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Taiwan handsets

DIGITIMES Research
ICT Report – 4Q 2008

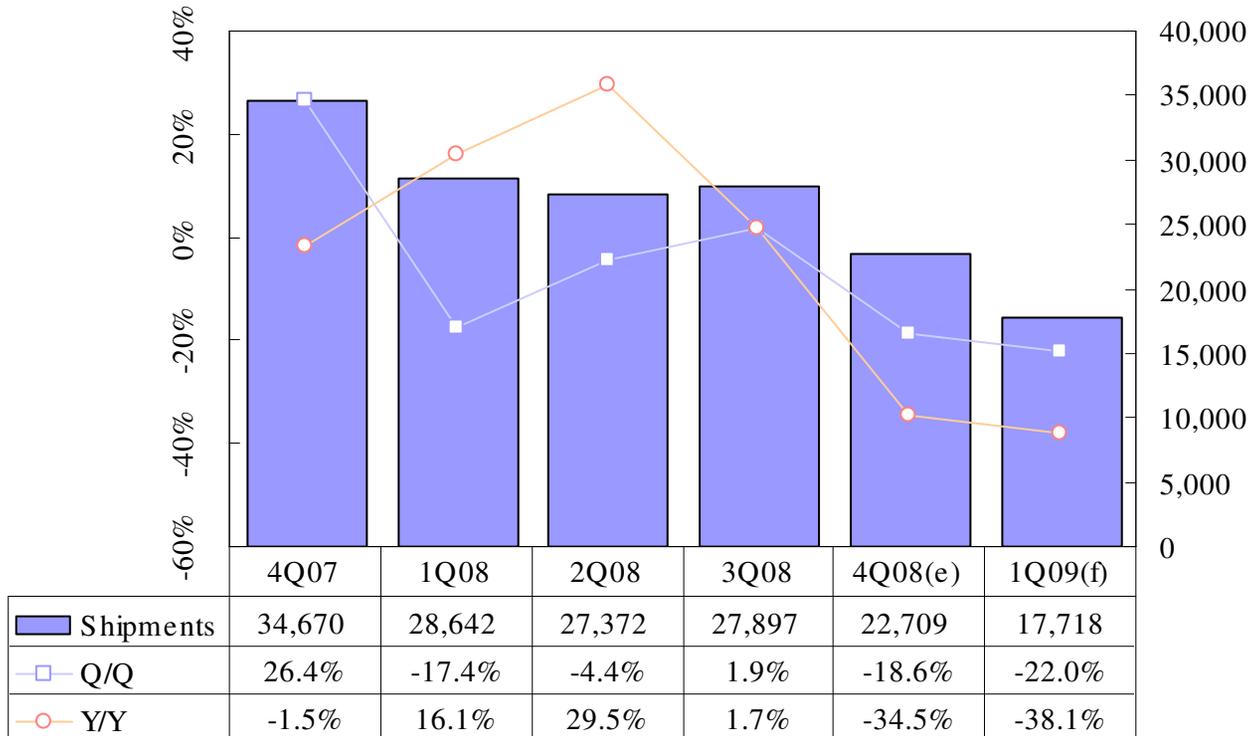
Original Chinese: Roger Huang, DIGITIMES Research, January 2009

English edition: Meiling Chen, DIGITIMES, January 2009

Introduction

- ✓ Taiwan shipped 22.7 million handsets in the fourth quarter of 2008, down 18.6% sequentially and 34.5% from the same period one year earlier.
- ✓ Handset shipments will drop another 22% in the first quarter of 2009, representing a drop of 38.1% from the same period in 2008.
- ✓ Taiwan shipped 107 million handsets in 2008, the second consecutive year its shipments decreased. Taiwan's shipments will continue falling in 2009 and only reach 102 million units.
- ✓ *NOTE: Unless otherwise indicated, all figures and tables in this report refer to output from Taiwan makers.*

Taiwan handset shipments, 4Q07-1Q09 (k units)



Industry watch (1)

- ✓ For the first time since Digitimes began tracking the industry, Taiwan saw a drop in its fourth-quarter handset shipments. Its on-year drop of 35% was also the largest drop since the second quarter of 2007, when BenQ faced a rapid decline in its handset business.
- ✓ In fourth-quarter 2008, Taiwan makers saw big drops in orders from first-tier vendors such as Motorola, Sony Ericsson and LG Electronics (LGE).
- ✓ Shipments in the first quarter of 2009 will take another hit of 22% due to a global economic downturn and fewer working days.

