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Census File Number

Item 17. CONSUMPTION OF SELECTED MATERIALS DURING 1997

INSTRUCTIONS

1. General – The materials, parts, and supplies listed below are those commonly consumed in the manufacture, processing, or assembly of the products listed in item 18B. Please review the entire list and report separately each item consumed. Leave blank if you do not consume the item. If you use materials, parts, and supplies which are not listed, describe and report them in the "Cost of all other materials . . ." line at the end of this section. If you consumed less than \$25,000 of a listed material, include the value and cost of all other materials . . .," Census product code 970099 8.

Report materials, parts, and supplies purchased, transferred from other plants of your company, or withdrawn from inventory.

If quantities are requested, please use the unit of measure specified.

If the information as requested cannot be taken directly from your book records, REASONABLE ESTIMATES ARE ACCEPTABLE.

2. Valuation of Materials Consumed – The value of the materials, etc., consumed should be based on the delivered cost; i.e., the amount paid or payable after discounts and including freight and other direct charges incurred in acquiring the materials.

Materials received from other plants within your company should be reported at their full economic value (the value assigned by the shipping plant, plus the cost of freight and other handling charges).

If purchases or transfers do not differ significantly from the amounts actually put into production, you may report the cost of purchases or transfers. However, if consumption differs significantly from the amounts purchased or transferred, these amounts should be adjusted for changes in the materials and supplies inventories by adding the beginning inventory to the amount purchased or transferred and subtracting ending inventory.

3. Contract Work – Include as materials consumed those you purchased for use by others making products for you under contract. Amounts paid to the companies doing the contract work should be reported in item 10, line e, and should include freight in and out. On the other hand, materials owned by others but used at this establishment in making products for others under contract or on commission should be excluded.

4. Resales – Cost for products bought and sold or transferred from other establishments of your company and sold without further manufacture, processing, or assembly should be reported in item 10, line b, not in item 17 below. The value of these products shipped by this establishment should be reported in item 18B under Census product code 99989 00 6, "Resales."

Line No.	Materials, parts, and supplies	Census material code	Consumption of purchased materials and of materials received from other establishments of your company			
			Cost, including delivery cost (freight-in)			
			(E)			
	(A)	(B)	574 Millions	Thou-sands	Dollars	
1	Cathode ray tubes (CRT's) and all other transmittal, industrial, and special-purpose electron tubes (except x-ray)	367102 1	\$			
2	Components for Electronic Circuitry, Except Tubes	Printed circuit boards (without inserted components)	367201 1			
3		PRINTED CIRCUIT ASSEMBLY (Loaded boards, subassemblies, and modules)	Memory boards	367980 0		
4			Peripheral controllers (graphic boards, drive controller, etc.)	367983 4		
5			Computer processors (system boards, array processors, etc.)	367984 2		
6			Communication boards (LAN boards, D/A and A/D converters)	367982 6		
7			Other boards	367987 5		
8			Semiconductors, including transistors, diodes, rectifiers, and integrated circuits	367408 2		
9		Capacitors	367501 4			
10		Resistors	367601 2			
11		Connectors	367800 0			
12		POWER SUPPLY UNITS	Battery packs	367988 3		
13			Other	367989 1		
14		Other components and accessories, n.e.c., including coils, transformers, transducers, switches, etc., but excluding tubes – <i>Specify</i>	367006 4			

CONTINUE WITH ITEM 17 ON PAGE 6

Item 17. CONSUMPTION OF SELECTED MATERIALS DURING 1997 – Continued						
Line No.	Materials, parts, and supplies (A)		Census material code (B)	Consumption of purchased materials and of materials received from other establishments of your company		
				Cost, including delivery cost (freight-in) (E)		
			571	574	Thou-	Dollars
		Millions	sands			
15	Electrical transmission, distribution, and control equipment (including switchgear, fuses, transformers, relays, regulators, etc.)		360101 0	\$		
16	ELECTRONIC ENCLOSURES	Steel, aluminum, and other metals	344402 3			
17		Plastics	308902 6			
18	FABRICATED METAL PRODUCTS, EXCEPT FORGINGS	Sheet metal products (including stampings), except enclosures (See line 16 above)	340002 5			
19		All other fabricated metal products	340055 3			
20	Forgings		346000 3			
21	Castings (rough and semifinished)		330091 0			
22	Metal shapes and forms (except castings, forgings, and fabricated metal products)		330090 2			
23	Insulated copper wire and cable (including magnet wire)		335799 3			
24	Fabricated plastics products, except enclosures (See line 17 above)		308020 7			
25	Purchased software		737202 2			
26	Appliance outlets, switches, lampholders, and other current carrying wiring devices		364301 2			
27	Electric motors and generators (all types)		362101 8			
28	Paper and paperboard products, including paperboard boxes, containers, and corrugated paperboard		260001 3			
29	PURCHASED ELECTRONIC COMPUTING AND PERIPHERAL EQUIPMENT FOR INCORPORATION INTO COMPLETE FINISHED PRODUCT (See instructions for reporting of resale items)	Computers	357102 3			
30		Storage devices	357202 1			
31		Terminals	357502 4			
32		Input devices including keyboards, mouse devices, trackballs, etc.	357702 0			
33		Printers	357704 6			
34		Other – <i>Specify</i>		357602 2		
35	Cost of all other materials and components, parts, containers, and supplies consumed <i>Describe the principal materials, etc., included in this value.</i>		970099 8			
36	TOTAL Sum of lines 1–35 should equal item 10, line a			\$		

CONTINUE WITH ITEM 18A ON PAGE 7

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Item 18A.

