

# Computers and Office and Accounting Machines: 2003

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## Current Industrial Reports

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**SUMMARY OF FINDINGS.** In 2003, manufacturers' shipments of computers were valued at \$38.5

billion, a 4.9-percent decrease from the 2002 total of \$40.4 billion. Units of computers shipped increased from 21.3 million in 2002 to 23.2 million in 2003. Personal computers were valued at \$14.7 billion in 2003, compared to \$16.0 billion in 2002. Workstations were valued at \$2.3 billion in 2003, compared to \$2.4 billion in 2002. Notebooks were valued at \$8.2 billion in 2003, compared to \$7.9 billion in 2002. Loaded processor boards and subassemblies were valued at \$19.2 billion, compared to \$23.2 billion in 2002. Computer storage devices were valued at \$5.1 billion in 2003, compared to \$5.0 billion in 2002. Magnetic and optical recording media were valued at \$2.1 billion in 2003, compared to \$2.2 billion in 2002.

For general CIR information, explanation of general terms and historical note, see the appendix.

Address inquiries concerning these data to Investment Goods Industries Branch, Manufacturing and Construction Division (MCD), Washington, DC 20233-6900, or call Keith McKenzie, 301-763-4777.

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# U S C E N S U S B U R E A U

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Economics and Statistics Administration  
U.S. CENSUS BUREAU

Table 1. Value of Shipments of Computers and Office and Accounting Machines by Product Class: 1998 to 2003  
 [Millions of dollars]

Product code	Product description	2003	2002	2001	2000	1999	1998
334111	Electronic computer manufacturing 1/.....	38,461.0	40,448.3	48,541.3	62,856.9	64,696.1	56,891.5
3341111100	Host computers (multiusers).....	12,105.6	r/ 13,053.2	16,469.3	22,877.4	21,089.4	15,010.2
3341117100	Single user computers.....	25,469.6	26,586.0	31,492.2	38,981.3	42,765.3	41,001.9
334111D121	Other computers, including array, analog, hybrid, or special computers not listed above.....	885.7	r/ 809.1	581.4	998.2	841.4	879.4
334418B	Loaded computer processor boards and board subassemblies 2/.....	19,231.0	23,170.8	31,214.0	37,272.5	30,090.9	26,046.5
3341121	Computer storage devices and equipment.....	5,121.5	r/ 5,026.9	7,318.7	8,995.4	9,826.5	9,318.6
3341124101	Parts for computer storage devices and subassemblies.....	1,129.5	1,578.0	1,699.1	1,691.9	2,253.5	2,309.7
3341131	Computer terminals.....	256.9	r/ 266.1	360.9	415.1	541.1	529.4
3341134101	Parts for computer terminals.....	1.3	(D)	(D)	(D)	(D)	(D)
3341191	Computer peripheral equipment, n.e.c. ....	9,386.6	10,460.4	10,636.7	12,434.4	12,889.4	12,145.4
3341194101	Parts for input/output equipment.....	1,832.6	r/ 1,905.3	2,359.9	2,766.3	2,387.5	2,629.5
	Calculating and accounting machines .....	920.2	844.6	1,190.8	1,210.4	1,195.6	1,060.5
3333136 pt.	Parts for calculating, coin, or currency handling, and accounting machines.....	27.1	60.6	94.8	105.7	(D)	126.5
333313A	Mailing, letter-handling, and addressing machines.....	730.2	r/ 1,942.8	1,308.2	1,375.7	1,158.1	989.0
333313E	Check handling, electric stapling and dictating machines, typewriters, and all other office machines, n.e.c. ....	490.1	r/ 536.7	780.0	806.6	826.1	778.5
333313J100	Parts for office machines, n.e.c. ....	189.8	r/ 142.2	323.8	239.5	463.2	359.5
334613	Magnetic and optical recording media.....	2,135.2	2,207.3	2,227.6	3,205.5	3,906.8	4,736.3

D Withheld to avoid disclosing data for individual companies. n.e.c. Not elsewhere classified. pt. Part. r/Revised by 5 percent or more from previously published data.

1/Detail may not sum to total due to rounding.

2/Data are collected on two Current Industrial Report forms, MA334R, "Computer and Office and Accounting Machines," and MA334Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components."

Table 2. Quantity and Value of Shipments of Computers and Office and Accounting Machines: 2003 and 2002  
 [Quantity in number of units. Value in thousands of dollars]

