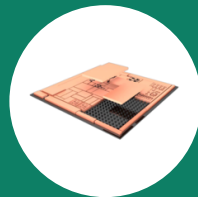
Test Challenges



Increasing Device Complexity



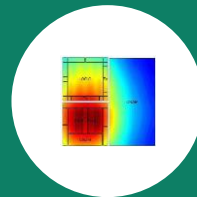
Increasing Power Requirement



Adoption of Advanced Packaging



Increasing Test Development Times



Increasing Thermal Challenges



Increasing Test Coverage Requirements

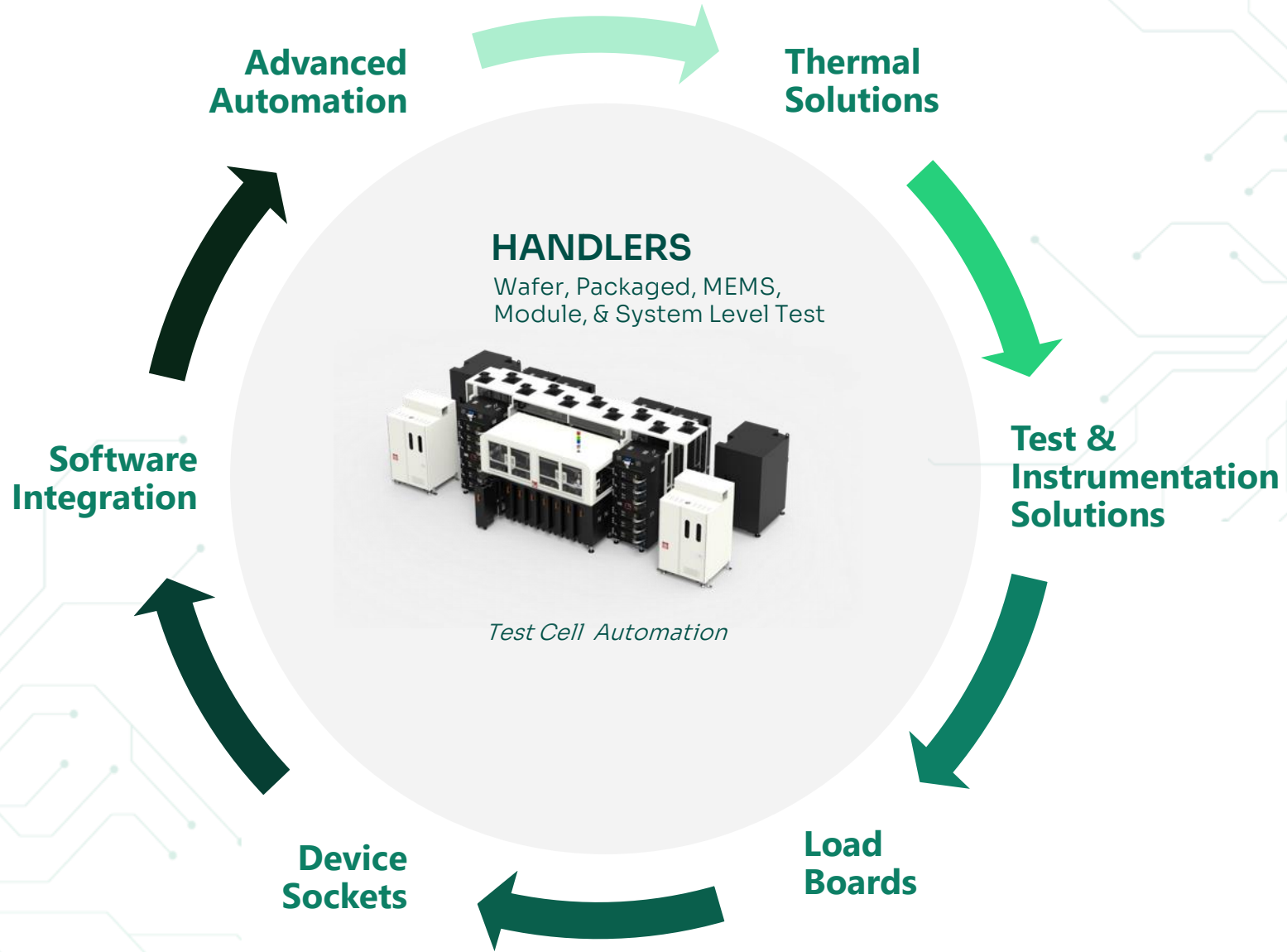
Device Test Times Increasing



**Growth In Test Spend**

# Full Stack Solution

Composed for the Customer's Modern Test Needs



# Test 2.0 And Our Composable Solutions are Enabled by AEM's Core Capabilities



Organic R&D

M&A

## TECHNOLOGY

### Test Handlers



*Test Cell Automation*

*Final Test Handlers*

### Thermal Arrays / Kits / Sockets



*System Level Test Consumables*

### Semiconductor Testers



*Low Cost ATE*

*Intelligent Load Boards*

### Application Specific Wafer Probers



*Humidity, Pressure, Gyro, Motion, Cryogenic, ATC*

### Software Integration



## DELIVERY

### Interconnect Testers



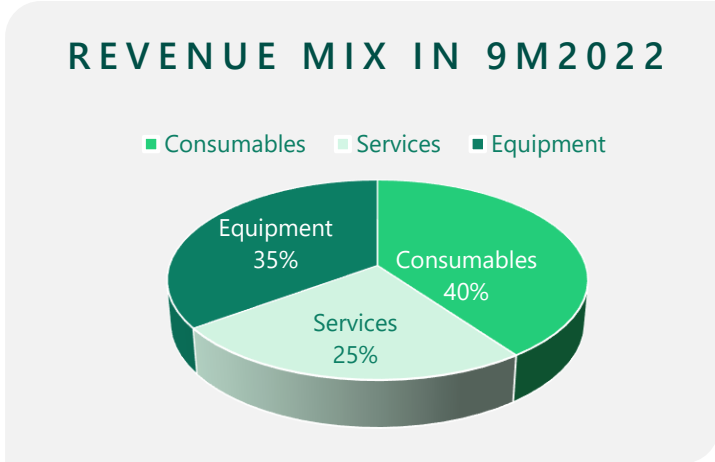
*Cable Testers, Vector Network Analyzers*

