Industrial/Medical Semiconductor Forecast — 2018 Edition

Market Analysis and Forecasts to 2023
July 2018 | 159 Pages

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Abstract

The industrial and medical market remains the most challenging sector for semiconductor manufacturers to serve and the supply chain is both complicated and fragmented. In practice industrial is a collection of markets within a market, while medical applications range from high reliability medical imaging and implantable electronics, to consumer wearables such as health & fitness monitors. Owing to this complexity, the sector has historically been overlooked by many semiconductor vendors, who have elected instead to focus their marketing efforts on higher value and less complicated verticals.

Accounting for about twelve percent of the semiconductor TAM, the industrial and medical sector is small compared with the compute, mobile, home and communications sectors, but revenues have exceeded those in automotive for over five years. Accordingly, many semiconductor suppliers have been advancing their understanding of this diverse and growing market, particularly as medium term growth prospects have begun to slow in other end-use sectors, such as mobile and PCs.

To support this need, Semicast has developed this research to focus on the strategic needs of semiconductor suppliers looking to identify the key equipment types driving semiconductor revenues in the industrial and medical sector and which market segments are forecast to have highest revenue growth. First published in 2006, the latest edition of the research builds on the work of the previous studies, using 2017 as the base year, with forecasts provided to 2023.

This study has been developed to be used as a companion to the Semicast study Tactical Analysis of the World Industrial/Medical Electronics Market & Supply Chain, which provides analysis of tactical issues for semiconductor suppliers in the industrial and medical sector. Used together, the two studies provide a comprehensive tactical and strategic analysis of the industrial and medical sector.

Overview & Key Features

- Analysis of 130 industrial/medical equipment types (full list provided on pages 3&4).
- Estimate and forecast for worldwide production volumes for each equipment type (2017-2023).
- Estimate and forecast for semiconductor value in each equipment type (2017-2023).
- Estimate and forecast for semiconductor TAM for each equipment type (2017-2023).
- Market analysis segmented into 18 semiconductor product types.
- Identification and ranking of top 25 highest semiconductor revenue applications (2017-2023).
- Supplier market share estimates for industrial/medical semiconductors in 2017.
- Highly quantitative analysis, with discussion summarized in short, easy to read bullet points.
- Analyst support time to answer all reasonable questions relating to forecasts and conclusions.
New for 2018 Edition

- Segmentation of the lighting market from building automation, HVAC & refrigeration.
- Analysis of the market for image sensors & MMICs added.

Industrial/Medical Market Segments & Sub-segments

The study segments the market for industrial/medical electronics systems into ten segments as follows:

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Industrial/Medical Equipment Coverage

The equipment types analyzed in the study are as follows:


Lighting: Electronic Ballasts/Lamps & Modules, Lighting Controls, Street Lights/Traffic Lights & Control.


EPOS, EFT & ID: ATMs, Handheld EFT Transaction Terminals, POS Authentication Pads, EPOS/ECR/Cash Drawer, Handheld Data Terminals, Fuel Dispensers, Vending/Payment/Change Machines, Card Readers, Coin Acceptors & Currency Validators, Printers, Scanners, Smart Cards.


Medical Imaging & Diagnostics: Medical Imaging [CT, Ultrasound, MRI, PET/PET-CT, Digital X-Ray, Picture Archiving & Communications] ; Diagnostics, Therapy & Monitoring [ECG, Dialysis Machines, Medical Ventilators, Point-of-care Testing, Pulse Oximetry Monitoring, Multiparameter Patient Monitors, Medical Lasers, Medical Endoscopes, Infusion Pumps, Pacemakers, Implantable Cardi oxygen Defibrillators, Cardiac Resynchronization Therapy, Pain Management Devices, External Defibrillators, Digital Hearing Aids, Sleep Diagnostics, Therapy & Interfaces, Fitness Machines, Electronic Beds, Electronic Wheelchairs, Powered Scooters].


