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Q4 2010

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Executive Summary

Overview

Financial news

There was a raft of buoyant quarterly results during the period with strong revenues in the sector. But, the stellar results were forecast to dilute as semiconductor companies cautioned Q4 sales would be hit by slower chip demand and weaker consumer appetite for PCs. Analysts also forecast flat or slight declines in Q4 sales at TSMC and UMC

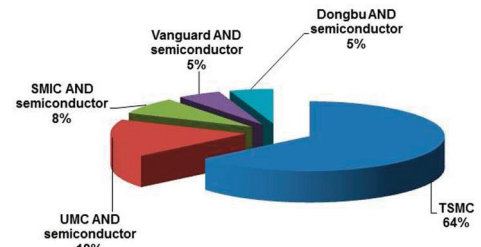
Industry advances

Qualcomm unveiled its new 28nm chip processor and Intel launched configurable chips. IBM inched closer to making racetrack memory chips a reality. Cadence and SMIC partnered on a 54nm SoC flow project.

Partnerships and deals

There was a flurry of M&A activity and consolidation in the sector. Broadcom acquired Beeceem to speed up its 4G time-to-market. Toshiba, Samsung & Intel invited semiconductor companies to join a consortium headed by the three industry giants. TSMC expanded its IP alliance to enhance soft IP readiness for advanced technology nodes.

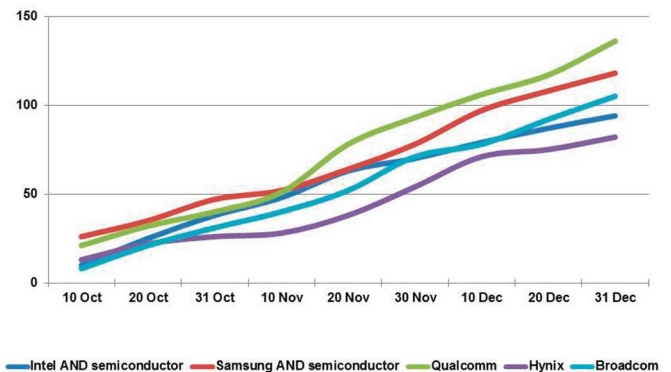
Top Five Foundries - Share of Voice



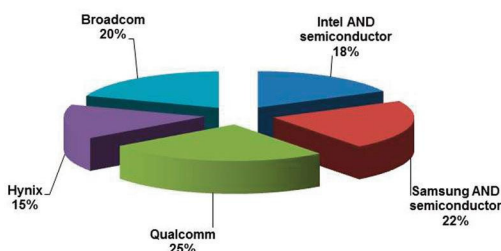
Industry outlook

Semiconductor leaders predicted that the industry, which has been riding a rollercoaster marked by record-breaking results, will start to stabilise in 2011. Global tablet sales, which are impacting PC shipments, will top 80 million within four years.

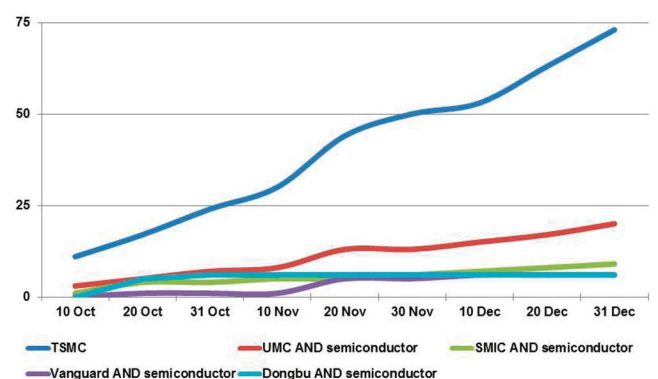
Top Five Competitors - Volume by Date Cumulative



Top Five Competitors - Share of Voice



Top Five Foundries - Volume by Date Cumulative





Competitor News

Financial News

Intel meets expectations

Business demand for server chips in part helped Intel post Q3 sales up 18 per cent to \$11.1bn on net income of \$3bn. Prices for microprocessors were flat, but were sharply up on the same period last time. During its Q3 earnings call it also explained that tablets had impacted PC sales.

The company forecast Q4 revenue would beat analyst expectations and will range from \$11bn to \$11.8bn. Demand would be driven by businesses and consumers buying computers in emerging markets. Analysts forecast an average of \$11.3bn

Chip prices hit Hynix earnings

Hynix said that the short-term outlook for the global chip market 'looked grim' and forecast a dent in its Q4 earnings as a consequence.

"Chip prices remained strong until the first half of this year, but they dropped sharply, especially during the fourth quarter."