# AEM's Business Model



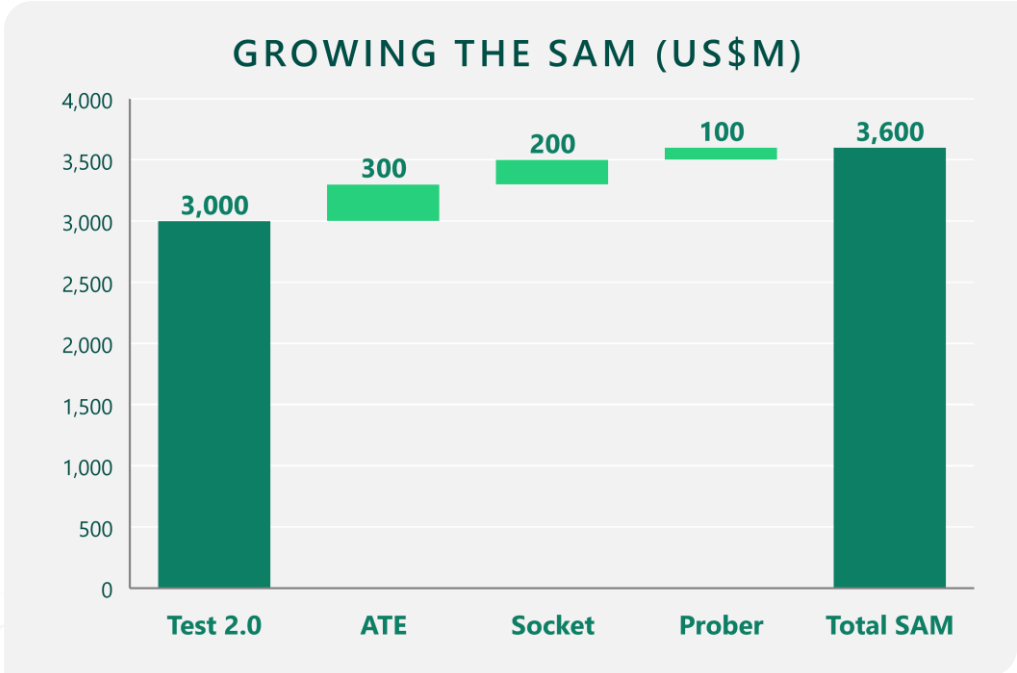
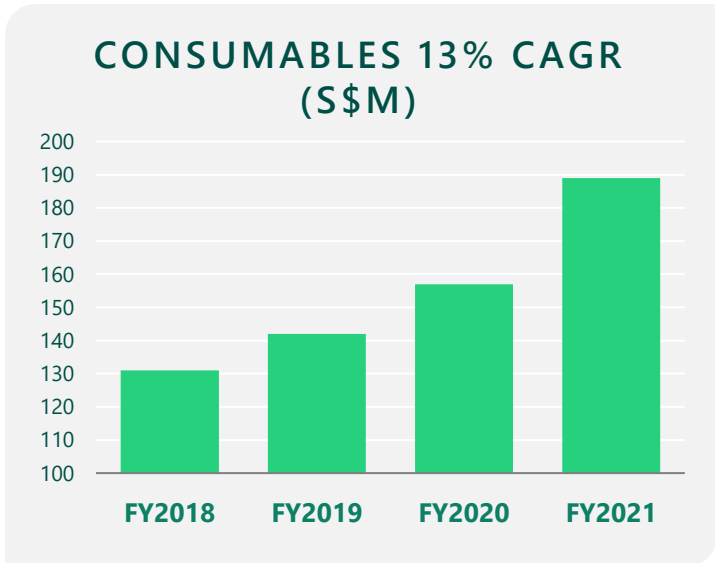
## Business Model

- Growing recurring demand for kits, pans, and spares underpinned by a growing install base of >1,000 Test 2.0 tools
- Grow share of wallet of the overall consumable stack within each tool



- ✓ **AEM's SAM for Test 2.0: US\$3.0B**
- ✓ **Growing the SAM by expanding capabilities**
  - ATE: US\$300M out of total US\$5,400M market
  - Socket: US\$200M out of total US\$1,500M market
  - Prober: US\$100M out of total US\$1,100M market

- ## Benefits
- ✓ Mitigate volatile equipment sales
  - ✓ Bolster profitability with higher margin consumables
  - ✓ Increase customer intimacy



