

Aerospace Actuation 2020

The Eighth review of the aerospace actuation market from
Counterpoint Market Intelligence Limited

Why buy this 356-page report?

Because things are changing and there have already been significant developments in; industry structure, procurement, M&A and technology (most notably in electromechanical actuation).

Our new report's detailed market model offers the following market analysis;

- Market size split by actuator product segment, divided into OE and aftermarket
- Market size split by aircraft type, divided into OE and aftermarket
- Market growth projections and segmentation under three different post Covid-19 scenarios over the period 2019-2029
- Analysis of 2019 market size and shares for the following 12 product segments: primary flight controls; secondary flight controls - high lift; secondary flight controls - other; landing gear; thrust reversers; engine controls; utilities; seats; weapons release; missiles; UAVs and space.

We analyse key characteristics and trends including;

- Shape of the market;
 - How the relative lack of large new programmes is changing supplier strategies
 - The aftermarket was already changing and now Covid-19 is having a massive impact, at least in the short term
 - Is the traditional market hierarchy still holding?
 - Will the move to the more electric aircraft change the shape of the actuation supply chain?
- Technology;
 - Electro-mechanical actuation; still the main technology shift occurring in actuation, with solutions now available in principle to address jamming issues.
 - How the industry sees the evolving role of EHA and EBHA.
 - The continuing important role of hydraulics.
 - New materials and processes: e.g. additive manufacturing and composites.
- The roles played by low cost country supply chains in aerospace actuation
- Procurement trends; e.g. is there a trend towards more insourcing by the aircraft OEMs who want systems integration responsibility and a move away from large systems contracts?
- Role of governments; its pivotal role in funding R&T programmes
- M&A; an analysis of deals over the last two years and our view of possible further moves – we think the Covid-19 shock will speed up consolidation. We expect to see M&A activity resume in 2021
- Profitability; analysis of reported results. Why actuation has been a good business.

The report provides profiles of 83 companies. Our expanded profiles cover;

- Origins and ownership; Our estimate of aerospace actuation sales, plus financials if obtainable; Operations and technologies; Customers and contracts; Strategy; Recent developments; Our comments

The report is supplied with an Excel data pack, which provides all the numbers in our charts and tables

We offer purchasers of our report a free teleconference to discuss any aspects.

CONTENTS

1. Summary
2. Market definition and segmentation
3. Glossary of different types of actuator
 - 3.1. General definitions and terms
 - 3.2. Types of aerospace actuator
 - 3.3. Aerospace actuator functions
4. Methodology
 - 4.1. Sources of information
 - 4.2. Our market model
 - 4.2.1. The Counterpoint database
 - 4.3. Company profiles and analysis of trends
5. The impact of Covid-19
 - 5.1. Some initial observations
 - 5.2. Forecasts in this report
6. Overall market analysis
 - 6.1. Industry structure
 - 6.2. Market size by segment
 - 6.3. Market growth
 - 6.4. Overall market shares
7. Sector analysis
 - 7.1. Primary flight controls
 - 7.1.1. Market size and growth
 - 7.1.2. Market shares
 - 7.2. Secondary flight controls - High lift systems
 - 7.2.1. Market size and growth
 - 7.2.2. Market shares
 - 7.3. Secondary flight controls – other
 - 7.3.1. Market size and growth
 - 7.3.2. Market shares
 - 7.4. Landing Gear Actuation
 - 7.4.1. Market size and growth
 - 7.4.2. Market shares
 - 7.5. Thrust reversers
 - 7.5.1. Market size and growth
 - 7.5.2. Market shares
 - 7.6. Engine controls
 - 7.6.1. Market size and growth
 - 7.6.2. Market shares
 - 7.7. Utilities
 - 7.7.1. Market size and growth
 - 7.7.2. Market shares
 - 7.8. Seats
 - 7.8.1. Market size and growth
 - 7.8.2. Market shares
 - 7.9. Weapons release
 - 7.9.1. Market size and growth
 - 7.9.2. Market shares
 - 7.10. Missiles
 - 7.10.1. Market size and growth
 - 7.10.2. Market shares
 - 7.11. UAVs
 - 7.11.1. Market size and growth
 - 7.11.2. Market shares
 - 7.12. Space
 - 7.12.1. Market size and growth
 - 7.12.2. Market shares
8. The shape and characteristics of the industry
 - 8.1. Consolidation
 - 8.2. Increasing market hierarchy?
 - 8.3. Company sizes – frequency distribution by sales range
 - 8.4. The geographical focus of the supply chain
 - 8.5. Aircraft product focus of the supply chain
 - 8.6. Barriers to entry

