

# 2010 Timing Devices

---

Logic Markets Service



# 2010 Timing Devices

---

Logic Markets Service

Susie Inouye

Myson Robles-Bruce

Matt Scherer

Publication Number: 10LOGIC-Timing

June 2010

© 2009 **databeans** Incorporated

Reno, NV 89523

Phone: 775.624.6200

[www.databeans.net](http://www.databeans.net)

---

## Abstract

Electronic timing devices are necessary products that synchronize components and make up an essential part of many devices that generate a radio signal. The major end markets include consumer electronics, computer systems, and communications gear. Databeans projects that in 2010 this total market will reach \$5.4 billion in global revenue. Over the next five years both shipments and sales will expand by 10 percent annually on average.

Silicon-based IC clocks accurately align a reference clock signal with a clock distribution signal. The clock rate or “frequency” is the fundamental rate in refresh cycles per second, which is measured in hertz, for the frequency of the clock in any synchronous circuit. This is an essential factor in determining the rate at which a PC’s CPU can perform set instructions and are required for the other circuits to function harmoniously. Clock generation devices are used to produce these signal copies. Timer chips are either single function or multi-function and operate in either up direction, down direction, or bi-direction.

Clock distribution circuits are then used to distribute the generated clock signals and synchronize system operations. Phase Lock Loops (PLLs) are included within the clock generation segment, and are used in a variety of ways, including for the recovery of clock-timing information from a disk drive, or to maintain timing relationships between processor elements that operate at faster speeds than external signal. Other products here are clock multipliers, doublers, and dividers.

Databeans projects that timing circuits will reach \$3 billion in global revenue in 2010, accounting for approximately 56 percent of the timing devices market as a whole. Over the next five years timing IC revenue will grow 12 percent annually, reaching \$5.3 billion by 2015. ASPs are also much higher here, ranging anywhere from \$0.60 to over \$100.00 for a single device depending on their use and sophistication, leading to higher margins for suppliers. Also because they are manufactured instead of naturally occurring suppliers can benefit from new process technologies and falling prices.

This study is available through individual report purchase for **\$3,700.00 USD**, or available at a discounted rate through our **Total Technology Service**, the **Logic Service**, our **Analog Markets Service**, the **Semiconductor Markets Service**, the **Computer Market Service**, and the **Semiconductor Product Service**. For our subscription service subscribers, all of our research is backed by a coverage guarantee meaning if you purchase a report and need additional information, our analysts are available to continue the analysis, customized to your organization’s needs.

## ABOUT DATABEANS

---

Databeans, Inc., headquartered in Reno, Nevada, USA, is an internationally recognized market research firm focused on the semiconductor and electronics industry. Databeans publishes over 50 market research reports annually that are available for purchase as individual studies, or bundled together in cost-saving subscription services. Databeans' detailed quality studies, industry leading customer service, and unparalleled responsiveness are unmatched in the electronics market research industry.

## BENEFITS OF A SUBSCRIPTION SERVICE WITH DATABEANS:

---

### **Databeans will become an extension of your group**

For our subscription services clients, Databeans will help with presentations, fact-finding inquiries, and essentially any project that internal groups may not have the time or resources to accomplish.

### **Inquiry hours**

All our subscription services include inquiry hours, allowing clients to take full advantage of our analysts for contribution to internal marketing and business planning.

### **Corporate-wide site licensing**

We encourage our clients to post our reports on their internal website, at no additional cost. This allows for maximum visibility and value of Databeans data and reports within your company.

### **Work within your budget**

We can create any type of payment plan that you desire. Call us to see which options will work best for your group or company.

### **Ease of doing business**

By ordering once a year, your company will automatically receive the reports or services ordered when they first become available.

### **Additional Savings**

- Our minimum discount with our smaller services is about 25% off list price, while our full service customers save about 48% off list price.
- The Total Technology Service includes our Databeans Market Database and Share Database, free.
- Enjoy any Databeans service and your company qualifies for a 20% discount on any non-subscription report Databeans publishes.

For more information, please contact us at 775.624.6200 or visit our website at [www.databeans.net](http://www.databeans.net).