Source : AEM estimates



# 9M2022 Highlights

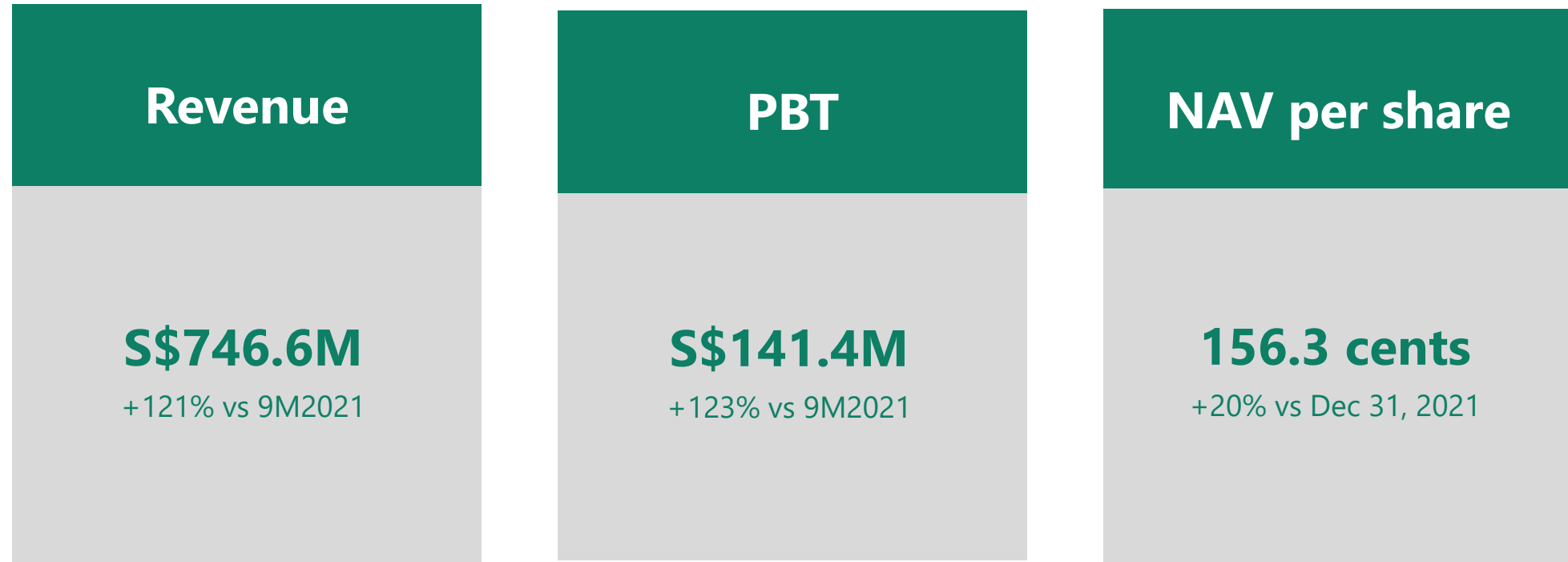
- Delivered highest 9M revenue and PBT in AEM's history at **S\$746.6M (+121% y-o-y)** and **S\$141.4M (+123% y-o-y)** respectively
- Reported EPS of 36.95 SG cents in 9M2022, a 99% y-o-y increase from 18.58 SG cents in 9M2021
- Continues to have a strong balance sheet with NAV per share of 156.3 SG cents as at Sep 30, 2022 compared to 130.0 SG cents as at Dec 31, 2021, a 20% increase
- Maintaining FY2022 revenue guidance between S\$820M and S\$850M on the back of strong demand from existing and new customers
- Continue to work with the three previously mentioned new customers, and are on the critical path for the release of their next generation devices

