X-By-Wire Systems - Global Strategic Business Report

Description: This report analyzes the worldwide markets for X-By-Wire Systems in Thousand Units. The Global Market is further analyzed by the following Product Types: Throttle-by-Wire Systems, Shift-by-Wire Systems, and Others. The report provides separate comprehensive analytics for the US, Canada, Japan, Europe, Asia-Pacific, and Rest of World. Annual estimates and forecasts are provided for the period 2015 through 2022. Market data and analytics are derived from primary and secondary research. Company profiles are primarily based on public domain information including company URLs.

The report profiles 29 companies including many key and niche players such as -

- Robert Bosch GmbH
- Continental AG
- Danaher Motion
- LORD Corporation
- Mobil Elektronik GmbH

Contents:

I. INTRODUCTION, METHODOLOGY & PRODUCT DEFINITIONS
   Study Reliability and Reporting Limitations
   Disclaimers
   Data Interpretation & Reporting Level
   Quantitative Techniques & Analytics
   Product Definitions and Scope of Study
   Throttle-by-Wire Systems
   Shift-by-Wire Systems
   Other by-Wire Systems

II. EXECUTIVE SUMMARY

1. INDUSTRY OVERVIEW
   Automobile "Electronification": The Cornerstone for Growth of X-By Wire Systems
   Table 1: Explosion of Electronic Systems Fuels Technology Interest & R&D Investments in X by Wire Technologies: Automotive Electronics as a Percentage of Vehicle Production Cost for the Years 2010, 2020 & 2030 (includes corresponding Graph/Chart)
   Table 2: With Powertrain & Chassis Electronics Accounting for a Projected 49% Share in Automotive Electronics, X by Wire is Poised for Significant “Technology Take-Off”: Breakdown of the Global Automotive Electronics Market (In US$ Billion) by Application for the Year 2020 (includes corresponding Graph/Chart)
   X By Wire: Market Review

2. KEY MARKETS TRENDS, DRIVERS & CHALLENGES
   Focus on Lightweighting Fuels the X By Wire Trend
   Focus on Vehicle Stability Control Fuels Engineering Interest in X by Wire
   X by Wire: The Foundation for Driverless Cars
   Design Flexibility Spurs Interest in X by Wire Systems
   Trend Towards Auto Transmission Benefits Shift by Wire Transmission Systems
   Table 3: Growing OEM Installation of Automatic Transmission Systems Expands the Addressable Technology Opportunity for Shift by Wire Systems: Breakdown of the Global Automotive Transmission Systems Market (In 000 Units) by Technology Type for the Years 2015 & 2020 (includes corresponding Graph/Chart)
   Drive-by-Wire: Primed As the Technology of the Future
   Electronic Throttle Control: The Most Widely Used X-by-Wire System
   Surging Interest in E-Mobility Paves the Way for X-by-Wire Systems
   Table 4: Growing Electric Vehicle Market Fuels Need for Optimization & Automation, Spurring Demand for Electronic X-by-Wire Architecture: Global Electric Vehicles Market (In '000 Units) by Geographic Region for the Years 2015 & 2020 (includes corresponding Graph/Chart)
   Component Manufacturers’ Focus On X By Wire Research to Benefit Market Growth
   ZF Friedrichshafen AG Remains Committed to Innovation in Auto Electronics
Continental to Develop Electronic Brake System
Robert Bosch Develops iBooster & eClutch
Siemens Focuses on Developing BbW & SbW Systems
Stable Automobile Production to Benefit Market Growth
Table 5: Projected Growth in Production of Automobiles to Benefit X By Wire Systems in the OEM Market:
Breakdown of Global Automobile Production (In ‘000 Units) the Years 2015 & 2020 (includes corresponding
Graph/Chart)
Expanding Middle Class Population in Developing Countries Fuels Growth
Table 6: With 67% of the World Middle Class Population by 2030, Asia-Pacific Ranks as an Important Market
for Innovative Automotive Technologies: Breakdown of World Middle Class Population (In Million) by Region
for the Years 2015, 2020 & 2030 (includes corresponding Graph/Chart)
Table 7: With a 577% Increase in Middle Class Consumer Spending by 2030, Asia Represents a Major Market
for Auto Manufacturers & Technology Vendors: Breakdown of World Middle Class Spending (In US$ Trillion)
by Region for the Years 2015 & 2030 (includes corresponding Graph/Chart)
Off-Highway Vehicles: A Major End-Use Sector for X-By-Wire Systems
Stringent Regulations Governing Dependability of Automotive Systems Dampen Market Growth
Rise in Vehicle Recalls Due to Failure of X-by-Wire Systems Aggravates Safety Concerns
Automotive Fiber Optics & Fault Tolerant Electronics & Communication: The Answer to Reliability Issues in X
by Wire Systems
42Volt Bus: The Solution for High Power Requirements in Automobiles
Market Outlook