Semiconductor Market Segmentation

The study provides analysis of the market for industrial/medical semiconductors into 18 product types:

- Actuators & Sensors
- Application Specific Analog ICs
- General Purpose Analog ICs
- Power Disretes & Modules
- Other Disretes
- Gate Arrays & Standard Cells
- PLDs/FPGAs
- Other Logic
- Image Sensors & MMICs
- 4/8-bit MCU
- 16-bit MCU
- 32-bit MCU
- 32/64-bit MPU
- DSP
- DRAM/SRAM
- PROM/EPROM/Flash/Other
- LEDs
- Other Optoelectronics

Further segmentation of the 32&64-bit MCU/MPU categories is also provided by architecture:

- ARM MCU
- ARM MPU
- MIPS
- Power Architecture
- 68K/Coldfire
- x86
- SuperH
- TriCore
- V850/RH850/RX
- Other 32/64-bit
## Example Tables

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Source: Semicast Research Table Revised: July 2018

### Global Market for Semiconductors in the Factory Automation & Control Sector by Equipment Type

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Source: Semicast Research Table Revised: May 2018
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</table>

Source: Semicast Research
Table of Contents

Section 1 – Executive Overview
Economic Uncertainties
Key Point Conclusions

Section 2 – Scope, Method & Limitations
2.1 Scope
2.2 Research Sources
2.3 Limitations to Method
2.4 Industrial/Medical Electronics & Semiconductors Service

Section 3 – Semiconductor TAM Analysis

Section 4 – Factory Automation & Control

Section 5 – Motor Drives

Section 6 – Lighting

Section 7 – Building Automation, HVAC & Refrigeration

Section 8 – EPOS, EFT & ID

Section 9 – Test & Measurement

Section 10 – Consumer Medical

Section 11 – Medical Imaging & Diagnostics

Section 12 – Power & Energy

Section 13 – Industrial Transport

Section 14 – Other Industrial Applications

Section 15 – Product Tables by Sub-sector

Appendix 1 – Previous Market Forecasts

List of Tables
Table 1.1 Global Market for Semiconductors in the Industrial/Medical Sector by Product - Revenue Forecast
Table 1.2 Global Market for Semiconductors in the Industrial/Medical Sector by Product - Unit Forecast
Table 1.3 Ranking of Top 25 Industrial/Medical Applications by Cumulative Revenues (SUM) from 2015-2021
Table 1.4 Market Share Estimates for Semiconductor Suppliers to the Industrial/Medical Sector in 2017
Table 1.5 Global Market for Semiconductors in the Industrial/Medical Sector in 2017
Table 1.6 Annual Growth Rate Summary for the Building Automation, HVAC & Refrigeration Sector
Table 1.7 Global Market for Semiconductors in the Industrial/Medical Sector by Region
Table 1.8 Average Semiconductor Value Estimates and Forecasts in the Industrial/Medical Sector

Table 1.9 Global Market for Semiconductors in the Industrial/Medical Sector by Region

Table 2.1 Analysis of the World Market for Semiconductors in the Industrial/Medical Sector in 2017
Table 2.2 Key Changes to the Factory Automation & Control Sector
Table 2.3 Definition of Equipment Types in the Factory Automation & Control Sector
Table 2.4 Global Equipment Production Estimates and Forecasts in the Factory Automation & Control Sector
Table 2.5 Average Semiconductor Value Estimates and Forecasts in the Factory Automation & Control Sector

Table 3.1 Analysis of the World Market for Semiconductors in the Industrial/Medical Sector by Region

Table 4.1 Key Changes to the Factory Automation & Control Sector
Table 4.2 Definition of Equipment Types in the Factory Automation & Control Sector
Table 4.3 Global Equipment Production Estimates and Forecasts in the Factory Automation & Control Sector
Table 4.4 Average Semiconductor Value Estimates and Forecasts in the Factory Automation & Control Sector
Table 4.5 Global Market for Semiconductors in the Factory Automation & Control Sector by Equipment Type
Table 4.6 Global Market for Semiconductors in the Factory Automation & Control Sector by Product
Table 4.7 Global Market for Semiconductors in the Factory Automation & Control Sector by Region
Table 4.8 Key Changes to the Motor Drives Sector
Table 4.9 Definition of Equipment Types in the Motor Drives Sector
Table 4.10 Global Equipment Production Estimates and Forecasts in the Motor Drives Sector
Table 4.11 Average Semiconductor Value Estimates and Forecasts in the Motor Drives Sector
Table 4.12 Global Market for Semiconductors in the Motor Drives Sector by Equipment Type
Table 4.13 Global Market for Semiconductors in the Motor Drives Sector by Product
Table 4.14 Key Changes to the Lighting Sector
Table 4.15 Definition of Equipment Types in the Lighting Sector
Table 4.16 Global Equipment Production Estimates and Forecasts in the Lighting Sector
Table 4.17 Average Semiconductor Value Estimates and Forecasts in the Lighting Sector
Table 4.18 Global Market for Semiconductors in the Lighting Sector by Equipment Type
Table 4.19 Global Market for Semiconductors in the Lighting Sector by Product
Table 4.20 Key Changes to the Consumer Medical Sector
Table 4.21 Definition of Equipment Types in the Consumer Medical Sector
Table 4.22 Global Equipment Production Estimates and Forecasts in the Consumer Medical Sector
Table 4.23 Average Semiconductor Value Estimates and Forecasts in the Consumer Medical Sector