# 9M2022 Financial Highlights

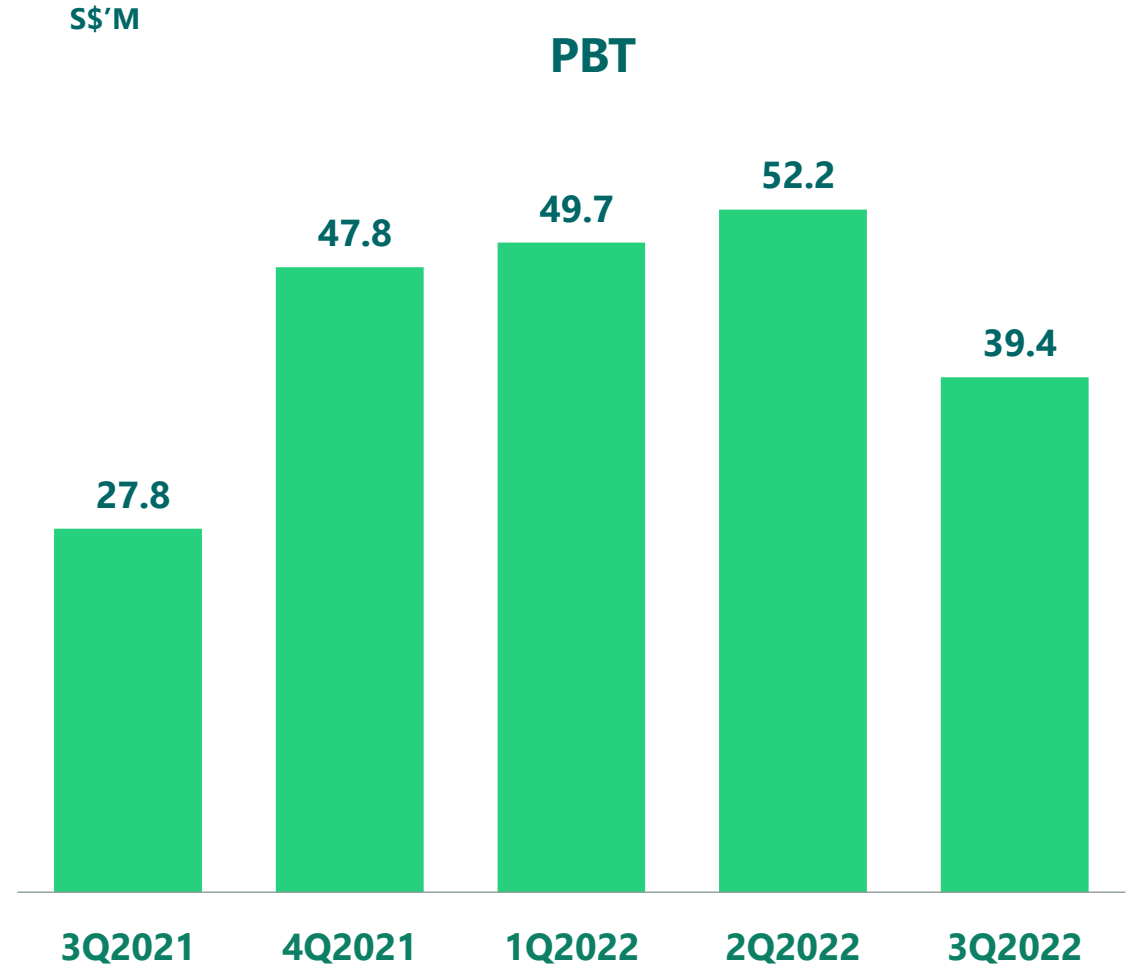