Industry watch (2)

- ✓ Due to the impact of the financial crisis, the global handset market is expected to decline in 2009. The share of mature markets, where the major demand is from customers replacing existing handsets, has increased, while the decline range of mature markets will be bigger in 2009. Therefore, the handset market will decrease of 5-10% in 2009.
- ✓ According to Digitimes Research, total global handset shipments will be 1.03-1.2 billion units, down 0.2-14.9% on year. Meanwhile, the smartphone segment will be the only growth driver in the handset market. First-tier handset vendors Motorola and Palm are expect to have another chance to rise with the launch of new smartphones. Nokia, Research In Motion (RIM) and HTC will maintain their positions in the smartphone market. Additionally, PC companies Hewlett-Packard (HP), Dell and Acer are entering the smartphone market to seek other sales opportunities.

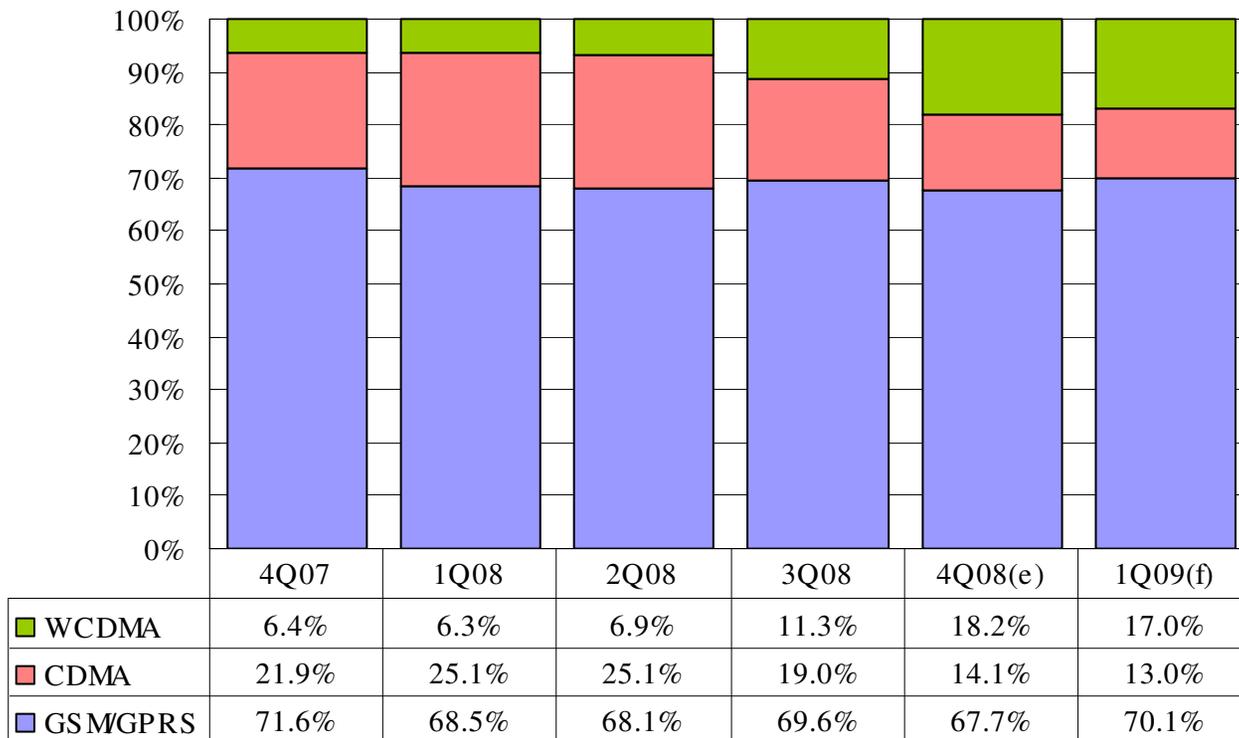
Industry watch (3)

