

### **Calling Iraq**

Trends in the U.S. electronics equipment market (shipments only).						
	% Change					
	Aug.	Sept.r	Oct.*	YTD		
Computers and electronics products	1.6	-2.7	2.8	12.9		
Computers	-2.5	8.5	10.9	15.9		
Storage devices	-0.2	1.8	-2.1	11.5		
Other peripheral equipment	4.2	-14.1	9.8	5.9		
Nondefense communications equipment	7.1	-8.4	-0.7	9.8		
Defense communications equipment	1.6	-1.8	46.2	23.9		
A/V equipment	9.0	-7.7	8.3	1.2		
Semiconductors	-0.5	-8.6	4.8	21.1		
Components <sup>1</sup>	-0.4	-0.3	-2.6	8.9		
Nondefense search and navigation equipment	7.4	6.6	0.1	7.6		
Defense search and navigation equipment	0.0	1.2	-1.7	9.3		
Medical, measurement and control	2.4	-1.3	-1.4	13.2		

<sup>r</sup>Revised. \*Preliminary. <sup>1</sup>Includes semiconductors. Seasonally adjusted. Source: U.S. Department of Commerce Census Bureau, December 2004.

### **Manufacturing Warms in November**

Tempe, AZ – Manufacturing in November reversed a three-month slide as new orders climbed for the first time since July. Production and backlogs slipped for the second straight month, however, said the Institute for Supply Management (ism.ws).

Manufacturing grew for the 18th consecutive month, ISM said, based on its monthly poll of the sup-

ply chain. "The manufacturing sector appears poised to end the year on a strong note," said ISM chairman Norbert Ore. He continued to warn about price inflation, saying manufacturers are concerned that commodity prices are eroding

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	July	August	Sept.	Oct.	Nov.
PMI	62.0	59.0	58.5	56.8	57.8
New orders	64.7	61.2	58.1	58.3	61.5
Production	66.1	59.5	61.6	58.9	57.0
Inventories	49.9	51.7	51.0	48.2	50.7
Customer inventories	37.5	45.5	41.4	43.5	43.5
Backlogs	58.0	55.0	55.0	49.0	47.5
Source: Institute for Sup	ply Mana	gement, Dec	ember 2004	!	

profits. Also, customer inventories remain too low.

The PMI measure of economic activity rose one point to 57.8%. New orders rose 3.2 points and production fell 1.9 points. "It appears the manufacturing sector is definitely sustaining its momentum as this month's PMI strengthened slightly while continuing to indicate a gradual downward trend," said Ore. "Prices are a big issue, but the strength in new orders offsets some of those concerns as companies work to benefit from the volume."

For the month, imports and exports rose and order backlogs fell. Employment was up 2.8 points. Electronic Components and Equipment, and Industrial and Commercial Equipment and Computers were among the sectors reporting growth.

#### **Industry Market Snapshot**

Book-to-bills of various components/equipment.							
	July	August	Sept.	Oct.			
Semiconductor equipment <sup>1</sup>	1.04	1.01	0.96	0.96			
Semiconductors <sup>2</sup>	1.0%	1.1%	1.0%	1.5%			
Rigid PCBs <sup>3</sup> (North America)	0.99	1.05	1.01	0.94			
Flexible PCBs <sup>3</sup> (North America)	1.57	0.98	1.38	1.48			
Sources: <sup>1</sup> SEMI, <sup>2</sup> SIA (3-month moving a	average growth), <sup>3</sup>	IPC					

# Q3 Server Sales Up 6%

Framingham, MA – Factory revenue in the worldwide server market grew 5.5% year-on-year to \$11.5 billion in the third quarter, the sixth consecutive quarter of growth. Units shipped rose 18.7%, said research firm IDC (idc.com). A competing firm, Gartner Inc. (gartner.com), said server sales rose 6% to \$11.8 billion.

Revenue from so-called volume servers grew 18.2% and continues to drive the server market, IDC said. Midrange enterprise server sales declined 10.2%, the third straight quarterly decline. High-end enterprise servers grew 1.9%.

IBM retained the top spot worldwide with 31.7% market share, up 6.3%. HP, the shipments leader, was second in revenues (26.8% share), up 2.9%. Sun and Dell were third at 10.2% and 10.1%, respectively. Dell grew 14.1% year-overyear while Sun was flat at 0.1%. Fujit-su/Fujitsu Siemens rounded out the top five, at 6.2%.

# Study: Flip Chips Jumping

Austin, TX — Flip chip and wafer level packaging will see a compound growth rate of 28% between 2004 and 2009, a new study projects. TechSearch International (techsearchinc.com) says drivers continue to be performance, onchip power distribution, pad-limited designs and form-factor requirements. High-performance logic suppliers are using more flip-chip-in-package (FCIP), and watch modules and automotive are using flip-chip-on-board packaging. An increasing number of devices, from diodes to DRAMs, are packaged at the wafer level.

Also, new bumping technologies continue to be introduced. The assembly of bumped silicon fabricated with low-k dielectric materials resulted in a host of changes to materials and assembly processes.