3. PRODUCT OVERVIEW
An Introduction to X-By-Wire Systems
Factors Driving Development of X-by-Wire Systems
X-by-Wire Systems Vs Mechanical Systems
Flexible Placement of Steering Unit
Easy Upgradation
Safety
Improved Control
Lower Weight
Quick and Simple Tuning
Eliminating Mechanical Hysteresis
Simple Integration with Electronic Systems
Eco-Friendliness
Better Failure Diagnosis
Cost-effectiveness
Lesser Constraints for Manufacturers
Communication System
Time-Triggered Communication
Fault Tolerant Unit (FTU)
Relevance of Fault Tolerant Architecture
Advantages of X-by-Wire Systems
Limitations of X-by-Wire Systems
Safety Concerns
Sensitivity Issues
Real-Time Constraints
Reliability Constraints
High Power Requirements
Regulations & Legislation
Types of X-by-Wire Systems
Throttle-by-Wire Systems
Shift-by-Wire Systems
Other by-Wire Systems
Park-by-wire
Drive-by-Wire/Electro-Hydraulic Steering Assist Systems
Steering Systems
Power Steering
Electrical Assist Steering
Steer-by-Wire Systems
Advantages of Steer-by-Wire Systems
Structure of Steer-By-Wire Systems
Steer-By-Wire System with Hydraulic Backup
Purely Electrical Steer-by-Wire System
Electronic Steering Systems in Industrial Utility Vehicles Market
Regulatory and Legal Environment for Steer-by-Wire Systems
The Steer-by-Wire Working Group
Directives Governing Steer-by-Wire Systems
An Insight
Passenger and Goods Carrying Motor Vehicles
Agricultural or Forestry Tractors
Mobile Machinery
Brake-by-Wire Systems
The Need for Electronic Braking Systems
Working of Brake-by-Wire Systems
Levels of Brake-by-Wire Systems
Electric Hydraulic Braking (EHB)
Working of the Electro-Hydraulic Brake
Electric Mechanical Braking (EMB)
Working of the Electro Mechanical Brake
Challenges Facing Adoption of Brake-by-Wire Technology

4. PRODUCT INNOVATIONS/INTRODUCTIONS
ZF Unveils Clutch-by-Wire
Orscheln Industries Offers Electronic Shift-By-Wire Systems
Infiniti Introduces Infiniti Q50 with Steer-by-Wire System
Raymarine Unveils Drive-by-Wire Steering Interface for Boat Builders
UTC Aerospace Joins Forces with Sikorsky Aircraft to Test SARA

5. RECENT INDUSTRY ACTIVITY
ZF Takes over TRW Automotive
Renault Opt for Shift-by-Wire Gearshift Designed by Ficosa in its Espace
NASA Incorporates Fly-By-Wire Driving System in its MRV

6. FOCUS ON SELECT PLAYERS
Robert Bosch GmbH (Germany)
Continental AG (Germany)
Danaher Motion (US)
LORD Corporation (US)
Mobil Elektronik GmbH (Germany)
RLP Engineering (US)
SKF Group (Sweden)
TORC Robotics Inc. (US)
ZF TRW (US)