- ✓ Cost down will be the focus of all of the top-five vendors, especially Motorola and Sony Ericsson.
- ✓ Since Motorola saw losses in 2007, the company undertook several layoffs. In its latest workforce cut, 5,000 employees in the handset department will be laid off, accounting for 70% of the company's total expected workforce reduction. The process will be completed before the second quarter this year. In addition, Motorola has adjusted production sites and standardized production processes to improve its cost structure and reach the goal of saving US\$1.2 billion in 2009.
- ✓ Sony Ericsson has seen losses since the second quarter of 2008. In addition to a 300 million euro (US\$8.63 million) restructuring plan and a cut of 2,000 employees last year, the company has announced another 180 million euro cost down plan, which is expected to be completed by the end of 2009. Sony Ericsson also does not rule out the possibility of another workforce reduction.

Industry watch (4)

- ✓ In 2009, each company is thinking highly of the smartphone segment. Nokia plans to further lower the price of its smartphones. Motorola will focus on the Android platform as well as mobile Internet and social networking services. In addition to the Windows Mobile platform, Sony Ericsson joined Google's Open Handset Alliance (OHA) at the end of 2008 and has announced its decision to enter the smartphone market in 2009.
- ✓ Korea-based Samsung and LGE have also invested in the smartphone market and expect to win more market share with their current advantage of exchange rate differences.

Taiwan handset shipments by transmission technology, 4Q07-1Q09



Taiwan handset shipments by transmission technology, 4Q07-1Q09

- ✓ The shipment share of WCDMA handsets continued to increase in the fourth quarter of 2008 driven by strong sales of smartphones. Related shipments were up 31% sequentially in the quarter.
- ✓ CDMA shipments dropped about 40% because of delayed orders from Nokia and decreased shipments from Cal-Comp Electronics.
- ✓ The CDMA share will continue to drop in the first quarter of 2009 since orders from Nokia are still not expected to ship this quarter. Related shipments will be down about 28%. The WCDMA segment will perform slightly better, with shipments down 27%.

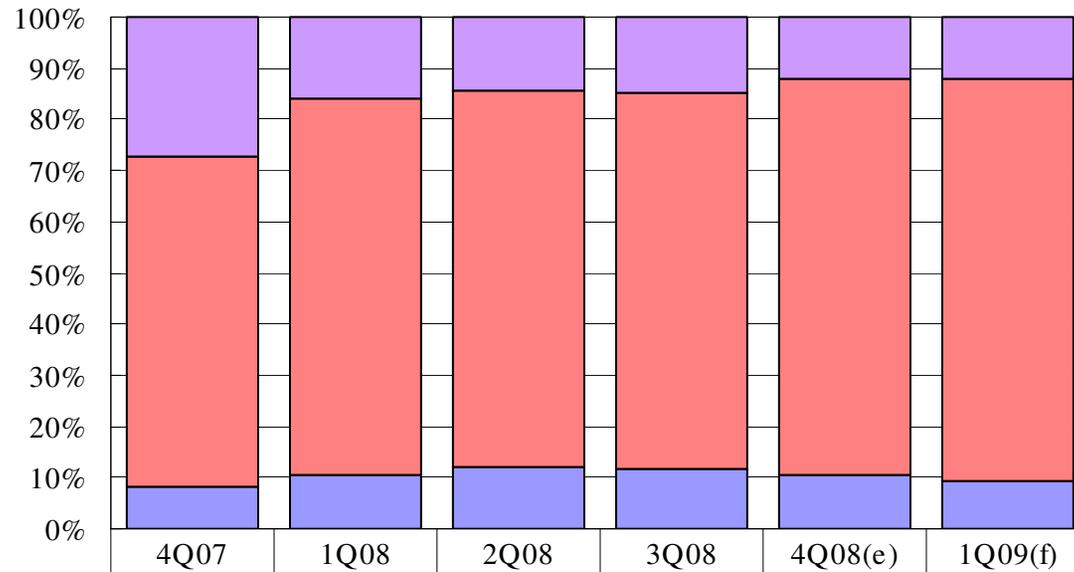
Taiwan handset shipments by type, 4Q07-1Q09



Taiwan handset shipments by type, 4Q07-1Q09

- ✓ The shipment share of slide phones had significant growth in the fourth quarter of 2008 thanks to strong shipments of Sony Ericsson's T303 models and the launches of High Tech Computer (HTC) slide smartphones.
- ✓ The first-quarter shipment share in 2009 will not have much difference compared to last quarter. Clamshell shipments will be down about 17% while slide phone shipments will be down 31%