Hynix CEO, O.C. Kwon, Wall Street Journal, 20/12

Broadcom profits up

Broadcom had a buoyant third quarter and posted record results for the period, boosted by demand for mobile devices. In contrast to some of its semiconductor peers, the company benefited from demand for chips in devices such as Apple's iPad.

ARM posts profit

ARM confirmed that it remained well-placed for growth with bullish Q3 results driven by demand for its ubiquitous chip designs. The company said almost half a billion consumers bought ARM-based products. It had sold more than four billion chips to date. The UK company posted a 60 per cent hike in Q3 profits before tax of £38.8m.

However, there was a note of caution that ARM was not immune to the slowdown reported across the sector. Its stock slid at the end of October after Texas Instruments (TI) warned that chip demand could be weakening.

"While ARM has a great business model and remains well placed to outperform the broader semiconductor industry, it is ultimately a play on the semiconductor market and dependent on the end-consumer demand."

Broker Execution Noble, Reuters, 27/10

Samsung misses expectations

Samsung's Q3 results missed analyst expectations fuelling concern that demand for consumer electronics was slowing. Elpida Memory also warned that weaker demand for PCs could hit chip prices and it could miss Q4 estimates.

Production & Technology

Will Intel quit NAND?

Electronics Weekly (30/12) suggested that either Intel was 'fed up' with IM Flash, its joint venture with Micron, or 'Micron has decided it would like all the output from Singapore for itself and is kicking Intel out of bed'. Micron confirmed Intel no longer participated in capex spending for the project. Speculation emerged at the end of the reporting period that Intel will quit NAND.

Intel unveils configurable chips

Reuters (23/11) reported news from Intel that it would combine its low-powered Atom processor with Altera's programmable chips. Intel would be able to offer clients tailored chips. It was looking for new inroads into markets such as medical equipment and other embedded devices.



Qualcomm unveils 28nm Snapdragon

Qualcomm mid-November launched its 28nm chipset. It had a new CPU core and was designed for smartphones and tablets.

"The MSM8960 will be a dual-core chip using an upgraded CPU core based on a new micro-architecture that delivers approximately five times the performance of the original Snapdragon chip at 75 percent less power."

Company statement, EE Times, 18/11

Hynix to ship smaller chips in Q1

There was also a snippet of news that Hynix would produce smaller 30nm in Q1 2011 to improve chip efficiency.

TI opens Chinese plant

TI opened its first wafer factory in China. The company had enough analog chip capacity there to generate around \$1bn in annual revenue. The move put TI close to its customer base in the region.

R&D and Investments

Intel attracts Israeli investment

The Israeli government gave the green light to a \$400m investment for Intel to build a semiconductor plant to generate 3,000 jobs in Kiryat Gat, just south of Tel Aviv. The state funding would pay for 12.5 per cent of construction costs.

In the US, the chip giant revealed plans for a new plant in Oregon, called D1X. R&D will start in 2013. Several factory upgrades were also in the pipeline.

Partnerships & Deals

Samsung, Toshiba, Intel head consortium

Samsung, Toshiba and Intel will invite around 10 semiconductor firms to join a newly-established consortium headed by the three chip making giants. Toshiba and Samsung planned to develop 10 nanometer-class NAND flash memory and other chips and Intel was expected to develop faster microprocessors. The Japanese government will invest around \$61.21m for R&D

AT&T to buy Qualcomm spectrum

AT&T confirmed that it would pay almost \$2bn for Qualcomm spectrum licences. The move was intended to boost its 4G network. Meanwhile, Qualcomm announced that it would close FLO TV, its mobile video broadcast service that used the spectrum now earmarked for AT&T.

Broadcom to buy

Broadcom agreed to buy fabless chip manufacturer Beceem Communications to speed up its 4G time-to-market.

"Beceem's 4G technology will enable our combined customers to accelerate the market availability of highly integrated, lower cost 4G wireless broadband devices."

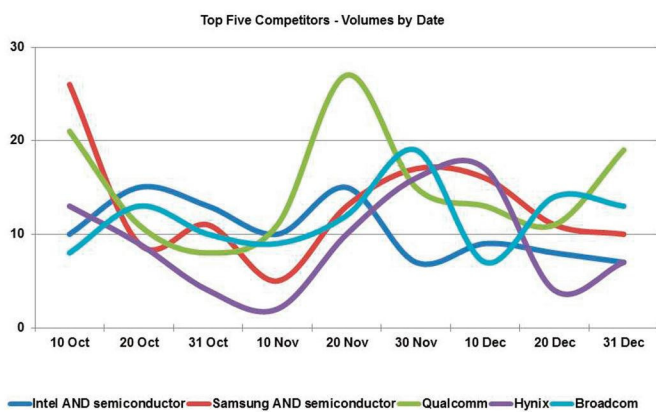
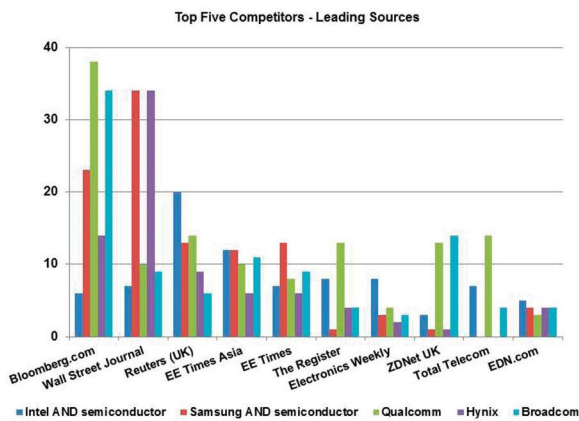
Company statement, The Register, 16/10