---

# Table of Contents

Significant Findings .....	1
Timing ICs .....	3
Regional Forecast.....	5
Americas .....	8
Europe .....	10
Japan.....	12
Asia Pacific.....	14
China .....	15
Taiwan.....	17
Korea .....	17
Other Asia .....	19
India .....	20
Consumption Forecast.....	21
Automotive .....	24
Computer .....	27
PC Motherboard .....	29
Memory Module.....	30
Consumer .....	34
Set-Top Box.....	36
Video Game Console .....	37
DVD Player/Recorder.....	39
Communications .....	42
SONET/SDH Line Card OC-48.....	44
DSL Infrastructure .....	45
Industrial.....	49
Process Control.....	51
Test and Measurement.....	52
Medical.....	53
Production Forecast .....	55
Crystal Clocks .....	57
Clock Generation ICs.....	60
PLLs .....	62
MEMS Resonators.....	63
CMOS Oscillators.....	65
Clock Distribution ICs.....	67
Supplier Market Share .....	69
Integrated Device Technology.....	71
Cypress Semiconductor.....	72
Texas Instruments .....	73
Silicon Labs.....	74
NXP Semiconductors .....	75
Micrel .....	76

---

---

Methodology.....	77
Databeans Market and Product Segmentation Definitions .....	79
Market Segmentation.....	79
Product Segmentation .....	86

## Table of Figures

Figure 1: Worldwide Timing Devices Market Forecast (Revenue, Units, and ASPs).....	1
Figure 2: Worldwide Timing Integrated Circuits Market Forecast (Revenue, Units, and ASPs).....	4
Figure 3: Worldwide Timing Devices Revenue Forecast by Region .....	6
Figure 4: 2010 Worldwide Timing Devices Revenue Share by Region .....	6
Figure 5: Worldwide Timing Integrated Circuits Revenue Forecast by Region .....	7
Figure 6: 2010 Worldwide Timing Integrated Circuits Revenue Share by Region .....	7
Figure 7: Americas Timing Devices Revenue Forecast.....	9
Figure 8: Americas Timing Integrated Circuits Revenue Forecast.....	10
Figure 9: Europe Timing Devices Revenue Forecast.....	11
Figure 10: Europe Timing Integrated Circuits Revenue Forecast.....	12
Figure 11: Japan Timing Devices Revenue Forecast .....	13
Figure 12: Japan Timing Integrated Circuits Revenue Forecast .....	14
Figure 13: China/Taiwan Timing Devices Revenue Forecast .....	16
Figure 14: China/Taiwan Timing Integrated Circuits Revenue Forecast .....	16
Figure 15: Korea Timing Devices Revenue Forecast.....	18
Figure 16: Korea Timing Integrated Circuits Revenue Forecast .....	19
Figure 17: Other Asia Timing Devices Revenue Forecast .....	19
Figure 18: Other Asia Timing Integrated Circuits Revenue Forecast .....	20
Figure 19: Worldwide Timing Devices Revenue Forecast by Market Segment .....	21
Figure 20: 2010 Worldwide Timing Devices Revenue Share by Market Segment.....	22
Figure 21: Worldwide Timing Integrated Circuit Revenue Forecast by Market Segment .....	23
Figure 22: 2010 Worldwide Timing Integrated Circuit Revenue Share by Market Segment .....	23
Figure 23: Worldwide Automotive Timing Devices Revenue Forecast.....	25
Figure 24: Worldwide Automotive Timing Integrated Circuit Revenue Forecast .....	25
Figure 25: Worldwide Computer Timing Devices Revenue Forecast.....	27
Figure 26: Worldwide Computer Timing Integrated Circuit Revenue Forecast by Application .....	28
Figure 27: 2010 Worldwide Computer Timing Integrated Circuit Revenue Share by Application.....	28

---

---

Figure 28: Worldwide Computer Timing Integrated Circuit Revenue Forecast in PC Motherboards.....	29
Figure 29: Worldwide Computer Timing Integrated Circuit Revenue Forecast in Memory Module.....	31
Figure 30: Worldwide Consumer Timing Devices Revenue Forecast .....	34
Figure 31: Worldwide Consumer Timing Integrated Circuit Revenue Forecast by Application.....	35
Figure 32: 2010 Worldwide Consumer Timing Integrated Circuit Revenue Share by Application.....	35
Figure 33: Worldwide Consumer Timing Integrated Circuit Revenue Forecast in Set-Top Box.....	36
Figure 34: Worldwide Consumer Timing Integrated Circuit Revenue Forecast in Video Game Consoles.....	38
Figure 35: Worldwide Consumer Timing Integrated Circuit Revenue Forecast in DVD Player/Recorder.....	39
Figure 36: Worldwide Communications Timing Devices Revenue Forecast .....	43
Figure 37: Worldwide Communications Timing Integrated Circuit Revenue Forecast.....	43
Figure 38: 2010 Worldwide Communications Timing Integrated Circuit Revenue Share by Application.....	44
Figure 39: Worldwide Communications Timing Integrated Circuit Revenue Forecast in SONET/SDH Line Card OC-48.....	45
Figure 40: Worldwide Communications Timing Integrated Circuit Revenue Forecast in DSL Infrastructure.....	46
Figure 41: Worldwide Industrial Timing Devices Revenue Forecast.....	50
Figure 42: Worldwide Industrial Timing Integrated Circuit Revenue Forecast by Application .....	50
Figure 43: 2010 Worldwide Industrial Timing Integrated Circuit Revenue Share by Application.....	51
Figure 44: Worldwide Timing Devices Revenue Forecast by Product Type .....	56
Figure 45: 2010 Worldwide Timing Devices Revenue Share by Product Type.....	56
Figure 46: Worldwide Timing Devices Revenue Forecast in Crystal Oscillator .....	59
Figure 47: Worldwide Crystal Oscillator Market Forecast (Revenue, Units, and ASPs).....	59
Figure 48: Worldwide Clock Generation Market Forecast (Revenue, Units, and ASPs) .....	60
Figure 49: Worldwide Clock Generation IC Revenue Forecast by Product Type .....	61
Figure 50: Worldwide PLL Market Forecast (Revenue, Units, and ASPs).....	63
Figure 51: Worldwide MEMS Resonator Market Forecast (Revenue, Units, and ASPs).....	65
Figure 52: Worldwide CMOS Oscillator Market Forecast (Revenue, Units, and ASPs).....	66
Figure 53: Worldwide Clock Distribution Market Forecast (Revenue, Units, and ASPs) .....	68
Figure 54: 2009 Worldwide Timing Integrated Circuit Revenue Share by Supplier.....	69