Product code	Product description	No. of cos.	2003		2002	
			Quantity	Value	Quantity	Value
334111	Electronic computer manufacturing.....	111	23,183,136	38,460,968	21,252,100	40,448,293
	Host computers (multiusers):					
334111101	Large-scale systems, including mainframes and super computers.....	12	175,026	3,010,779	127,273 r/	3,196,727
334111103	Medium-scale systems and unix servers 1/.....	17	(D)	(D)	284,880	6,703,839
334111105	Personal computer servers 1/.....	21	1,110,748	8,946,244	(D)	(D)
334111106	Other host computers 2/.....	8	(D)	(D)	(D)	(D)
334111109	Server appliance 2/.....	6	31,397	148,587	(D)	(D)
	Single user computers:					
3341117107	Personal computers.....	29	14,949,630	14,708,434	14,138,321	16,030,151
3341117109	Workstations.....	35	1,309,109	2,288,019	1,186,060	2,407,367
3341117111	Laptops (AC/DC).....	8 c/	8,645 c/	24,938	7,866	23,403
3341117112	Tablet computer.....	-	-	-	-	-
3341117113	Notebooks, subnotebooks (battery operated)....	13	5,107,141	8,161,171	4,491,230	7,850,242
3341117115	Personal digital assistants 3/.....	5	(D)	(D)	(D)	(D)
3341117117	Other portable computers 3/.....	4	(D)	(D)	(D)	(D)
3341117119	Other single user computers 3/.....	5	315,994	287,052	317,353	274,831
3341117125	Home internet appliance.....	-	-	-	-	-
334111D121	Other computers, including array, analog, hybrid or special-purpose computers not included above.....	28	175,446	885,744	111,639 r/	809,061
334418B	Printed circuit assemblies (loaded boards, subassemblies, and modules) 4/.....	618	(X)	19,231,021	(X)	23,170,766
	Loaded computer processor boards and board subassemblies:					
334418B105	Computer and peripheral printed board assemblies.....	227	(X)	7,651,834	(X)	7,953,415
334418B110	Communications printed board assemblies.....	196	(X)	4,775,139	(X)	6,287,799
334418B115	Industrial process control board assemblies 5/.....	207	(X)	(D)	(X) r/	1,000,282
334418B120	Instrumentation printed board assemblies (except industrial).....	165	(X)	1,249,789	(X)	1,766,507
334418B125	Search and detection printed board assemblies....	60	(X)	173,418	(X) r/	135,357
334418B130	Consumer electronics printed board assemblies...	108	(X)	783,278	(X)	714,387
334418B132	Plotter controllers 5/.....	2	(X)	905,054	(X)	(NA)
334418B135	Other electronics, printed board assemblies, including office equipment and point of sales....	280	(X)	3,692,509	(X)	5,313,019
3341121	Computer storage devices and equipment.....	51	(X)	5,121,492	(X)	5,026,899
	Rigid magnetic disk drives:					
3341121102	Rigid magnetic drives.....	14	10,601	16,297	76,305	55,325
3341121109	Disk subsystems and disk arrays for multiuser computer systems.....	20	53,751	1,349,572	52,487	1,267,624
3341121111	Flexible magnetic disk drives.....	5	(D)	(D)	(D)	(D)
	Optical disk drives, including CD-ROM and magneto-optical equipment:					
	CD-ROM:					
3341121113	"Juke-box" capable of handling multiple disks....	4	626 a/	3,553	9,162 r/	10,983
3341121115	Single-disk equipment.....	5	(D)	(D)	(D)	(D)
3341121116	DVD.....	3	(D)	(D)	(D)	(D)
3341121118	Magneto-optical (MO).....	-	-	-	-	-
3341121120	Other optical disk drives.....	2	(D)	(D)	(D)	(D)
3341121121	Optical subsystems for multiusers computer systems.....	4	(D)	(D)	(D)	(D)
3341121124	Auxiliary storage, not disk or tape-based, for multiuser computer systems.....	6	(D)	(D)	(D)	(D)
3341121127	Other direct access storage equipment.....	9	(D)	(D)	(D)	(D)
	Serial-access storage equipment (e.g., tape drives):					
3341121129	1/2-inch tape drives.....	6	39,800	290,268	51,099	638,543
3341121131	1/4-inch tape drives.....	3	(D)	(D)	(D)	(D)
3341121133	Helical scan tape drives.....	4	(D)	(D)	(D)	(D)
3341121135	Cassette tape drives.....	3	(D)	(D)	(D)	(D)
3341121137	Other serial access storage equipment.....	7	(D)	(D)	(D)	(D)

Table 2. Quantity and Value of Shipments of Computers and Office and Accounting Machines: 2003 and 2002  
 [Quantity in number of units. Value in thousands of dollars]