Candy bar, slide phone shipments by main display colors, 4Q07-1Q09

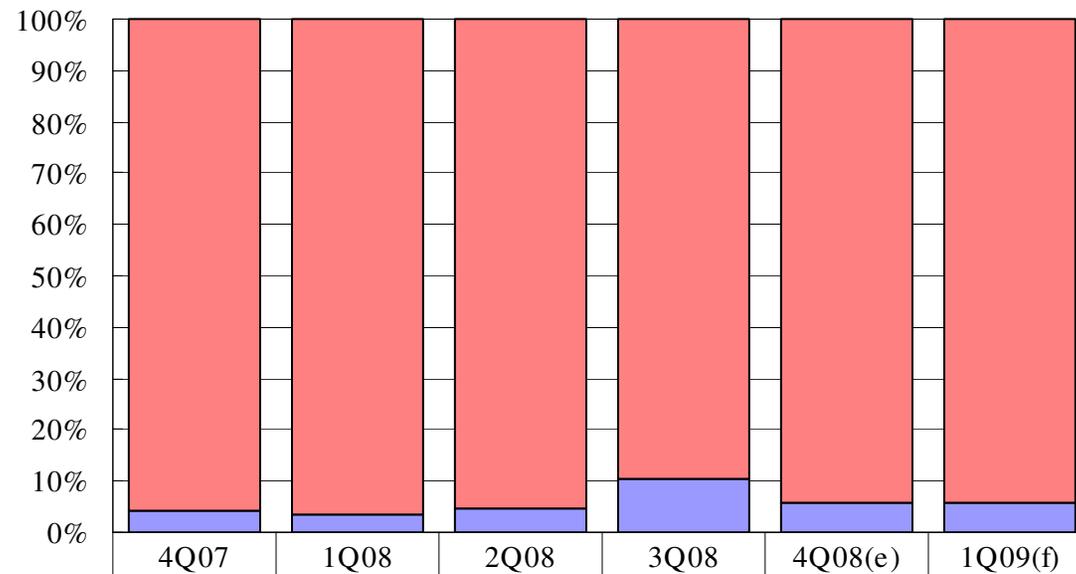


	4Q07	1Q08	2Q08	3Q08	4Q08(e)	1Q09(f)
■ Monochrome	27.4%	16.1%	14.5%	14.8%	12.0%	11.9%
■ ≤ 4,096 colors	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
■ 65,000 colors	64.3%	73.4%	73.3%	73.4%	77.6%	78.7%
■ ≥ 260,000 colors	8.3%	10.6%	12.2%	11.8%	10.4%	9.4%

Candy bar, slide phone shipments by main display colors, 4Q07-1Q09

- ✓ Shipments of all kinds of display models dropped in the fourth quarter last year. Monochrome had the biggest drop of 34% while 65,000-color s had the smallest drop at 14%.
- ✓ First-quarter shipment shares in 2009 will remain the same level with last quarter. The best performing segment will be the 65,000-color segment which will see a shipment drop of 21%.