---

---

# Table of Tables

Table 1: Worldwide Timing Devices Market Forecast (Revenue, Units, and ASPs) .....	2
Table 2: Worldwide Timing Integrated Circuits Market Forecast (Revenue, Units, and ASPs) .....	4
Table 3: Worldwide Timing Devices Revenue Forecast by Region .....	5
Table 4: Worldwide Timing Integrated Circuits Revenue Forecast by Region.....	8
Table 5: Worldwide Timing Devices Revenue Forecast by Market Segment.....	22
Table 6: Worldwide Timing Integrated Circuit Revenue Forecast by Market Segment.....	22
Table 7: Worldwide Automotive Electronics Revenue Forecast by Application Area .....	26
Table 8: Worldwide Automotive Electronics Shipment Forecast by Application Area.....	26
Table 9: Worldwide Computers Timing Integrated Circuit Revenue Forecast by Application .....	27
Table 10: Worldwide Computer Electronics Revenue Forecast by Application.....	32
Table 11: Worldwide Computer Electronics Shipment Forecast by Application .....	33
Table 12: Worldwide Consumer Timing Integrated Circuits Revenue Forecast by Application.....	36
Table 13: Worldwide Consumer Electronics Revenue Forecast by Application.....	40
Table 14: Worldwide Consumer Electronics Shipment Forecast by Application.....	41
Table 15: Worldwide Communications Timing Integrated Circuit Revenue Forecast by Application.....	42
Table 16: Worldwide Communications Electronics Revenue Forecast by Application.....	47
Table 17: Worldwide Communications Electronics Shipment Forecast by Application.....	48
Table 18: Worldwide Industrial Timing Integrated Circuit Revenue Forecast by Application.....	49
Table 19: Worldwide Industrial Electronics Revenue Forecast by Application Area.....	53
Table 20: Worldwide Timing Devices Revenue Forecast by Product Type .....	57
Table 21: Worldwide Timing Devices Shipment Forecast by Product Type.....	57
Table 22: Worldwide Crystal Oscillator Market Forecast (Revenue, Units, and ASPs) .....	59
Table 23: Worldwide Clock Generation Market Forecast (Revenue, Units, and ASPs) .....	61
Table 24: Worldwide Clock Generation IC Revenue Forecast by Product Type .....	61
Table 25: Worldwide PLL Market Forecast (Revenue, Units, and ASPs) .....	63
Table 26: Worldwide MEMS Resonator Market Forecast (Revenue, Units, and ASPs).....	64
Table 27: Worldwide CMOS Oscillator Market Forecast (Revenue, Units, and ASPs).....	66
Table 28: Worldwide Clock Distribution Market Forecast (Revenue, Units, and ASPs).....	68
Table 29: 2009 and 2008 Worldwide Timing Integrated Circuit Revenue Share by Supplier .....	70

---

---

*This report is the property of Databeans Inc., and has been distributed to a select group of clients upon specified terms and conditions. Data presented in this report is an interpretation of the modeled market, and is believed to be reliable, but is not guaranteed for accuracy or completeness. Reproduction of this report, in whole or in parts, is permitted only by express consent of Databeans, Inc.*



© 2010 **databeans** Incorporated  
Publication Number: 10LOGIC-Timing  
Research Analyst: Susie Inouye  
✉ [sinouye@databeans.net](mailto:sinouye@databeans.net)  
Research Analyst: Myson Robles-Bruce  
✉ [myson@databeans.net](mailto:myson@databeans.net)  
Research Analyst: Matt Scherer  
✉ [matt@databeans.net](mailto:matt@databeans.net)

---