Product code	Product description	No. of cos.	2003		2002	
			Quantity	Value	Quantity	Value
3341124101	Computer storage parts and subassemblies.....	16	(X)	1,129,462	(X)	1,578,009
3341131	Computer terminals.....	24	(X)	256,919	(X)	266,104
3341131101	Remote batch terminals.....	5	(D)	(D)	(D)	(D)
3341131103	Teleprinters.....	1	(D)	(D)	(D)	(D)
	Display terminals, including graphics type, whether or not incorporating a printing mechanism:					
3341131105	X-terminals.....	4	(D)	(D)	(D)	(D)
	Other than X-terminals:					
3341131107	13-inch or less display.....	4	(D)	(D)	(D)	(D)
3341131109	More than 13-inch but less than 19-inch display.....	12	89,902	100,034	117,052 r/	101,827
3341131111	19-inch or more display.....	4	(D)	(D)	(D)	(D)
3341134101	Computer terminal parts and subassemblies.....	6	(X)	1,279	(X)	(D)
3341191	Computer peripheral equipment, n.e.c. ....	185	(X)	9,386,570	(X)	10,460,443
	Keying equipment:					
3341191100	Digital cameras.....	-	-	-	-	-
3341191101	Keyboards.....	21	1,099,802	46,446	(D)	(D)
3341191102	Memory cards and readers.....	2	(D)	(D)	(D)	(D)
3341191103	Other keying equipment.....	3	(D)	(D)	(D)	(D)
3341191105	Mouse devices.....	8	(D)	(D)	(D)	(D)
3341191107	Digitizers and light pen tablets.....	5	83,190	39,650	75,352	37,716
3341191109	Other manual input devices (joysticks, trackballs, touchscreens, etc.).....	11 a/	1,855,246 b/	136,309	1,200,927 b/	114,521
3341191111	Computer output to microfilm (COM) equipment.....	3	(D)	(D)	(D)	(D)
3341191113	Media copying and/or conversion equipment.....	4	(D)	(D)	(D)	(D)
	Optical scanning devices:					
3341191115	Bar code devices.....	19 b/	936,512 a/	400,900 a/	2,187,801 r/	503,999
3341191117	OCR equipment.....	8	50,919 a/	160,906	48,510 a/	185,583
	Other than bar code or OCR devices:					
3341191119	Flat bed scanners 6/.....	3	(D)	(D)	(D)	(D)
3341191120	Drum scanners.....	-	-	-	-	-
3341191121	Hand-held scanners 6/.....	3	90,541	145,520	92,195	148,839
3341191122	Photo scanners.....	1	(D)	(D)	-	-
3341191123	Other.....	10 c/	21,435 a/	113,653 c/	20,407 b/	120,601
3341191125	Voice recognition equipment.....	6	(D)	(D)	(D)	(D)
3341191127	Magnetic strip and ink recognition equipment.....	8 c/	100,553 b/	168,331 b/	140,270 b/	143,140
3341191129	Other document entry equipment.....	2	(D)	(D)	(D)	(D)
	Computer printers:					
	Impact printers:					
3341191131	Line type (typically with a Centronics interface with output measured in line per minute).....	11	178,184	175,981	188,982 r/	186,222
3341191133	Serial type (typically with a serial and/or parallel interface with output measured in characters per second).....	15	128,272	58,823	139,708	65,668
	Nonimpact printers:					
3341191135	Laser.....	22	2,040,269	1,998,412	2,327,250	1,853,681
3341191137	Inkjet.....	8	(D)	(D)	(D)	(D)
3341191139	Other (thermal, ion deposition, etc.).....	17	308,815	432,735	282,335	391,811
3341191141	Peripheral sharing devices.....	6	18,510 b/	1,917 a/	16,585 r/	2,565
3341191143	Font cartridges.....	2	(D)	(D)	(D)	(D)
3341191145	Plotters, including electrostatic.....	8 b/	2,466 b/	43,856 b/	3,395 b/	50,019
	Monitors, excluding terminals:					
3341191147	Flat panel displays.....	9	248,723 a/	158,529	139,800 r/	75,945
	Other than flat panel displays:					
3341191149	Less than 19-inch display.....	15	343,531 a/	109,367	728,401 a/	276,003
3341191151	19-inch or more display.....	12	(D)	(D)	(D)	(D)
3341191153	Monitor screen projection devices (e.g., LCD panels).....	5	(D)	(D)	(D)	(D)
3341191155	All other input/output devices.....	38	(X)	3,481,998	(X)	4,092,818
3341191157	Accessories for computer peripherals (e.g., device device supports, ergonomic aids, etc.).....	20	(X)	267,987	(X)	295,788
3341194101	Parts and subassemblies for computer peripherals and input/output equipment.....	44	(X)	1,832,642	(X) r/	1,905,267

Continued

Table 2. Quantity and Value of Shipments of Computers and Office and Accounting Machines: 2003 and 2002  
 [Quantity in number of units. Value in thousands of dollars]