Table 5.1 Key Changes to the Motor Drives Sector
Table 5.2 Definition of Equipment Types in the Motor Drives Sector
Table 5.3 Global Equipment Production Estimates and Forecasts in the Motor Drives Sector
Table 5.4 Average Semiconductor Value Estimates and Forecasts in the Motor Drives Sector
Table 5.5 Global Market for Semiconductors in the Motor Drives Sector by Equipment Type
Table 5.6 Global Market for Semiconductors in the Motor Drives Sector by Product
Table 5.7 Global Market for Semiconductors in the Motor Drives Sector by Region
Table 5.8 Key Changes to the Building Automation, HVAC & Refrigeration Sector
Table 5.9 Definition of Equipment Types in the Building Automation, HVAC & Refrigeration Sector
Table 5.10 Global Equipment Production Estimates and Forecasts in the Building Automation, HVAC & Refrigeration Sector
Table 5.11 Average Semiconductor Value Estimates and Forecasts in the Building Automation, HVAC & Refrigeration Sector
Table 5.12 Global Market for Semiconductors in the Building Automation, HVAC & Refrigeration Sector by Equipment Type
Table 5.13 Global Market for Semiconductors in the Building Automation, HVAC & Refrigeration Sector by Product
Table 5.14 Key Changes to the Building Automation, HVAC & Refrigeration Sector by Region
Table 5.15 Definition of Equipment Types in the Building Automation, HVAC & Refrigeration Sector
Table 5.16 Global Equipment Production Estimates and Forecasts in the Building Automation, HVAC & Refrigeration Sector
Table 5.17 Average Semiconductor Value Estimates and Forecasts in the Building Automation, HVAC & Refrigeration Sector

Table 6.1 Key Changes to the Lighting Sector
Table 6.2 Definition of Equipment Types in the Lighting Sector
Table 6.3 Global Equipment Production Estimates and Forecasts in the Lighting Sector
Table 6.4 Average Semiconductor Value Estimates and Forecasts in the Lighting Sector
Table 6.5 Global Market for Semiconductors in the Lighting Sector by Equipment Type
Table 6.6 Global Market for Semiconductors in the Lighting Sector by Product
Table 6.7 Global Market for Semiconductors in the Lighting Sector by Region
Table 6.8 Key Changes to the Consumer Medical Sector
Table 6.9 Definition of Equipment Types in the Consumer Medical Sector
Table 6.10 Global Equipment Production Estimates and Forecasts in the Consumer Medical Sector
Table 6.11 Average Semiconductor Value Estimates and Forecasts in the Consumer Medical Sector
Table 6.12 Global Market for Semiconductors in the Consumer Medical Sector by Equipment Type