Market Reports

Wolfson makes Linux list

Early December, the Linux Foundation released its report detailing the biggest contributors to the Linux kernel for 2010. For the first time, Wolfson Microelectronics and Renesas appeared in the top 20.





Foundry News

Financial News

TSMC profits up 54 per cent

TSMC had another stellar quarter with profits up 54 per cent. Sales were driven by wafer shipments and strong consumer demand for mobile devices. It recorded a profit of \$1.5bn for the July to September period.

However, there was a note of caution from analysts who forecast flat or slight declines in Q4 sales at TSMC and UMC hit by a strong Taiwan dollar and flagging demand.

UMC posts strong Q3 results

UMC also had a buoyant quarter and posted its best quarterly profits of \$283m, its best results since Q3, 2007. However, it warned a drop in wafer shipments would impact its Q4 results.

SMIC in the black, increases capital spending

SMIC announced Q3 sales jumped 7.6 per cent to \$410.1m and it recorded a profit of \$30.4m.

"Revenue contribution from 65nm doubled compared to the second quarter. Our 40nm low-leakage technology process was frozen on schedule with a leading customer's endorsement. We are accelerating our other 45nm programs, targeting revenue in the second half of 2011."

SMIC CEO, David Wang, EE Times, 5/11

The company also confirmed it would lift capital spending which stood at around \$750m in Q2.

Production & Technology

IBM advances on racetrack chips

IBM moved closer to making racetrack memory chips a reality with its progress on moving bits along a permalloy nanowire at an atomic scale. If successful, IBM could create a solid state, non-volatile storage tier between DRAM and flash.

Cadence & SMIC partner for 54nm SoC flow

SMIC selected Cadence as a partner to develop an integrated end-to-end silicon realization flow for 65nm SoC designs.

Partnerships & Deals

Toshiba offloads plant to Sony

Sony agreed to buy Toshiba's chip making plant in Nagasaki as part of Toshiba's wider cost-cutting measures. The plant makes the cell chips for Playstation 3 consoles. Toshiba was also looking for other buyers of its non-memory products, including Samsung, which will manufacture wafers for it using its 40nm technology.

TSMC expands IP alliance

In October, news emerged that TSMC had expanded its IP alliance to include a soft IP programme. The move will improve soft IP readiness for advanced technology nodes and reduce time-to-market. Imagination Technologies was among its new partners for the initiative.



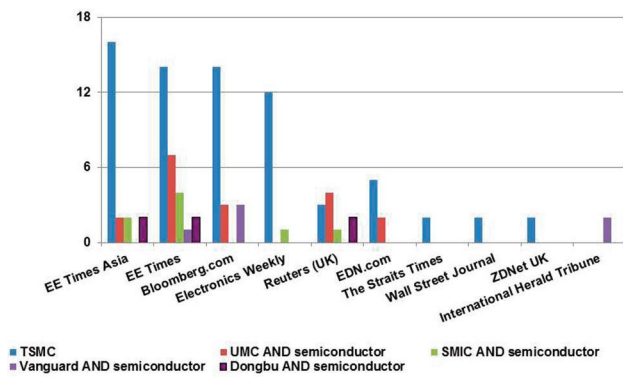
UMC ends merger deal

UMC ended an agreement to buy an 85 per cent stake in foundry He Jian, which had hoped would give it leverage in the Chinese market. UMC backed out due to regulatory and shareholder uncertainties.