Product code	Product description	No. of cos.	2003		2002	
			Quantity	Value	Quantity	Value
3341197103	Calculating and accounting machines.....	34	(X)	920,242	(X)	844,585
3341197107	Funds transfer devices 7/.....	3	(D)	(D)	(D)	(D)
3333134115	Point-of-sale terminals 7/.....	20		309,910	264,547	632,446
3333134125	Machines for sorting, wrapping, counting, changing, or dispensing coins and/or currency.....	7		98,776	139,813	197,492
3333134125	Other coin or currency handling machines, including cash registers, calculators, accounting, bookkeeping, and billing machines, and credit card imprinters.....	9	(X) b/	51,595	(X) b/	53,837
3333136 pt.	Parts for calculating, coin or currency handling and accounting machines.....	10	(X) a/	27,106	(X)	60,585
333313A	Mailing, letter handling, and addressing machines.....	28		393,056	730,231	559,689 r/
333313A101	Forms handling equipment, including bursters, decollators, and imprinters.....	8		33,480 c/	27,305	39,593 r/
333313A105	Letter and envelope handling machines.....	13		12,596	290,347 a/	15,978 r/
333313A107	Other mailing, letter handling, and addressing machines.....	17		346,980	412,579	504,118 r/
333313E	All other office machines, n.e.c. ....	35	(X)	490,074	(X)	536,686
333313E101	Check handling machines.....	6	(D)	(D)	(D)	(D)
333313E104	Electronic staplers.....	3		522,531	7,046	519,230 r/
333313E105	Paper cutting machines and apparatus office type.....	3		840,819 a/	13,850	958,897
333313E106	Pencil sharpeners.....	1	(D)	(D)	(D)	(D)
333313E107	Paper shredders.....	2	(D)	(D)	(D)	(D)
333313E110	All other office machines, n.e.c., including typewriters, dictating machines, binding machines, ticket counting machines, and voting machines.....	15	(X)	415,165	(X)	455,002
333313J100	Parts for office machines, n.e.c. ....	23	(X)	189,787	(X) r/	142,205
3345184131	Time recording and time stamp machines and devices.....	11 b/		264,033 a/	115,900 b/	322,345 b/
3399427100	Perforating or stapling machines, nonelectric.....	5	(D)	(D)	(D)	(D)
334613	Magnetic and optical recording media.....	34	(X)	2,135,160	(X)	2,207,250
3346131111	Rigid disks:					
3346131211	Less than 3-1/2 inches.....	-	-	-	-	-
3346131211	3-1/2 inches up to but not including 5-1/4 inches.....	4	(D)	(D)	(D)	(D)
3346131213	5-1/4 inches and greater.....	3	(D)	(D)	(D)	(D)
3346131611	Flexible disks:					
3346131611	3-1/2 inches up to but not including 5-1/4 inches.....	3	(D)	(D)	(D)	(D)
3346131613	5-1/4 inches and greater.....	3	(D)	(D)	(D)	(D)
3346131615	Optical disks.....	9		1,035,854	643,249 b/	994,788 r/
3346131501	Bulk magnetic tape.....	7		915,920	129,819	1,060,625
3346131411	Packaged magnetic tape:					
3346131411	In reels for computer use 8/.....	5	(D)	(D)	(D)	(D)
3346131413	In cassette and cartridge for computer use 8/.....	8		2,980,992	860,095	5,070,126
3346131415	In forms suitable for audio use.....	5	(D)	(D)	(D)	1,033,377
3346131417	In video cassette, 8-mm and 1/2-inch.....	5	(D)	(D)	(D)	58,836
3346131419	In video cassette, 3/4 (19-mm) and 2-inch (51-mm).....	8		124,270	163,805	183,393
3346131419	In video cassette, 3/4 (19-mm) and 2-inch (51-mm).....	2	(D)	(D)	(D)	(D)
3346131421	Other package magnetic tape.....	-	-	-	-	(D)
3346131617	Other magnetic recording media, including parts.....	4	(X)	(D)	(X)	(D)
4216900000	Nonmanufacturing revenue of manufacturing establishments:					
4216900000	Supplies and accessories for use with computers or business machines (resales).....	36	(X)	1,996,094	(X)	1,934,355
9999980000	Research and development, testing, and evaluation of systems and components.....	10	(X)	12,226	(X)	6,431
3346110001	Software sold with computer systems shipped by manufacturers:					
3346110001	Operating system software.....	8	(X)	(D)	(X)	(D)
3346110002	Utilities and device managers.....	12	(X)	(D)	(X)	6,366
3346110003	Application software.....	23	(X)	285,600	(X)	267,266

Continued

Table 2. Quantity and Value of Shipments of Computers and Office and Accounting Machines: 2003 and 2002  
 [Quantity in number of units. Value in thousands of dollars]

Product code	Product description	No. of cos.	2003		2002	
			Quantity	Value	Quantity	Value
3346110004	Other software.....	3	(X)	(D)	(X)	(D)
5415120000	Systems integration revenues, including configuration, installation and site preparation, and custom programming.....	17	(X)	57,477	(X) r/	84,051
5415190000	Other nonmanufacturing revenues associated with computer systems.....	55	(X)	1,805,924	(X)	1,815,839

- Represents zero. D Withheld to avoid disclosing data for individual companies. NA Not available. n.e.c. Not elsewhere classified. pt. Part. r/Revised by 5 percent or more from previously published data. X Not applicable.

- 1/For 2003, product codes 3341111103 and 3341111105 have been combined to avoid disclosing individual companies.
- 2/Product codes 3341111106 and 3341111109 have been combined to avoid disclosing individual companies.
- 3/Product codes 3341117115, 3341117117, and 3341117119 have been combined to avoid disclosing individual companies.
- 4/Data are collected on two Current Industrial Report forms, MA334R, "Computer and Office and Accounting Machines" and MA334Q, "Semiconductors, Printed Circuit Boards, and Other Electronic Components."
- 5/For 2003, value of shipments for product codes 334418B115 and 334418B132 have been combined to avoid disclosing individual companies.
- 6/Product codes 3341191119 and 3341191121 have been combined to avoid disclosing individual companies.
- 7/Product codes 3341197103 and 3341197107 have been combined to avoid disclosing individual companies.
- 8/Product codes 3346131411 and 3341413 have been combined to avoid disclosing individual companies.

Note: Percent of estimation of each item is indicated as follows: a/10 to 25 percent of this items has been estimated. b/26 to 50 percent of this item is estimated. c/Over 50 percent of this item has been estimated.