Clamshell shipments by main display colors, 4Q07-1Q09

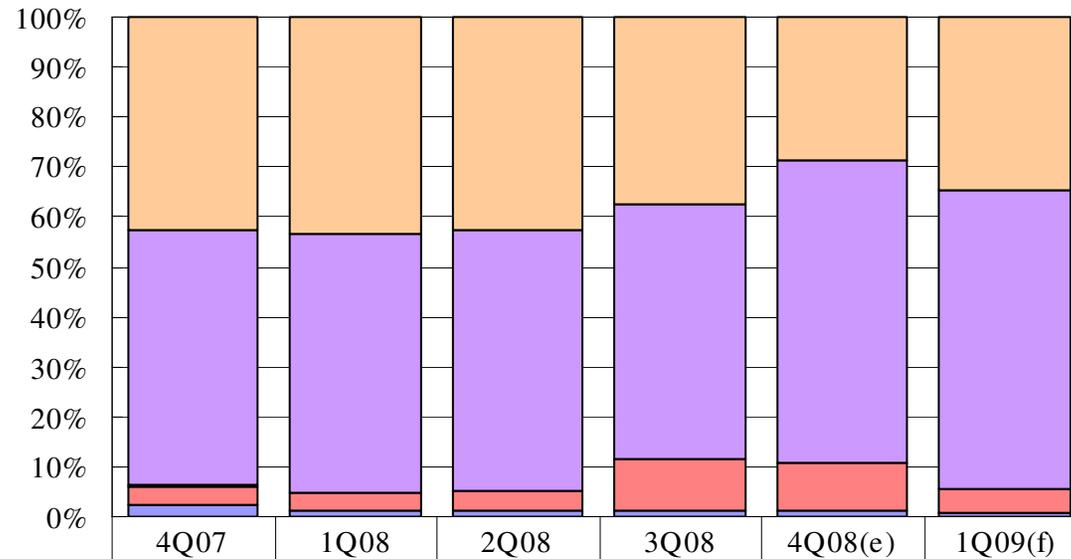


■ Monochrome	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
■ ≤ 4,096 colors	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
■ 65,000 colors	95.9%	96.6%	95.3%	89.5%	94.3%	94.2%
■ ≥ 260,000 colors	4.1%	3.4%	4.7%	10.5%	5.7%	5.8%

Clamshell shipments by main display colors, 4Q07-1Q09

- ✓ 260,000-color handset orders from Nokia dropped significantly, affecting the share of the 260,000-color segment in the fourth quarter of 2008. The segment saw a shipment drop of over 50% in 4Q08.
- ✓ The first-quarter shipment share in 2009 will remain the same as that of 4Q08. Shipments will be down between 20-22% for each segment.