Table 7.1 Key Changes to the Building Automation, HVAC & Refrigeration Sector
Table 7.2 Definition of Equipment Types in the Building Automation, HVAC & Refrigeration Sector
Table 7.3 Global Equipment Production Estimates and Forecasts in the Building Automation, HVAC & Refrigeration Sector
Table 7.4 Average Semiconductor Value Estimates and Forecasts in the Building Automation, HVAC & Refrigeration Sector
Table 7.5 Global Market for Semiconductors in the Building Automation, HVAC & Refrigeration Sector by Equipment Type
Table 7.6 Global Market for Semiconductors in the Building Automation, HVAC & Refrigeration Sector by Product
Table 7.7 Global Market for Semiconductors in the Building Automation, HVAC & Refrigeration Sector by Region
Table 7.8 Key Changes to the EPOS, EFT & ID Sector
Table 7.9 Definition of Equipment Types in the EPOS, EFT & ID Sector
Table 7.10 Global Equipment Production Estimates and Forecasts in the EPOS, EFT & ID Sector
Table 7.11 Average Semiconductor Value Estimates and Forecasts in the EPOS, EFT & ID Sector
Table 7.12 Global Market for Semiconductors in the EPOS, EFT & ID Sector by Equipment Type
Table 7.13 Global Market for Semiconductors in the EPOS, EFT & ID Sector by Product
Table 7.14 Key Changes to the Test & Measurement Sector
Table 7.15 Definition of Equipment Types in the Test & Measurement Sector
Table 7.16 Global Equipment Production Estimates and Forecasts in the Test & Measurement Sector
Table 7.17 Average Semiconductor Value Estimates and Forecasts in the Test & Measurement Sector
Table 7.18 Global Market for Semiconductors in the Test & Measurement Sector by Equipment Type
Table 7.19 Global Market for Semiconductors in the Test & Measurement Sector by Product
Table 7.20 Key Changes to the Consumer Medical Sector
Table 7.21 Definition of Equipment Types in the Consumer Medical Sector
Table 7.22 Global Equipment Production Estimates and Forecasts in the Consumer Medical Sector
Table 7.23 Average Semiconductor Value Estimates and Forecasts in the Consumer Medical Sector
Table 7.24 Global Market for Semiconductors in the Consumer Medical Sector by Equipment Type

Table 8.1 Key Changes to the EPOS, EFT & ID Sector
Table 8.2 Definition of Equipment Types in the EPOS, EFT & ID Sector
Table 8.3 Global Equipment Production Estimates and Forecasts in the EPOS, EFT & ID Sector
Table 8.4 Average Semiconductor Value Estimates and Forecasts in the EPOS, EFT & ID Sector
Table 8.5 Global Market for Semiconductors in the EPOS, EFT & ID Sector by Equipment Type
Table 8.6 Global Market for Semiconductors in the EPOS, EFT & ID Sector by Product
Table 8.7 Key Changes to the EPOS, EFT & ID Sector by Region
Table 8.8 Definition of Equipment Types in the Building Automation, HVAC & Refrigeration Sector
Table 8.9 Global Equipment Production Estimates and Forecasts in the Building Automation, HVAC & Refrigeration Sector
Table 8.10 Average Semiconductor Value Estimates and Forecasts in the Building Automation, HVAC & Refrigeration Sector
Table 8.11 Global Market for Semiconductors in the Building Automation, HVAC & Refrigeration Sector by Equipment Type
Table 8.12 Global Market for Semiconductors in the Building Automation, HVAC & Refrigeration Sector by Product
Table 8.13 Key Changes to the Building Automation, HVAC & Refrigeration Sector by Region
Table 8.14 Definition of Equipment Types in the Building Automation, HVAC & Refrigeration Sector
Table 8.15 Global Equipment Production Estimates and Forecasts in the Building Automation, HVAC & Refrigeration Sector
Table 8.16 Average Semiconductor Value Estimates and Forecasts in the Building Automation, HVAC & Refrigeration Sector

Table 9.1 Key Changes to the Test & Measurement Sector
Table 9.2 Definition of Equipment Types in the Test & Measurement Sector
Table 9.3 Global Equipment Production Estimates and Forecasts in the Test & Measurement Sector
Table 9.4 Average Semiconductor Value Estimates and Forecasts in the Test & Measurement Sector
Table 9.5 Global Market for Semiconductors in the Test & Measurement Sector by Equipment Type
Table 9.6 Global Market for Semiconductors in the Test & Measurement Sector by Product
Table 9.7 Key Changes to the Consumer Medical Sector
Table 9.8 Definition of Equipment Types in the Consumer Medical Sector
Table 9.9 Global Equipment Production Estimates and Forecasts in the Consumer Medical Sector
Table 9.10 Average Semiconductor Value Estimates and Forecasts in the Consumer Medical Sector
Table 9.11 Global Market for Semiconductors in the Consumer Medical Sector by Equipment Type