Table 3. Shipments, Exports, Imports, and Apparent Consumption of Computing and Accounting Machines: 2003  
 [Quantity in thousands of units. Value in millions of dollars]

Product code	Product description	Manufacturers' shipments (f.o.b. plant)		Exports of domestic merchandise 1/ 2/		Imports for consumption 1/ 3/	
		Quantity	Value	Quantity	Value	Quantity	Value 4/
3341111101, 103, 105, 106, 109, 3341117107, 109, 111, 112, 113, 115, 117, 119, 125, 334111D121	Computers, digital, analog, hybrid, and other.....	23,183.1	38,461.0	3,368.0	6,203.6	29,428.0	19,930.4
3341121111	Flexible magnetic disk drives.....	(D)	(D)	112.3	19.5	26,154.1	288.7
3341121102, 109	Rigid magnetic disk drives, including disk subsystems and disk arrays.....	64.4	1,365.9	4,592.1	745.9	80,103.8	7,379.4
3341121113, 115, 116, 118, 120, 121, 124, 127, 129, 131, 133, 135, 137, 3341124101	Computer storage devices and equipment, n.e.c. ....	(X)	(D)	1,047.6	1,154.8	65,542.4	3,898.2
3341191135	Laser computer printers.....	2,040.3	1,998.4	546.5	327.0	6,753.8	2,468.0
3341191137	Inkjet computer printers.....	(D)	(D)	502.9	143.9	32,276.8	3,130.3
3341191131, 133, 139	Computer printers, n.e.c. ....	615.3	667.5	756.6	519.2	3,059.0	759.3
3341191145	Plotters, including electrostatic.....	2.5	43.9	(X)	12.4	244.7	16.3
3341191101	Computer keyboards.....	1,099.8	46.4	589.1	60.4	50,748.9	412.0
3341131101, 103, 105, 107, 109, 111	Computer terminals.....	(X)	256.9	55.2	44.0	1,412.0	388.6
3341191149, 151	Monitors, CRT-type.....	(D)	(D)	1,188.5	276.7	16,596.7	1,945.3
3341191147, 153	Monitors, n.e.c. ....	(D)	(D)	318.6	313.2	34,327.7	6,673.0
3341191115, 117, 119, 120, 121, 122, 123 127	Optical scanning devices and magnetiac strip and ink recognition equipment.....	1,200.0	1,036.6	678.5	369.3	5,786.3	673.9
3341191105, 109	Control devices.....	(D)	(D)	2,221.5	2,486.7	64,576.3	4,014.5
3341191107	Digitizers and light pen tablets.....	83.2	39.7	903.2	197.1	238.5	20.9
3341191102, 103, 111, 113, 125, 129, 141, 143, 155	Computer equipment, n.e.c. ....	(X)	3,691.0	2,769.2	1,519.9	69,104.6	682.4
3341197103, 107	Point-of-sales terminals and ATM.....	309.9	728.8	71.7	110.9	1,809.9	578.5
3341191157, 4101, 334418B105, 110, 115, 120, 125, 130, 132, 135	Parts, subassemblies, and accessirues for computers and computer peripheral equipment.....	(X)	21,331.7	(X)	13,294.5	(X)	23,483.4
3333134115, 125	Coin or currency handling machines, n.e.c., including cash registers, accounting, bookkeeping, and billing...	(X)	191.4	1,016.1	50.6	112,107.8	625.9

Continued

Table 3. Shipments, Exports, Imports, and Apparent Consumption of Computing and Accounting Machines: 2003  
 [Quantity in thousands of units. Value in millions of dollars]

Product code	Product description	Manufacturers' shipments (f.o.b. plant)		Exports of domestic merchandise 1/ 2/		Imports for consumption 1/ 3/	
		Quantity	Value	Quantity	Value	Quantity	Value 4/
333313A101, 105, 107	Mailing, letter handling, and addressing machines.....	393.1	730.2	51.7	91.8	894.8	124.9
3345184131	Time recording and time stamp machines and devices..	264.0	115.9	248.1	10.3	169.6	8.0
333313E106	Pencil sharpeners.....	(D)	(D)	701.1	88.4	5137.5	16.3
333313E101, 104, 105, 107, 110, 3399427100	Office machines, n.e.c. ....	(X)	483.3	9.2	3.2	61,279.3	492.0
3333136 pt.	Parts for calculating, coin, or currency handling, and accounting machines.....	(X)	27.1	(X)	200.3	(X)	244.3
333313J100	Parts for office machines, n.e.c. ....	(X)	189.8	(X)	340.7	(X)	1,300.1
3346131111, 211, 213, 611, 613, 615	Rigid, flexible, and optical disks.....	1,803.5	841.7	228,195.8	484.1	533,002.5	127.2
3346131411, 413, 415, 417, 419, 421, 501	Bulk and packaged magnetic tape.....	(D)	(D)	25,299	417.5	696,279.8	1,225.1
3346131617	Other magnetic recording media, including parts.....	(X)	(D)	113.7	259.7	521.2	2,110.2

D Withheld to avoid disclosing data for individual companies. n.e.c. Not elsewhere classified. pt. Part. X Not applicable.

1/For comparison of North American Industry Classification System (NAICS)-based product codes with Schedule B export codes and HTSUSA import codes, see Table 4.

2/Source: Census Bureau report EM 545, U.S. Exports.

3/Source: Census Bureau report IM 145, U.S. Imports for Consumption.

4/Value represents c.i.f. plus U.S. import duties.



