

Semiconductor Silicon Demand Forecast Tool

Len Jelinek, Senior Director and Chief Analyst
Chris Welch, Principal Analyst

ACTUALS AND FORECAST

Frequency, Time Period

- Annual: 5-year forecasts
- Historical data from 2000
- Updated quarterly

Measures

- Revenue
- Shipment
- Capital (top-8 suppliers)
- Capacity (top-8 suppliers)

Detail Level

- Geometry
- Wafer Size
- Market
- Submarket
- Component
- Device
- SubDevice

TECHNOLOGIES COVERED

- Discrete
- Logic
- Memory
- Analog
- Microcomponent
- Sensors & actuators

EQUIPMENT COVERED

90+ applications within the major application markets of:

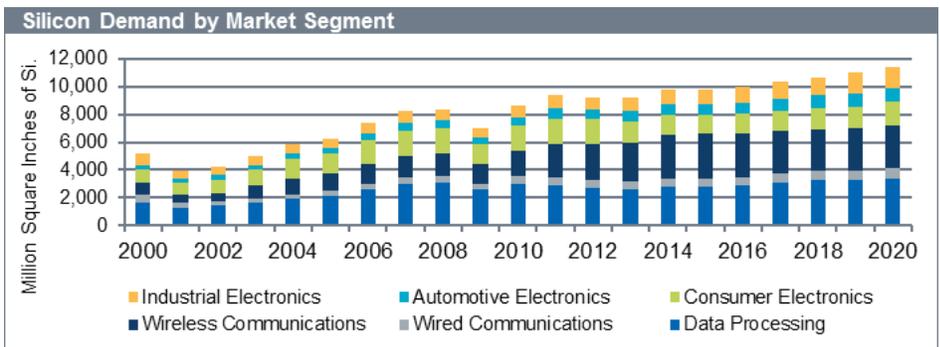
- Automotive Electronics
- Consumer Electronics
- Data Processing
- Industrial Electronics
- Wired Communications
- Wireless Communication

IHS Markit anticipates that semiconductor demand will be driven by wireless, data center, automotive and industrial applications. Devices that are driving growth within industrial and automotive market segments use more mature 200mm technology as well as more legacy manufacturing flows, whereas devices driving growth in wireless and data center will be 300mm advanced technology.

The Semiconductor Silicon Demand Forecast Tool provides a long-term view of silicon demand by both technology and wafers size. The methodology used in developing these silicon forecasts uses the identified market sizing revenue for over 180 applications within the 6 key semiconductor market segments. With the use of the IHS Markit online tool, a client can run multiple models to investigate the technology required as well as the wafer sizes that will most likely be in demand.

A subscription to this service, which is updated quarterly, includes:

- Market size and forecast database delivered in Excel and easy-to-use online tool
- Market analysis and trends report in PDF



Key Issues Addressed

- How much silicon will be required to support 300 mm manufacturing operations?
- How much silicon will be used for mature technologies?
- As the industry goes through its cycles of rapid growth followed by periods of slowing, what applications will continue to demand increased silicon capacity?
- What will the impact of technology transitions be for silicon manufacturers?
- What market applications are driving silicon consumption?
- What will be the impact of technology transitions for the equipment and material suppliers?

Applicable To

- Strategic Manufacturing Managers
 - Managers in charge of expanding capacity for IDM's and foundries
 - Managers responsible for purchasing equipment for IDM's and foundries
 - Controllers forecasting capital expenditures
 - Planners determining if wafer technology transitions will obsolete mature wafer sizes
- Material Suppliers
- Equipment Manufacturers

LEAD ANALYSTS

Len Jelinek – Director and Chief Analyst

Len Jelinek has focused his research on capacity management and technology transitions within the semiconductor industry. He works with clients to access individual corporate strategies that may be impacted by additional wafer manufacturing capacity in China as well as other global locations.

Len has developed an extensive database of wafer manufacturing suppliers both leading IDM's and pure play foundries service providers. This database can be used by clients to define corporate manufacturing strategies such as expand internal capacity versus transitioning to an outsourcing model.

Chris Welch - Principal Analyst

Chris works as a principal analyst within the semiconductor research group at IHS Markit. Chris conducts research and analysis on the global semiconductor manufacturing industry focusing on feature size migrations and wafer capacity for IDM (Independent Device Manufacturers). Additionally, he monitors and reports on raw silicon manufacturers and global supply trends and threats.

ABOUT IHS MARKIT

The Technology, Media and Telecommunication Group at IHS Markit is the leading source of information, insight and analytics in critical areas that shape today's technology ecosystem—from materials and components, to devices and equipment, to end markets and consumers. Businesses and governments in more than 150 countries around the globe rely on the deep market insight and expert independent analysis of our 300+ industry analysts in technology sectors spanning IT, telecom, media, industrial, automotive, electronics, solar and more.

Measures

Wafers

- 4-inch
- 5-inch
- 6-inch
- 8-inch
- 12-inch

Technology

- 0.014 micron
- 0.020 micron
- 0.022 micron
- 0.032 micron
- 0.040 micron
- 0.045 micron
- 0.065 micron
- 0.08 micron
- 0.09 micron
- 0.11 micron
- 0.13 micron
- 0.15 micron
- 0.18 micron
- 0.25 micron
- 0.35 micron
- ≥ 0.50 micron

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About IHS Markit

IHS Markit (Nasdaq: INFO) is a world leader in critical information, analytics and solutions for the major industries and markets that drive economies worldwide. The company delivers next-generation information, analytics and solutions to customers in business, finance and government, improving their operational efficiency and providing deep insights that lead to well-informed, confident decisions. IHS Markit has more than 50,000 key business and government customers, including 85 percent of the Fortune Global 500 and the world's leading financial institutions. Headquartered in London, IHS Markit is committed to sustainable, profitable growth.