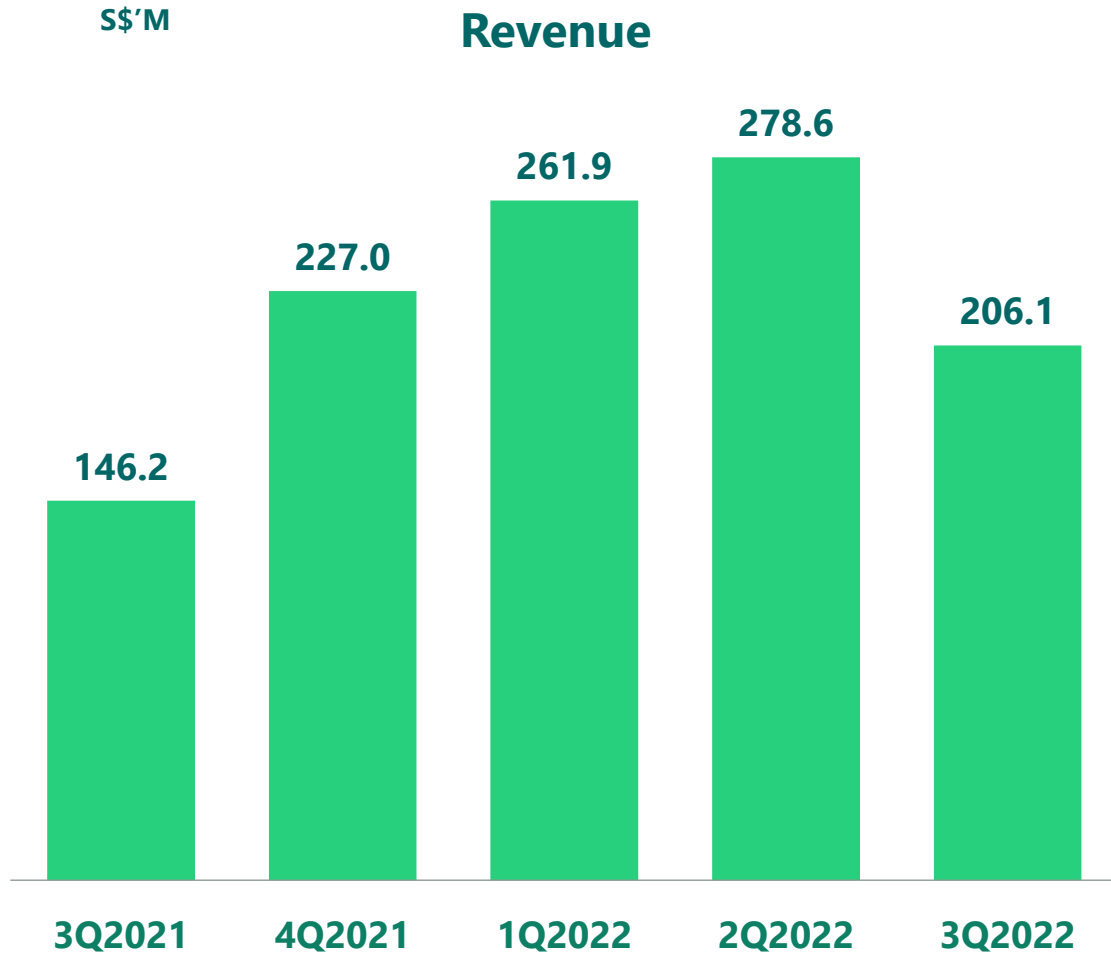
Highest 9 months results recorded