Table 4. Comparison of North American Industry Classification System (NAICS)-Based Product Codes with Schedule B Export Codes, and HTSUSA Import Codes: 2003

Product code	Product description	Export code 1/	Import code 2/
3341111101, 103, 105, 106, 109, 3341117107, 109, 111, 112, 113, 115, 117, 119, 125, 334111D121	Computers, digital, analog, hybrid, and other.....	8471.10.0000 8471.30.0000 8471.41.0035 8471.41.0065 8471.41.0095 8471.49.1035 8471.49.1065 8471.49.1095 8471.50.0035 8471.50.0065 8471.50.0085	8471.10.0000 8471.30.0000 8471.41.0035 8471.41.0065 8471.41.0095 8471.49.1035 8471.49.1065 8471.49.1095 8471.50.0035 8471.50.0065 8471.50.0085
3341121111	Flexible magnetic disk drives.....	8471.49.5020 8471.70.4035 8471.70.5035	8471.49.5020 8471.70.4035 8471.70.5035
3341121102, 109	Rigid magnetic disk drives, including disk subsystems and disk arrays.....	8471.49.5010 8471.49.5040 8471.70.1000 8471.70.2000 8471.70.3000 8471.70.4065 8471.70.5065	8471.49.5010 8471.49.5040 8471.70.1000 8471.70.2000 8471.70.3000 8471.70.4065 8471.70.5065
3341121113, 115, 116, 118, 120, 121, 124, 127, 129, 131, 133, 135, 137, 3341124101	Computer storage devices and equipment, n.e.c. ....	8471.49.5060 8471.49.5080 8471.70.4095 8471.70.5095 8471.70.6000 8471.70.9000	8471.49.5060 8471.49.5080 8471.70.4095 8471.70.5095 8471.70.6000 8471.70.9000
3341191135	Laser computer printers.....	8471.49.3100 8471.49.3200 8471.60.5100 8471.60.5200 8471.60.6100 8471.60.6200	8471.49.3100 8471.49.3200 8471.60.5100 8471.60.5200 8471.60.6100 8471.60.6200
3341191137	Inkjet computer printers.....	8471.49.3400 8471.60.5400 8471.60.6400	8471.49.3400 8471.60.5400 8471.60.6400
3341191131, 133, 139	Computer printers, n.e.c. ....	8471.49.3300 8471.49.3500 8471.49.3600 8471.49.3730 8471.49.3760 8471.49.3790 8471.60.5300 8471.60.5500 8471.60.5600 8471.60.5730 8471.60.5760 8471.60.5790 8471.60.6300 8471.60.6500 8471.60.6600 8471.60.6730 8471.60.6760 8471.60.6790	8471.49.3300 8471.49.3500 8471.49.3600 8471.49.3730 8471.49.3760 8471.49.3790 8471.60.5300 8471.60.5500 8471.60.5600 8471.60.5730 8471.60.5760 8471.60.5790 8471.60.6300 8471.60.6500 8471.60.6600 8471.60.6730 8471.60.6760 8471.60.6790

Table 4. Comparison of North American Industry Classification System (NAICS)-Based Product Codes with Schedule B Export Codes, and HTSUSA Import Codes: 2003

Product code	Product description	Export code 1/	Import code 2/
3341191145	Plotters, including electrostatic.....	9017.10.0000	9017.10.4000 9017.20.7000
3341191101	Computer keyboards.....	8471.49.2100 8471.60.2000	8471.49.2100 8471.60.2000
3341131101, 103, 105, 107, 109, 111	Computer terminals.....	8471.49.2400 8471.60.3000	8471.49.2400 8471.60.3000
3341191149, 151	Monitors, CRT-type.....	8471.49.2600 8471.60.1035 8471.60.1065 8471.60.3500 8471.60.4540	8471.49.2600 8471.60.1035 8471.60.1065 8471.60.3500 8471.60.4540
3341191147, 153	Monitors, n.e.c. ....	8471.49.2900 8471.60.1095 8471.60.4580	8471.49.2900 8471.60.1095 8471.60.4580 9013.80.7000 9013.80.9000
3341191115, 117, 119, 120, 121, 122, 123, 127	Optical scanning devices and magnetic strip and ink recognition equipment.....	8471.49.4200 8471.60.8000	8471.49.4200 8471.60.8000
3341191105, 109	Control devices.....	8471.49.6000 8471.80.1000	8471.49.6000 8471.80.1000
3341191107	Digitizers and light pen tablets.....	9017.20.8040	9017.20.8040
3341191102, 103, 111, 113, 125, 129, 141, 143, 155	Computer equipment, n.e.c. ....	8471.49.1500 8471.49.4850 8471.49.4875 8471.49.4895 8471.49.9000 8471.60.9030 8471.60.9070 8471.60.9090 8471.80.9000 8471.90.0000	8471.49.1500 8471.49.4850 8471.49.4875 8471.49.4895 8471.49.9500 8471.60.9030 8471.60.9070 8471.60.9090 8471.80.9000 8471.90.0000
3341197103, 107	Point-of-sale terminals and Automatic Teller Machines.....	8470.50.0020 8472.90.1000	8470.50.0020 8472,90.1000
3341191157, 4101, 334418B105, 110, 115, 120, 125, 130, 132, 135	Parts, subassemblies, and accessories for computers and computer peripheral equipment .....	8471.60.7040 8471.60.7080 8471.80.4000 8473.30.0000 8473.50.0000	8471.49.8500 8471.60.7040 8471.60.7080 8471.80.4000 8473.30.1040 8473.30.1080 8473.30.2000 8473.30.3000 8473.30.5000 8473.30.6000 8473.30.9000 8473.50.3000 8473.50.6000 8473.50.9000

Table 4. Comparison of North American Industry Classification System (NAICS)-Based Product Codes with Schedule B Export Codes, and HTSUSA Import Codes: 2003