Clamshell shipments by sub-display colors, 4Q07-1Q09

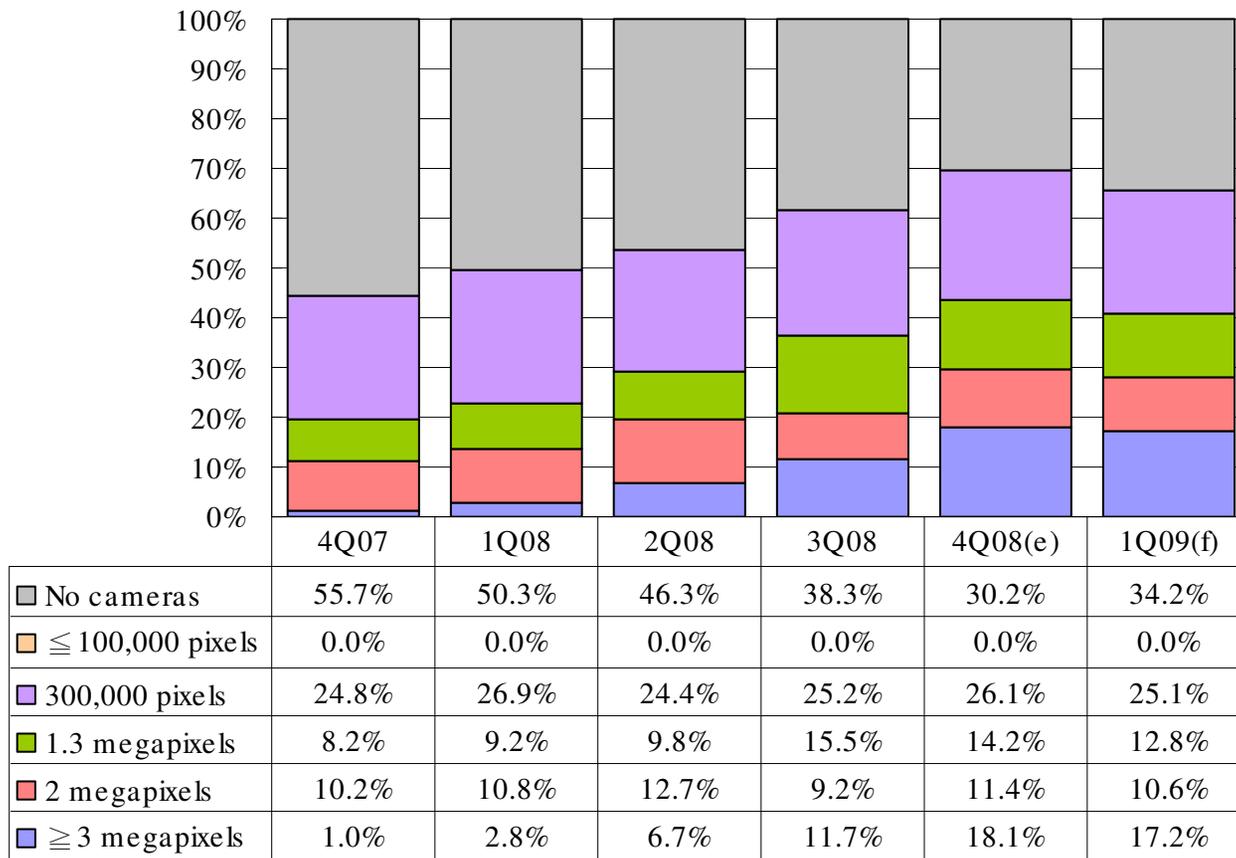


	4Q07	1Q08	2Q08	3Q08	4Q08(e)	1Q09(f)
No sub-dis play	42.6%	43.3%	42.5%	37.4%	28.7%	34.5%
Monochrome	51.1%	51.9%	52.1%	51.2%	60.6%	60.0%
≤ 4,096 colors	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%
65,000 colors	3.7%	3.4%	4.0%	10.1%	9.4%	4.7%
≥ 260,000 colors	2.3%	1.2%	1.4%	1.3%	1.2%	0.7%

Clamshell shipments by sub-display colors, 4Q07-1Q09

- ✓ The shipment share of the no sub-display segment decreased in the fourth quarter of 2008 because shipments from Chi Mei Communication Systems to Motorola had a large decline. Shipments for the segment declined 38%.
- ✓ On the other hand, the share of the monochrome segment increased in the fourth quarter because shipments of Compal Communications to Motorola had a smaller decline. The shipment decline for the segment was only 4%.
- ✓ The share of the 65,000-color segment had a slight drop in the fourth quarter due to decreased orders from Nokia, and this segment will continue to drop in the first quarter of 2009. The segment's shipments were down 24% in 4Q08 and will drop another 70% in 1Q09.
- ✓ The share of the no-sub-display segment in the first quarter will increase due to a smaller decline compared to other segments. The segment will see a shipment decline of only 6%.

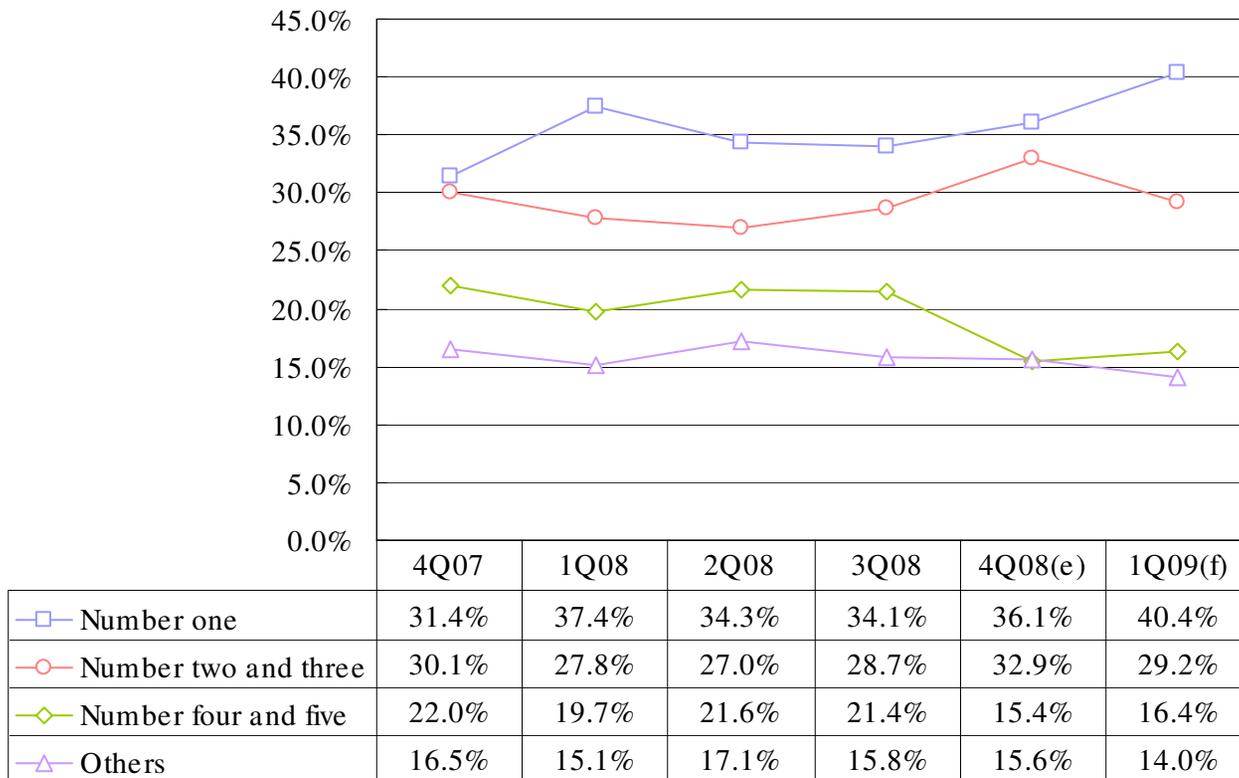
Taiwan's handset shipments by camera pixels, 4Q07-1Q09