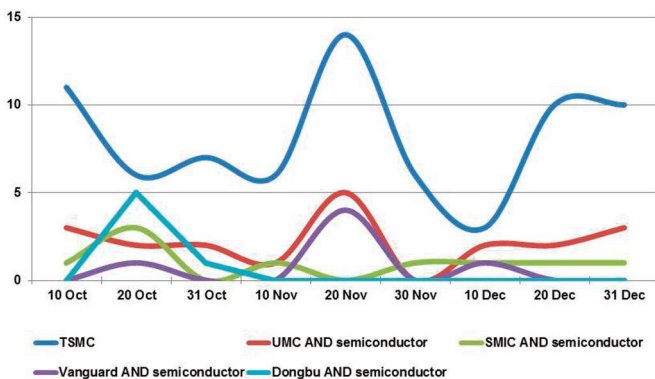
TSMC in land deal

Rumours emerged at the end of the reporting period that TSMC planned to pay NT\$3bn to Powerchip Technology Corp for land and buildings in Hsinchu.

Top Five Foundries - Leading Sources



Top Five Foundries - Volumes by Date





Market Analysis

Industry Forecasts

Chip sector looks for normality

Freescale CEO Henri Richard forecast stability for the chip industry after an accelerated year marked by record-breaking quarters. The executive asserted: "We will walk into 2011 with a much more predictable situation." STMicroelectronics CEO Carlo Bozzotti predicted: "Our expectation for the semiconductor industry for next year is 5-10 percent growth ... "We see a flattening of the semiconductor industry in Q4 and a glitch in the first quarter."

Infineon CEO Peter Bauer commented: "What we are seeing in H2 is a return to normality." Richard and Bauer saw energy efficiency, healthcare and security as growth areas for the sector. (Reuters 10/11)

Here comes 'fab-tight' production

Future Horizons CEO Malcolm Penn asserted that the semiconductor industry was now building capacity in response to demand instead of ahead of demand. He described the strategy as 'fab-tight'. Penn cautioned that the drop-off in manufacturing capacity could drive the price of semiconductor wafers.

Penn also predicted that the drive for sub-50nm scale semiconductors will lead to wider partnerships between chip designers and fabs.

Vertical markets

Intel chips in 'premier' smartphones

Intel announced that its chips would be used in 'premier' smartphones but did not name any of the brands it would be working with. Intel was looking to fill its order book for smartphone processor, diluting its dependency on the PC market.

Competitor Qualcomm had the strongest foothold in the market for digital signal processors for mobile radios. A market also eyed by Intel, which last month bought Infineon's wireless unit to give it market leverage.

Tablet shipments to top 80 million

Juniper Research asserted that shipments of tablets would top 80 million within four years. North America, then Western Europe, followed by the Far East would be the biggest markets.

The research firm also predicted that a raft of competitor devices would challenge Apple's hegemony in 2011. Android was forecast as the OS of choice for rival tablets.

Computer prices buck trend

The Wall Street Journal reported research from NPD Group which found prices for desktops, laptops and low-cost netbooks rose during 2010, outpacing the wider consumer electronics market.

Intel CEO, Paul Otellini, thought that the rising prices showed the 'PC industry has finally matured to the point that regular price declines are coming to an end'. This was evident on its balance sheet - for four quarters in a row, it reported an increase or flat prices for its microprocessors.

PC sales slow

Research from IDC and Gartner found demand for tablets weighed on PC sales for Q3. Consumer demand had slowed and the market was 'crimped' by weaker back-to-school sales during the quarter. Both data trackers said that although the PC market had expanded during the period, it failed to meet their expectations. Gartner put growth at 7.6 per cent and IDC estimated growth at 11 per cent.



Methodology

Overview – Intelligence Reports

NMI's Intelligence Reports are intended to transform the vast amount of media information published online into concise Intelligence Reports. In order to do this, we utilise our own monitoring technology to gather articles in real-time from over 25,000 hand-picked sources. We then filter this content in terms of search and source profiles in order to create a set of relevant and timely original articles. Finally we use experienced editors to analyse and summarise the articles into a concise report.

Our intention is to provide a high-level view of the media landscape facing each firm in terms of:

- Legislative & Regulatory Developments
- Market Trends
- Competitors
- Suppliers
- Customers

Each report is tailored to individual client requirements.

Semiconductor Market Report - Specifics

Monitor key industry and general business titles in order to provide a monthly Intelligence Report. Specific sections to include

- Competitor News
- Foundry News and
- Market Analysis including Key Customer Segment Developments



Sources

Topics / Companies Tracked

Companies

Intel
Samsung
Toshiba Semiconductors
Texas Instruments
STMicroelectronics
Renesas
Sony
Qualcomm
Hynix
Infineon
NEC Semiconductors
AMD
Freescale
Broadcom
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Micron
NXP
Sharp Electronics
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NVIDIA
Marvell Technology
MediaTek
Fujitsu
Analog Devices
TSMC
UMC
Chartered Semiconductor
SMIC
Vanguard
Dongbu
X-Fab
HHNEC
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SSMC

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UMC
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Dongbu
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He Jian
SSMC

Customers

Mobile Phone Market
Automotive Market
PC Market
Set-top box Market
Server Market



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