Product code	Product description	Export code 1/	Import code 2/
3333134115, 125	Coin or currency handling machines, n.e.c., including cash registers, accounting, bookkeeping, and billing machines, and credit card imprinters.....	8470.10.0000	8470.10.0040
		8470.21.0000	8470.10.0060
		8470.29.0000	8470.21.0000
		8470.30.0000	8470.29.0000
		8470.40.0000	8470.30.0000
		8470.50.0060	8470.40.0000
			8470.50.0060
	8472.90.9040		
	8472.90.9060		
	8472.90.9520		
333313A101, 105, 107	Mailing, letter handling, and addressing machines.....	8470.90.0010	8470.90.0010
		8472.20.0000	8472.20.0000
		8472.30.0000	8472.30.0000
3345184131	Time recording and time stamp machines and devices.....	9106.10.0000	9106.10.0000
333313E106	Pencil sharpeners.....	8472.90.9000	8472.90.4000
333313E101, 104, 105, 107, 3399427100	Office machines, n.e.c. ....	8469.20.0020	8469.20.0020
		8469.20.0040	8469.20.0040
		8469.30.0020	8469.30.0020
		8469.30.0040	8469.30.0040
			8472.90.6000
	8472.90.7000		
	8472.90.9080		
3333136 pt.	Parts for calculating, coin, or currency handling, and accounting machines.....	8473.21.0000	8473.21.0000
		8473.29.0000	8473.29.0000
333313J100	Parts for office machines, n.e.c. ....	8473.10.0020	8473.10.4000
		8473.40.8000	8473.10.6000
		8473.40.8500	8473.10.9000
			8473.40.1000
			8473.40.6000
	8473.40.8000		
3346131111, 211, 213, 611, 613, 615	Rigid, flexible, and optical disks.....	8523.20.0000	8523.20.0000
3346131411, 413, 415, 417, 419, 421, 501	Bulk and packaged magnetic tape.....	8523.11.0000	8523.11.0000
		8523.12.0010	8523.12.0010
		8523.12.0020	8523.12.0020
		8523.12.0040	8523.12.0040
		8523.12.0060	8523.12.0060
		8523.13.0020	8523.13.0020
		8523.13.0040	8523.13.0040
		8523.13.0060	8523.13.0060
	8523.13.0080		
	8523.13.0080		
3346131617	Other magnetic recording media, including parts.....	8522.10.0000	8522.10.0000
		8522.90.0010	8522.90.7540
		8522.90.0090	8522.90.7580
		8523.90.0000	8523.90.0000

n.e.c. Not elsewhere classified. pt. Part.

1/Source: 2003 edition, Harmonized System-based Schedule B, Statistical Classification of Domestic and Foreign Commodities Exported from the United States.

2/Source: Harmonized Tariff Schedule of the United States, Annotated (2003).

# Appendix.

## General CIR Survey Information, Explanation of General Terms and Historical Note

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### GENERAL

The CIR program has been providing monthly, quarterly, and annual measures of industrial activity for many years. Since 1904, with its cotton and fats and oils surveys, the CIR program has formed an essential part of an integrated statistical system involving the quinquennial economic census, manufacturing sector, and the annual survey of manufactures. The CIR surveys, however, provide current statistics at a more detailed product level than either of the other two statistical programs.

The primary objective of the CIR program is to produce timely, accurate data on production and shipments of selected products. The data are used to satisfy economic policy needs and for market analysis, forecasting, and decision making in the private sector. The product-level data generated by these surveys are used extensively by individual firms, trade associations, and market analysts in planning or recommending marketing and legislative strategies, particularly if their industry is significantly affected by foreign trade. Although production and shipments information are the two most common data items collected, the CIR program collects other measures also such as inventories, orders, and consumption. These surveys measure manufacturing activity in important commodity areas such as textiles and apparel, chemicals, primary metals, computer and electronic components, industrial equipment, aerospace equipment, and consumer goods.

The CIR program uses a unified data collection, processing, and publication system. The U.S. Census Bureau updates the survey panels for most reports annually and reconciles the estimates to the results of the broader-based annual survey of manufactures and the economic census, manufacturing sector. The manufacturing sector provides a complete list of all producers of the products covered by the CIR program and serves as the primary source for CIR sampling. Where a small number of producers exist, CIR surveys cover all known producers of a product. However, when the number of producers is too large, cutoff and random sampling techniques are used. Surveys are continually reviewed and modified to provide the most up-to-date information on products produced. The CIR program includes a group of mandatory and voluntary surveys. Typically the monthly and quarterly surveys are conducted on a voluntary basis. Those companies that choose not to respond to the voluntary surveys are required to submit a mandatory annual counterpart corresponding to the more frequent survey.

### NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM (NAICS), 1997

The adoption of the North American Industry Classification System (NAICS) in the 1997 Economic Census has had a major impact on the comparability of current and historic data. Approximately half of the industries in the manufacturing sector of NAICS do not have comparable industries in the Standard Industrial Classification (SIC) system that was used in the past.

While most of the change affecting the manufacturing sector was change within the sector, some industries left manufacturing and others came into manufacturing. Prominent among those that left manufacturing are logging and portions of publishing. Prominent among the industries that came into the manufacturing sector are bakeries, candy stores where candy is made on the premises, custom tailors, makers of custom draperies, and tire retreading. The net effect of the classification changes are such that if the 1997 value of shipments data for all manufacturers were tabulated on an SIC basis, it would be approximately 3 percent higher.