Shipments by camera pixels, 4Q07-1Q09

- ✓ The shipment share of entry-level handsets declined in the fourth quarter of 2008 amid decreased orders from Motorola, Reliance and Huawei, while the share of 2-megapixel handsets and above increased driven by strong shipments of smartphones.
- ✓ The no camera segment saw the greatest shipment drop in 4Q08, at 36%.
- ✓ The greater than 3-megapixel segment was the big winner in 4Q08 on improved shipment of 26%. However, shipments to the segment will drop 26% in 1Q09.
- ✓ Shipments to the no-camera segment will continue falling in 1Q09 at a 12% clip. However, the segment will still gain share as overall shipments will fall 22%. The segment will be buoyed by Foxlink's shipments to Motorola, which will begin in 1Q09.

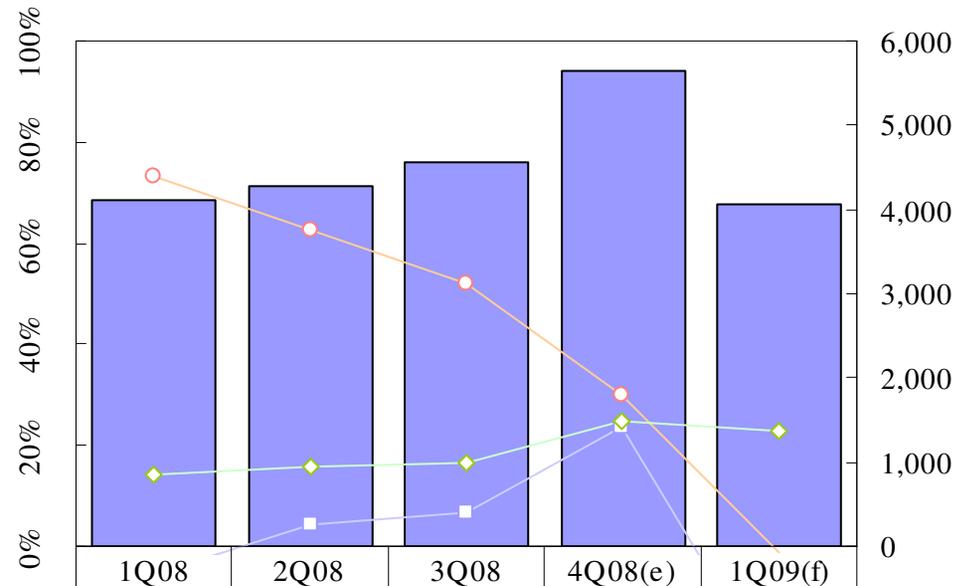
Shipment proportion by tier, 4Q07-1Q09



Shipment proportion by tier, 4Q07-1Q09

- ✓ With HTC's strong shipments of its Touch series, the T-Mobile G1 and Sony Ericsson's Xperia X1, HTC climbed the rankings to become the number two maker in the fourth quarter of 2008, pushing the share of the top-three makers to reach nearly 70%.
- ✓ Still, in the fourth quarter, shipments from the number one maker dropped 14%, while shipments from the number two and three makers dropped 7% combined.
- ✓ Shipments of the Number two and three makers will have more declines in the first quarter of 2009, lowering their shares in general. Their shipments will drop 31%.
- ✓ The top-five makers in the fourth quarter of 2008 were Compal, HTC, Arima Communications, Foxlink and Cal-Comp, in that order. The ranking will remain the same in the first quarter of 2009.