7. GLOBAL MARKET PERSPECTIVE
Table 8: World Recent Past, Current and Future Analysis for X-By-Wire Systems by Geographic Region
US, Canada, Japan, Europe, Asia-Pacific (excluding Japan) and Rest of World Markets Independently Analyzed with Annual Sales Figures in Thousand Units for Years 2015 through 2022 (includes corresponding Graph/Chart)
Table 9: World 7-Year Perspective for X-By-Wire Systems by Geographic Region
Percentage Breakdown of Unit Sales for US, Canada, Japan, Europe, Asia-Pacific (excluding Japan) and Rest of World Markets for Years 2016 and 2022 (includes corresponding Graph/Chart)
Table 10: World Recent Past, Current and Future Analysis for X-By-Wire Systems by Type
Shift-by-Wire, Throttle-by-Wire, and Others Markets Independently Analyzed with Annual Sales Figures in Thousand Units for Years 2015 through 2022 (includes corresponding Graph/Chart)
Table 11: World 7-Year Perspective for X-By-Wire Systems by Type
Percentage Breakdown of Unit Sales for Shift-by-Wire, Throttle-by-Wire, and Others Markets for Years 2016 and 2022 (includes corresponding Graph/Chart)

III. MARKET
1. THE UNITED STATES
A. Market Analysis
Outlook
Product Introductions
Strategic Corporate Developments
Key Players
B. Market Analytics
Table 12: US Recent Past, Current and Future Analysis for X-By-Wire Systems Analyzed with Annual Sales Figures in Thousand Units for Years 2015 through 2022 (includes corresponding Graph/Chart)

2. CANADA
Market Analysis
Table 13: Canadian Recent Past, Current and Future Analysis for X-By-Wire Systems Analyzed with Annual Sales Figures in Thousand Units for Years 2015 through 2022 (includes corresponding Graph/Chart)

3. JAPAN
Market Analysis
Table 14: Japanese Recent Past, Current and Future Analysis for X-By-Wire Systems Analyzed with Annual Sales Figures in Thousand Units for Years 2015 through 2022 (includes corresponding Graph/Chart)

4. EUROPE
A. Market Analysis
Outlook
An Insight into European X-By-Wire Market
Brake-by-Wire Systems: Focus on Safety and Safety
B. Market Analytics
Table 15: European Recent Past, Current and Future Analysis for X-By-Wire Systems by Geographic Region France, Germany, Italy, UK, Spain, Russia and Rest of Europe Markets Independently Analyzed with Annual Sales Figures in Thousand Units for Years 2015 through 2022 (includes corresponding Graph/Chart)
Table 16: European 7-Year Perspective for X-By-Wire Systems by Geographic Region Percentage Breakdown of Unit Sales for France, Germany, Italy, UK, Spain, Russia and Rest of Europe Markets for Years 2016 and 2022 (includes corresponding Graph/Chart)

4a. FRANCE
A. Market Analysis
Current & Future Analysis
Strategic Corporate Development
B. Market Analytics
Table 17: French Recent Past, Current and Future Analysis for X-By-Wire Systems Analyzed with Annual Sales Figures in Thousand Units for Years 2015 through 2022 (includes corresponding Graph/Chart)

4b. GERMANY
A. Market Analysis
Current & Future Analysis
Product Introductions
Key Players
B. Market Analytics
Table 18: German Recent Past, Current and Future Analysis for X-By-Wire Systems Analyzed with Annual Sales Figures in Thousand Units for Years 2015 through 2022 (includes corresponding Graph/Chart)

4c. ITALY
A. Market Analysis
Current & Future Analysis
B. Market Analytics
Table 19: Italian Recent Past, Current and Future Analysis for X-By-Wire Systems Analyzed with Annual Sales Figures in Thousand Units for Years 2015 through 2022 (includes corresponding Graph/Chart)

4d. THE UNITED KINGDOM
A. Market Analysis
Current & Future Analysis
Product Introduction
B. Market Analytics
Table 20: UK Recent Past, Current and Future Analysis for X-By-Wire Systems Analyzed with Annual Sales Figures in Thousand Units for Years 2015 through 2022 (includes corresponding Graph/Chart)

4e. SPAIN
A. Market Analysis
Current & Future Analysis
B. Market Analytics
Table 21: Spanish Recent Past, Current and Future Analysis for X-By-Wire Systems Analyzed with Annual Sales Figures in Thousand Units for Years 2015 through 2022 (includes corresponding Graph/Chart)

4f. RUSSIA
A. Market Analysis
Current & Future Analysis
B. Market Analytics
Table 22: Russian Recent Past, Current and Future Analysis for X-By-Wire Systems Analyzed with Annual Sales Figures in Thousand Units for Years 2015 through 2022 (includes corresponding Graph/Chart)