Listed below are the NAICS sectors:

- 21 Mining
- 22 Utilities
- 23 Construction
- 31-33 Manufacturing
- 42 Wholesale Trade
- 44-45 Retail Trade
- 48-49 Transportation and Warehousing
- 51 Information
- 52 Finance and Insurance
- 53 Real Estate and Rental and Leasing
- 54 Professional, Scientific, and Technical Services
- 55 Management of Companies and Enterprises
- 56 Administrative and Support and Waste Management and Remediation Services
- 61 Educational Services
- 62 Health Care and Social Assistance
- 71 Arts, Entertainment, and Recreation
- 72 Accommodation and Food Services
- 81 Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

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The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

## FUNDING

The Census Bureau funds most of the surveys. However, a number of surveys are paid for either fully or partially by other Federal Government agencies or private trade associations. A few surveys are mandated, but all are authorized by Title 13 of the United States Code.

## RELIABILITY OF DATA

Survey error may result from several sources including the inability to obtain information about all cases in the survey, response errors, definitional difficulties, differences in the interpretation of questions, mistakes in recording or coding the reported data, and other errors of collection, response, coverage, and estimation. These nonsampling errors also occur in complete censuses. Although no direct measurement of the biases due to these nonsampling errors has been obtained, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data in an effort to minimize their influence.

A major source of bias in the published estimates is the imputing of data for nonrespondents, for late reporters, and for data that fail logic edits. Missing figures are imputed based on period-to-period movements shown by reporting firms. A figure is considered to be an impute if the value was not directly reported on the questionnaire, directly derived from other reported items, directly available from supplemental sources, or obtained from the respondent during the analytical review phase. Imputation generally is limited to a maximum of 10 percent for any one data cell. Figures with imputation rates greater than 10 percent are suppressed or footnoted. The imputation rate is not an explicit indicator of the potential error in published figures due to nonresponse, because the actual yearly movements for nonrespondents may or may not closely agree with the imputed movements. The range of difference between the actual and imputed figures is assumed to be small. The degree of uncertainty regarding the accuracy of the published data increases as the percentage of imputation increases. Figures with imputation rates above 10 percent should be used with caution.

## DATA REVISIONS

Statistics for previous years may be revised as the result of corrected figures from respondents, late reports for which imputations were originally made, or other corrections. Data that have been revised by more than 5 percent from previously published data are indicated by footnotes.

## DISCLOSURE

The Census Bureau collects the CIR data under the authority of Title 13, United States Code, which specifies that the information can only be used for statistical purposes and cannot be published or released in any manner that would identify a person, household, or establishment. "D" indicates that data in the cell have been suppressed to avoid disclosure of information pertaining to individual companies.

## EXPLANATION OF GENERAL TERMS

**Capacity.** The maximum quantity of a product that can be produced in a plant in 1 day if operating for 24 hours. Includes the capacity of idle plants until the plant is reported to be destroyed, dismantled, or abandoned.

**Consumption.** Materials used in producing or processing a product or otherwise removing the product from the inventory.

**Exports.** Includes all types of products shipped to foreign countries, or to agents or exporters for reshipment to foreign countries.

**Gross shipments.** The quantity or value of physical shipments from domestic establishments of all products sold, transferred to other establishments of the same company, or shipped on consignment, whether for domestic or export sale or use. Shipments of products purchased for resale are omitted. Shipments of products made under toll arrangements are included.

**Interplant transfers.** Shipments to other domestic plants within a company for further assembly, fabrication, or manufacture.

**Inventories.** The quantity or value of finished goods, work in progress, and materials on hand.

**Machinery in place.** The number of machines of a particular type in place as of a particular date whether the machinery was used for production, prototype, or sampling, or was idle. Machinery in place includes all machinery set up in operating positions.

**Net receipts.** Derived by subtracting the materials held at the end of the previous month from the sum of materials used during the current month.

**Production.** The total volume of products produced, including: products sold; products transferred or added to inventory after adjustments for breakage, shrinkage, and obsolescence, plus any other inventory adjustment; and products that undergo further manufacture at the same establishment.

**Quantities produced and consumed.** Quantities of each type of product produced by a company for internal consumption within that same company.

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**Quantity and value of new orders.** The sales value of orders received during the current reporting period for products and services to be delivered immediately or at some future date. Also represents the net sales value of contract change documents that increase or decrease the sales value of the orders to which they are related, when the parties concerned are in substantial agreement as to the amount involved. Included as orders are only those that are supported by binding legal documents such as signed contracts or letter contracts.

**Quantity and value of shipments.** The figures on quantity and value of shipments represent physical shipments of all products sold, transferred to other establishments of the same company, or shipped on consignment, whether for domestic or export sale. The value represents the net sales price, f.o.b. plant, to the customer or branch to which the products are shipped, net of discounts, allowances, freight charges, and returns. Shipments to a company's own branches are

assigned the same value as comparable appropriate allocation of company overhead and profit. Products bought and resold without further manufacture are excluded.

**Stocks.** Total quantity of ending finished inventory.

**Unfilled orders (backlog).** Calculated by adding net new orders and subtracting net sales from the backlog at the end of the preceding year.

#### **HISTORICAL NOTE**

Data on computers and office and accounting machines have been collected by the Census Bureau since 1953. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library.