Table 10.1 Key Changes to the Lighting Sector
Table 10.2 Definition of Equipment Types in the Lighting Sector
Table 10.3 Global Equipment Production Estimates and Forecasts in the Lighting Sector
Table 10.4 Average Semiconductor Value Estimates and Forecasts in the Lighting Sector
Table 10.5 Global Market for Semiconductors in the Lighting Sector by Equipment Type
Table 10.6 Global Market for Semiconductors in the Lighting Sector by Product
Table 10.7 Key Changes to the Consumer Medical Sector
Table 10.8 Definition of Equipment Types in the Consumer Medical Sector
Table 10.9 Global Equipment Production Estimates and Forecasts in the Consumer Medical Sector
Table 10.10 Average Semiconductor Value Estimates and Forecasts in the Consumer Medical Sector
Table 10.11 Global Market for Semiconductors in the Consumer Medical Sector by Equipment Type

Appendix 1 – Previous Market Forecasts
Table 10.6 Global Market for Semiconductors in the Consumer Medical Sector by Product
Table 10.7 Global Market for Semiconductors in the Consumer Medical Sector by Region
Table 11.1 Key Changes to the Medical Imaging & Diagnostics Sector
Table 11.2 Definition of Equipment Types in the Medical Imaging & Diagnostics Sector
Table 11.3 Global Equipment Production Estimates and Forecasts in the Medical Imaging & Diagnostics Sector
Table 11.4 Average Semiconductor Value Estimates and Forecasts in the Medical Imaging & Diagnostics Sector
Table 11.5 Global Market for Semiconductors in the Medical Imaging & Diagnostics Sector by Equipment Type
Table 11.6 Global Market for Semiconductors in the Medical Imaging & Diagnostics Sector by Product
Table 11.7 Global Market for Semiconductors in the Medical Imaging & Diagnostics Sector by Region
Table 12.1 Key Changes to the Power & Energy Sector
Table 12.2 Definition of Equipment Types in the Power & Energy Sector
Table 12.3 Global Equipment Production Estimates and Forecasts in the Power & Energy Sector
Table 12.4 Average Semiconductor Value Estimates and Forecasts in the Power & Energy Sector
Table 12.5 Global Market for Semiconductors in the Power & Energy Sector by Equipment Type
Table 12.6 Global Market for Semiconductors in the Power & Energy Sector by Product
Table 12.7 Global Market for Semiconductors in the Power & Energy Sector by Region
Table 13.1 Key Changes to the Industrial Transport Sector
Table 13.2 Definition of Equipment Types in the Industrial Transport Sector
Table 13.3 Global Equipment Production Estimates and Forecasts in the Industrial Transport Sector
Table 13.4 Average Semiconductor Value Estimates and Forecasts in the Industrial Transport Sector
Table 13.5 Global Market for Semiconductors in the Industrial Transport Sector by Equipment Type
Table 13.6 Global Market for Semiconductors in the Industrial Transport Sector by Product
Table 13.7 Global Market for Semiconductors in the Industrial Transport Sector by Region
Table 14.1 Key Changes to the Other Industrial Applications Sector
Table 14.2 Global Market for Semiconductors in Other Industrial Applications by Equipment Type
Table 14.3 Global Market for Semiconductors in Other Industrial Applications by Product
Table 14.4 Global Market for Semiconductors in Other Industrial Applications by Region
Table 15.1 Industrial/Medical Market for Actuators & Sensors by Sub-sector
Table 15.2 Industrial/Medical Market for Application Specific Analog ICs by Sub-sector
Table 15.3 Industrial/Medical Market for General Purpose Analog by Sub-sector
Table 15.4 Industrial/Medical Market for Power Discretes & Modules by Sub-sector
Table 15.5 Industrial/Medical Market for Other Discretes by Sub-sector
Table 15.6 Industrial/Medical Market for Gate Arrays & Standard Cells by Sub-sector
Table 15.7 Industrial/Medical Market for PLDs/FPGAs by Sub-sector
Table 15.8 Industrial/Medical Market for Other Logic by Sub-sector
Table 15.9 Industrial/Medical Market for 4/8-bit MCUs by Sub-sector
Table 15.10 Industrial/Medical Market for 16-bit MCUs by Sub-sector
Table 15.11 Industrial/Medical Market for 32-bit MCUs by Sub-sector
Table 15.12 Industrial/Medical Market for 32/64-bit MPUs by Sub-sector
Table 15.13 Industrial/Medical Market for ARM-based MCUs by Sub-sector
Table 15.14 Industrial/Medical Market for ARM-based MPUs by Sub-sector
Table 15.15 Industrial/Medical Market for MIPS-based MCUs/MPUs by Sub-sector
Table 15.16 Industrial/Medical Market for Power Architecture-based MCUs/MPUs by Sub-sector
Table 15.17 Industrial/Medical Market for 68K/Coldfire-based MCUs/MPUs by Sub-sector
Table 15.18 Industrial/Medical Market for x86-based MCUs/MPUs by Sub-sector
Table 15.19 Industrial/Medical Market for SuperH-based MCUs/MPUs by Sub-sector
Table 15.20 Industrial/Medical Market for TriCore-based MCUs/MPUs by Sub-sector
Table 15.21 Industrial/Medical Market for Other 32/64-bit MPUs by Sub-sector
Table 15.22 Industrial/Medical Market for DSPs by Sub-sector
Table 15.23 Industrial/Medical Market for DRAM/SRAM by Sub-sector
Table 15.24 Industrial/Medical Market for PROM/EPROM/Flash/Other Memory by Sub-sector
Table 15.25 Industrial/Medical Market for LEDS by Sub-sector
Table 15.26 Industrial/Medical Market for Image Sensors & MMICs by Sub-sector
Table 15.27 Industrial/Medical Market for Other Optoelectronics by Sub-sector