4g. REST OF EUROPE
A. Market Analysis
Current & Future Analysis
SKF Group (Sweden)
A Key Player
B. Market Analytics
Table 23: Rest of Europe Recent Past, Current and Future Analysis for X-By-Wire Systems Analyzed with Annual Sales Figures in Thousand Units for Years 2015 through 2022 (includes corresponding Graph/Chart)

5. ASIA-PACIFIC
A. Market Analysis
Outlook
B. Market Analytics
Table 24: Asia-Pacific Recent Past, Current and Future Analysis for X-By-Wire Systems Analyzed with Annual Sales Figures in Thousand Units for Years 2015 through 2022 (includes corresponding Graph/Chart)

6. REST OF WORLD
Market Analysis
Table 25: Rest of World Recent Past, Current and Future Analysis for X-By-Wire Systems Analyzed with Annual Sales Figures in Thousand Units for Years 2015 through 2022 (includes corresponding Graph/Chart)

IV. COMPETITIVE LANDSCAPE
Total Companies Profiled: 29 (including Divisions/Subsidiaries 31)
The United States (15)
Japan (2)
Europe (13)
- Germany (8)
- Italy (1)
- Spain (1)
- Rest of Europe (3)
Asia-Pacific (Excluding Japan) (1)

Ordering:
Order Online - http://www.researchandmarkets.com/reports/1882085/
Order by Fax - using the form below
Order by Post - print the order form below and send to
Research and Markets,
Guinness Centre,
Taylors Lane,
Dublin 8,
Ireland.
Fax Order Form
To place an order via fax simply print this form, fill in the information below and fax the completed form to 646-607-1907 (from USA) or +353-1-481-1716 (from Rest of World). If you have any questions please visit http://www.researchandmarkets.com/contact/

Order Information
Please verify that the product information is correct and select the format(s) you require.

Product Name: X-By-Wire Systems - Global Strategic Business Report
Web Address: http://www.researchandmarkets.com/reports/1882085/
Office Code: SCBRQIOA

Product Formats
Please select the product formats and quantity you require:

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic (PDF) - Single User:</td>
<td>USD 4500</td>
</tr>
<tr>
<td>Electronic (PDF) - 1 - 5 Users:</td>
<td>USD 6300</td>
</tr>
<tr>
<td>Electronic (PDF) - 1 - 10 Users:</td>
<td>USD 8550</td>
</tr>
<tr>
<td>Electronic (PDF) - 1 - 15 Users:</td>
<td>USD 10800</td>
</tr>
</tbody>
</table>

Contact Information
Please enter all the information below in BLOCK CAPITALS

Title: [ ] Mr  [ ] Mrs  [ ] Dr  [ ] Miss  [ ] Ms  [ ] Prof

First Name: ___________________________________________  Last Name: _______________________________________
Email Address: * _______________________________________
Job Title: _____________________________________________
Organisation: __________________________________________
Address: ______________________________________________
City: __________________________________________________
Postal / Zip Code: _______________________________________
Country: _______________________________________________
Phone Number: __________________________________________
Fax Number: ____________________________________________

* Please refrain from using free email accounts when ordering (e.g. Yahoo, Hotmail, AOL)
Payment Information

Please indicate the payment method you would like to use by selecting the appropriate box.

- [ ] Pay by credit card: You will receive an email with a link to a secure webpage to enter your credit card details.

- [ ] Pay by check: Please post the check, accompanied by this form, to:

  Research and Markets,
  Guinness Center,
  Taylors Lane,
  Dublin 8,
  Ireland.

- [ ] Pay by wire transfer: Please transfer funds to:

  Account number: 833 130 83
  Sort code: 98-53-30
  Swift code: ULSBIE2D
  IBAN number: IE78ULSB98533083313083
  Bank Address: Ulster Bank,
  27-35 Main Street,
  Blackrock,
  Co. Dublin,
  Ireland.

If you have a Marketing Code please enter it below:

Marketing Code: ________________________________

Please note that by ordering from Research and Markets you are agreeing to our Terms and Conditions at http://www.researchandmarkets.com/info/terms.asp

Please fax this form to:

(646) 607-1907 or (646) 964-6609 - From USA
+353-1-481-1716 or +353-1-653-1571 - From Rest of World