## 9M2022 vs 9M2021



# Quarterly Revenue and PBT





# A Robust Balance Sheet

Sound capital structure – Debt/Equity ratio of 0.2X

NAV per share increased mainly due to \$115M profits earned for 9M2022



	As at	
	Sep'22	Dec'21
	S\$M	S\$M
Property, Plant & Equipment	38.5	26.1
Right-Of-Use Assets	36.2	17.8
Intangible Assets	113.1	96.9
Cash	153.6	216.2
Current Assets less Current Liabilities	339.0	314.9
Total Assets	823.9	710.5
Financial Liabilities	95.1	81.3
Shareholders' Equity	488.9	402.5
<b>in SG Cents</b>		
NTA per share	121.2	98.3
NAV per share	156.3	130.0
Debt/ Equity	0.2x	0.2x



## Highlights

### Net Current Assets (+S\$24.1M)

Increased mainly from:

- Higher inventory level in 9M2022 to ensure parts and components availability for upcoming delivery

### Shareholders' Equity (+S\$86.4M)

Increased due to profit contribution in 9M2022 of S\$115.3M partially offset by dividends paid in 2022 of S\$36.2M

# Thank You

## **Investor Relations Contact**

Samir MOWLA  
samir.mowla@aem.com.sg

---

## **Financial PR Pte Ltd**

Kamal SAMUEL / Shivam SARAF / Urvija DIWAN  
Tel: 6438 2990 / Fax: 6438 0064  
kamal@financialpr.com.sg  
shivam@financialpr.com.sg  
urvija@financialpr.com.sg