- 8.7. Contract wins since June 2018
- 8.8. Cost breakdown
- 9. Technology
 - 9.1. A brief history of aerospace actuation
 - 9.2. The growing penetration of electric actuation
 - 9.2.1. Electro-hydrostatic actuation
 - 9.2.2. Electrical backup hydraulic actuation (EBHA)
 - 9.2.3. Electro-mechanical actuation (EMA)
 - 9.2.4. More sensors
 - 9.3. Electric motors
 - 9.4. Electric power generation and distribution
 - 9.5. More distributed system architectures
 - 9.6. Additive Manufacturing
 - 9.7. Morphing wings/adaptive trailing edges
- 10. Procurement trends
 - 10.1. Integrated flight control and computer contracts
 - 10.2. Primary, high lift and other secondary flight controls
 - 10.3. Undercarriage actuators
 - 10.4. Nacelle actuation
 - 10.5. Airframe parts delivered with actuation installed
 - 10.6. The effect on the supply chain of the move to the more electric aircraft
- 11. The aftermarket
- 12. The role of governments
 - 12.1. EU programmes
 - 12.2. US programmes
 - 12.3. Other national programmes
 - 12.4. Other ways in which governments influence actuation development
 - 12.5. The West and Russia
- 13. Actuation strategies
 - 13.1. Responding to the Covid crisis
 - 13.2. Gradual move from components to systems
 - 13.2.1. Wide scope systems integrators
 - 13.3. Major suppliers' bidding strategy
 - 13.4. Set up local to the customer
 - 13.5. Making use of low cost countries
 - 13.6. In-house or outsourcing?
 - 13.7. Investment in technology
 - 13.8. Investment in capex
 - 13.9. Investment in new materials
 - 13.10. Partner with an aerospace parts distributor
 - 13.11. Package actuation with other products
 - 13.12. M&A deals over the last two years
 - 13.13. Capture more aftermarket
- 14. Industry profitability
- 15. Major systems suppliers
Profiles of 6 companies
- 16. Principal suppliers - USA and Canada
Profiles of 38 companies
- 17. Principal suppliers Europe
Profiles of 28 companies
- 18. Principal suppliers – rest of the world
Profiles of 11 companies
- 19. ANNEX A – An introduction to aerospace actuation
 - 19.1. Performance and Design Requirements
 - 19.2. Control system computers
 - 19.3. Materials
 - 19.4. Electric generators
- 20. Counterpoint Market Intelligence Limited terms of business

WHY COUNTERPOINT?

Counterpoint Market Intelligence Limited was formed by Richard Apps and George Burton in 2004 to offer original, independent and rigorous research into aerospace markets. Between them, George and Richard have over 40 years of experience in senior positions in aerostructures, engine components, and aerospace equipment.

Counterpoint is an international business, with 80% of sales outside the UK. Sales of research reports have led to consultancy projects. Two thirds of sales are to the aerospace industry – aircraft and engine OEMs and first and second tier suppliers. Other clients are private equity funds, investment banks and government organisations.

In addition to this report the following reports are available from Counterpoint Market Intelligence Limited:

- Aerostructures 2020
- Aero-Engine and IGT components 2020
- Aircraft interiors 2019
- Aerospace composites 2019
- Tooling & automated assembly for aerostructures 2017
- Mini reports;
 - Electrical Power Systems 2020
 - Engine Controls and Health Monitoring 2020
 - Aircraft Harnesses and Electrical Standard Parts 2020
 - Aircraft Fluid Conveyance 2019
 - Aerospace Sensors 2019
 - Aerospace valves 2019
 - Aerospace Machining 2019
 - Aerospace Environmental Control Systems 2018

Counterpoint Market Intelligence Limited also undertakes commissioned consultancy studies for its clients in areas including the following:

- Deep-dive market analysis
- Evaluation of the strategic positioning of businesses
- Market and strategy-related due diligence for M&A
- Acquisitions search

How to buy the report

Please contact us using the contact details below or email us on enquiries@cpmil.com.

Richard Apps Tel: +44 (0)1235 868051
 Mobile: +44 (0)7741 035969
 e-mail: richardapps@cpmil.com

Address: Counterpoint Market Intelligence Ltd, Curlew Meadow, Denchworth, Oxfordshire OX12 0EA, UK

Website: www.cpmil.com

COUNTERPOINT MARKET INTELLIGENCE LIMITED TERMS AND CONDITIONS OF TRADING

Use

Single Site Licence: This report may be used by an unlimited number of people within the same site. Each of these people may use the report on any computer, and may print out the report, but may not share the report (or any information contained therein) with any person or persons outside that site without the written approval of Counterpoint Market Intelligence Limited.

Group Licence: This report may be used by an unlimited number of people within the same group of companies. Users must not share the report (or any information contained therein) with any person or persons outside that group of companies without the written approval of Counterpoint Market Intelligence Limited.

Limitation on liability of Counterpoint Market Intelligence Limited

Counterpoint Market Intelligence Limited makes no representation or warranty, expressed or implied, as to the accuracy or completeness of the information contained in this report.

Counterpoint Market Intelligence Limited shall not be held liable for consequential and indirect losses or loss of profit or revenue resulting from the use of this report.

No recommendations are made or should be implied from this report.

Intellectual Property

All intellectual property rights, including but not limited to copyright, shall remain the property of Counterpoint Market Intelligence Limited or any third-party licensors.

Payment

Payment of Counterpoint Market Intelligence Limited's invoices is to be made within 30 days of the date of invoice.

Governing Law and Jurisdiction

Any dispute or claim arising out of or in connection with this report (including non-contractual disputes or claims) shall be governed by, and construed in accordance with, the Law of England and Wales. The purchaser of this report irrevocably agrees that the courts of England and Wales shall have exclusive jurisdiction to settle any dispute or claim that arises out of or in connection with this report (including non-contractual disputes or claims).