Smartphone shipments, 1Q08-1Q09

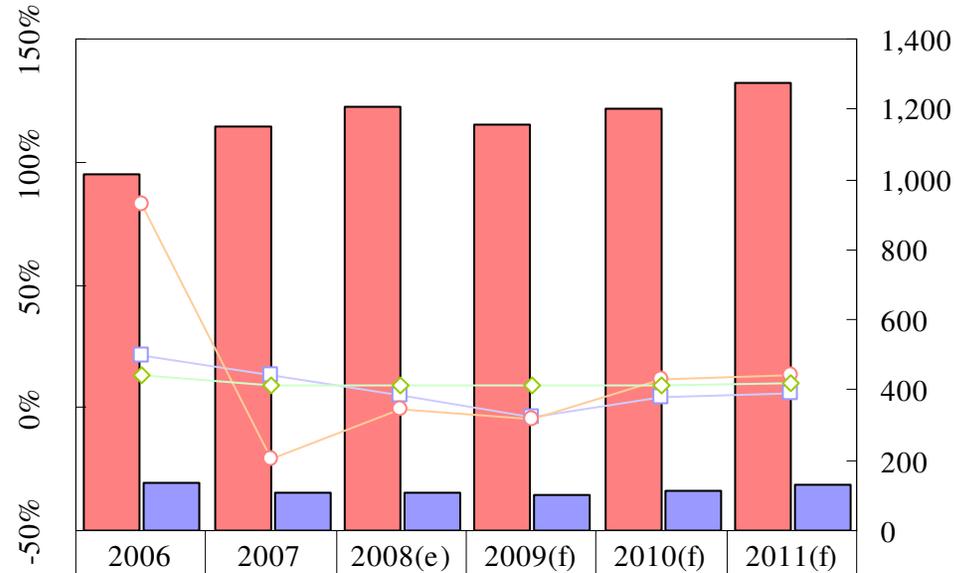


Shipment	4,105	4,284	4,567	5,644	4,062
Q/Q	-5.61%	4.36%	6.61%	23.58%	-28.03%
Y/Y	73.10%	62.60%	51.90%	29.78%	-1.05%
Share of all handsets	14.33%	15.65%	16.37%	24.85%	22.93%

Smartphone shipments, 1Q08-1Q09

- ✓ Smartphone shipments saw strong shipment growth in the fourth quarter of 2008, at 24%. The share of the smartphones to overall shipments increased to 25%.
- ✓ Shipments will decline 28% in their first quarter 2009, but the segment will maintain a 23% share of overall shipments.
- ✓ All makers expect for HTC will see large declines in shipments in 1Q09.

Handset shipment trend and global market share, 2006-2011 (million units)



 Taiwan shipments	135	108	107	102	114	129
 Worldwide shipments	1,013	1,148	1,206	1,155	1,201	1,273
 Worldwide growth Y/Y	21.0%	13.4%	5.1%	-4.2%	4.0%	6.0%
 Taiwan growth Y/Y	82.4%	-20.5%	-0.9%	-4.5%	11.9%	13.0%
 Taiwan market share	13.4%	9.4%	8.8%	8.8%	9.5%	10.1%

Handset shipment trend and global market share, 2006-2011 (million units)

- ✓ Taiwan handset shipments in 2009 will decline for the third consecutive year.
- ✓ The weakened position of Motorola in the marketplace has affected shipments of Taiwan makers significantly because it is still Taiwan biggest OEM customer. Order visibility from Sony Ericsson is also low.
- ✓ Although LGE has been in talks with Taiwan makers for several new models, the outlook is unclear due to the appreciation of the Korean won has increased OEM costs.
- ✓ Taiwan's new customer Vodafone is expected to bring a 7.5 million-unit contribution beginning in the second quarter of 2009. Shipments after 2009 will grow steadily until 2011.