List of Figures
Figure 1 Semiconductor Revenues in the Industrial/Medical Sector - Comparisons with Historical Forecasts
Figure 2 Semiconductor Revenues in the Factory Automation & Control Sector - Comparisons with Historical Forecasts
Figure 3 Semiconductor Revenues in the Motor Drives Sector - Comparisons with Historical Forecasts
Figure 4 Semiconductor Revenues in the Lighting Sector - Comparisons with Historical Forecasts
Figure 5 Semiconductor Revenues in the Building, HVAC & Refrigeration Sector - Comparisons with Historical Forecasts
Figure 6 Semiconductor Revenues in the EPOS, EFT & ID Sector - Comparisons with Historical Forecasts
Figure 7 Semiconductor Revenues in the Test & Measurement Sector - Comparisons with Historical Forecasts
Figure 8 Semiconductor Revenues in the Consumer Medical Sector - Comparisons with Historical Forecasts
Figure 9 Semiconductor Revenues in the Medical Imaging & Diagnostics Sector - Comparisons with Historical Forecasts
Figure 10 Semiconductor Revenues in the Power & Energy Sector - Comparisons with Historical Forecasts
Figure 11 Semiconductor Revenues in the Industrial Transport Sector - Comparisons with Historical Forecasts
Figure 12 Semiconductor Revenues in the Other Industrial Applications Sector - Comparisons with Historical Forecasts
Analyst Biography

Colin Barnden - Principal Analyst

Colin joined Semicast Research in 2006 and is principal analyst for semiconductor research and vice president of business development. Prior to joining Semicast, he worked for 12 years at IMS Research, rising to the position of Senior Research Director of its Semiconductor Research Group and responsible for analyst coverage on the analog/mixed signal, optoelectronic and embedded processing industries. Colin also set-up and established IMS Research’s Automotive Electronics Group. During his tenure, Colin authored dozens of reports and became a well respected industry analyst. He holds a B.S. in Electronic Engineering from Aston University, England and has almost twenty-five years of experience as an industry analyst.

About Semicast

Founded in 2006, Semicast has an established reputation at most top 20 semiconductor suppliers, with areas of expertise covering industrial and medical electronics and semiconductors; automotive electronic controllers; automotive audio, infotainment & navigation systems; automotive semiconductors; and 32-bit microcontrollers.

Our analysts use a combination of technical expertise, a proven method for producing electronics focused market research and specific applications knowledge to produce concise and timely research to help you make effective business decisions.

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- Analyst support time is included to answer all reasonable questions relating to forecasts and conclusions.
- PDF files are printable.
- Enterprise license permits storage of the research on the purchasing company’s intranet for access by permanent company employees.
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