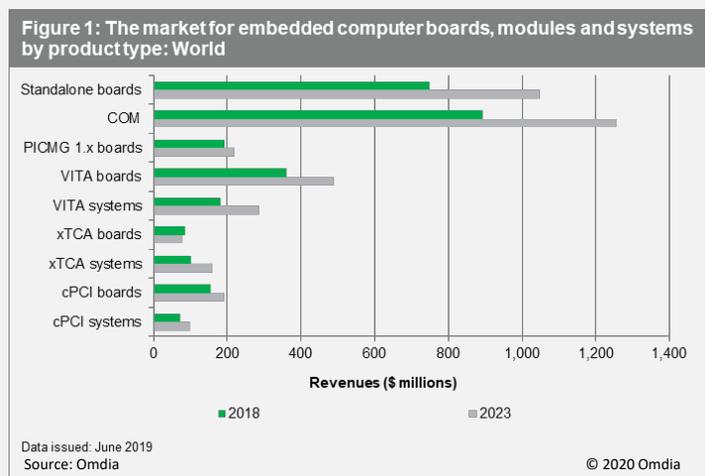# Embedded Computer Boards, Modules & Systems Report - 2019

Part of the Discrete, Process & Capital Equipment Service Area Package

Mark Watson, VP Research Industrial

Published On July 1, 2019

Figure 1: The market for embedded computer boards, modules and systems by product type: World

IOT innovation will be a key driver of the embedded computing market over the next five years and new wireless technologies will push IoT into new applications

The key markets served by embedded computer boards, modules and systems span military, medical, gaming, transportation, and industrial automation. Embedded computing controls ground, air and sea-based military applications, railroads and factories, and provides critical functionality to scientific and medical equipment.

While many of these markets grow at a modest pace year-on-year, the impact of the growth in Internet of Things (IOT) applications has the potential to grow certain parts of the embedded computing market at a much more radical pace. In particular, it is the industrial IOT (IIOT) applications which appear to offer the greatest potential. The industrial automation market segment has been deploying automation for decades but IIoT is different in certain respects. The main distinctions are the extensive use of sensors and actuators, the advanced analytics employed, and the adoption of IT methodologies.

A strong theme emerged in embedded computing in 2019, describing the transformation from analytics to artificial intelligence (AI), first seen in the cloud, now at the edge and everything in-between. Computing power is now moving from a centralized system to a distributed system. So much power is now available at the edge, this processing capability is now involved in decision making. Inference is moving from the datacenter to distributed workstations close to the edge, due to bandwidth, latency, and data privacy concerns.

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Report Coverage

KEY ISSUES ADDRESSED	COVERAGE

KEY ISSUES ADDRESSED

- What are the key drivers for the embedded computer boards, modules and systems market in the next five years?
- What is the current size of the embedded computer boards, modules and systems market and how will this change for each form factor over the next five years?
- Who are the leading suppliers of each form factor? Which suppliers lost and gained share?
- Will new applications bring additional opportunities to the market?

COVERAGE

Frequency, Time Period
- 5-year Forecast
- 10 Industry Sectors

Measures

2019-2023 forecast across all 3 regions and all countries
- Revenues
- Average Selling Prices
- Units

2017 and 2018 company market shares by world, EMEA, Americas and Asia Pacific regions

Regions
- EMEA
- Americas
- Asia Pacific

Single Board Computers
- ATCA
- PrAMC
- 3U CompactPCI (PICMG 2.0)
- 6U CompactPCI (PICMG 2.0)
- CompactPCI-Serial
- VME
- 3U VPX
- 6U VPX

Computer-on-Modules
- COM Express Basic
- COM Express Compact
- COM Express Mini
- ETX/XTX
- Qseven
- uQseven
- SMARC
- Other

PICMG 1.X
- PICMG 1.0
- PICMG 1.3
- (Top-level Statistics and market shares only)

Standalone Boards
- 3.5"
- ATX
- MicroATX
- Mini-ITX
- Nano-ITX
- Pico-ITX
- EBX
- EPIC
- eNUC
- Mini-STX
- Other (Standard)

Architecture
- ARM
- PowerPC
- X86
- Other

Further Breakouts

Selected form factors by:
- Country
- MPU Market Share

System Level Sales
- ATCA
- MicroTCA
- 3U CompactPCI (PICMG 2.0)
- 6U CompactPCI (PICMG 2.0)
- CompactPCI-Serial
- VME
- 3U VPX
- 6U VPX

Industry Sector
- Civil Aerospace
- Commercial Communications
- Defense
- Gambling/Gaming
- Industrial Automation
- Medical
- POS/POI/Digital Signage
- Railway
- Transportation (other categories)
- Other Sector

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ABOUT OMDIA

Omdia is a global technology research powerhouse, established following the merger of the research division of Informa Tech (Ovum, Heavy Reading, and Tractica) and the acquired Omdia technology research portfolio.* We combine the expertise of more than 400 analysts across the entire technology spectrum, covering 150 markets. We publish over 3,000 research reports annually, reaching more than 14,000 subscribers, and cover thousands of technology, media, and telecommunications companies. Our exhaustive intelligence and deep technology expertise enable us to uncover actionable insights that help our customers connect the dots in today's constantly evolving technology environment and empower them to improve their businesses–today and tomorrow.

*The majority of Omdia technology research products and solutions were acquired by Informa in August 2019 and are now part of Omdia.

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Applicable to
- Existing manufacturers and suppliers of single computer boards, computer-on-modules and standalone boards
- Any company considering entering this market
- Distributors and systems houses involved with manufacturing
- Systems designers and specifiers, particularly those involved in industrial automation
- Of interest to senior managers, marketing managers and planners, and automation design and production managers
- single board computers, computer-on-modules and standalone boards
- Suppliers of semiconductors and electronic components

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