• **Part I. TYPE OF BUSINESS AT THIS ESTABLISHMENT**

Mark the ONE box which best describes the business or activity that accounted for the MAJOR portion of this establishment's value of shipments in 1997

Line No.	Type of business (A)	Census code	Mark (X) ONE box
		591 (B)	592 (C)
1	MANUFACTURER <i>(If you mark (X) for ONE of these items, complete lines 13-19 below)</i> Making computers and/or peripheral equipment from components that you manufactured at this location or obtained from other units of your company	9019	1 <input type="checkbox"/>
2	Assembling computers and/or peripheral equipment from components that you purchased (including final assembly and testing of computers)	9027	1 <input type="checkbox"/>
3	Other types of assembly/manufacturing operations, including providing extension, upgrades, expansions, printed circuit assembly manufacture, and similar operations – Describe in REMARKS section, page 11.	9035	1 <input type="checkbox"/>
4	SYSTEMS INTEGRATOR <i>(Value added reseller or similar type operation)</i> Developing or modifying software and the "bundling" of software with computer equipment and/or peripheral equipment for computers to create an integrated system	9043	1 <input type="checkbox"/>
5	<i>(If you mark (X) for ONE of these items, complete lines 13-19 below)</i> Selling purchased computer hardware and software as an integrated system, including "in-house" or "in-company" systems integration sold to outside parties	9050	1 <input type="checkbox"/>
6	Other types of operations, including value added resellers, third party vendors, and other types of systems integrators (including noncomputer) – Describe nature of operation in REMARKS section, page 11.	9068	1 <input type="checkbox"/>
7	WHOLESALE OR DEALER Buying and reselling products TO OTHER BUSINESSES AND GOVERNMENTS without arranging for further processing, including marketing of purchased computer software	9076	1 <input type="checkbox"/>
8	RETAILER Buying and reselling products primarily TO INDIVIDUALS FOR PERSONAL USE without arranging for further processing, including marketing of purchased computer software	9084	1 <input type="checkbox"/>
9	DESIGN AND ENGINEERING Providing design and engineering services on contract or fee basis – Describe in REMARKS section, page 11.	9092	1 <input type="checkbox"/>
10	RESEARCH AND DEVELOPMENT Performing research and development for your own account, including "start up operations"	9100	1 <input type="checkbox"/>
11	Performing research and development on a contract basis for others	9118	1 <input type="checkbox"/>
12	OTHER BUSINESSES Other types of businesses, not listed above – Describe nature of operations in REMARKS section, page 11.	9126	1 <input type="checkbox"/>

• **Part II. KIND OF OPERATIONS PERFORMED AT THIS LOCATION**

NOTE – Complete this item only if you marked lines 1-6 above

Line No.	Kind of operations (A)	Census code	Mark (X) appropriate boxes
		591 (B)	592 (C)
13	Assembly and/or final testing of finished computers and/or peripheral equipment	9217	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
14	Manufacture of printed circuit boards or assemblies, semiconductor devices, and other electronic components (including integrated microcircuit packages, etc.)	9225	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
15	Systems integration, value added reselling, third party vending, "in-house" or "in-company" system integration selling and other computer-related services	9233	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
16	Custom computer programming	9241	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
17	Packaged computer software design	9258	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
18	Buying and selling products without arranging for further processing, EITHER TO OTHER BUSINESSES, GOVERNMENTS, OR TO INDIVIDUALS FOR PERSONAL USE	9266	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
19	Other kinds of operations – Describe	9274	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No

CONTINUE WITH ITEM 18B ON PAGE 8

Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997

INSTRUCTIONS

1. General – The manufactured products and services listed below are generally made in your industry. If you make products that are not listed, describe and report them in the "All other products made in this establishment" section at the end of item 18B. PLEASE DO NOT COMBINE PRODUCT LINES.

If quantities are requested, please use the unit of measure specified.

If the information as requested cannot be taken directly from your book records, REASONABLE ESTIMATES ARE ACCEPTABLE.

2. Valuation of Products – Report the value of the products shipped and services performed at the net selling value, f.o.b. plant to the customer; i.e., after discounts and allowances, and exclusive of freight charges and excise taxes.

If you transfer products to other establishments within your company, you should assign the full economic value to the transferred products; i.e., include all direct costs of production and a reasonable proportion of all other costs and profits.

3. Contract Work – Report PRODUCTS MADE BY OTHERS FOR YOU FROM YOUR MATERIALS on the specific lines as if they were made in this establishment. On the other hand, do not report on the specific product lines PRODUCTS THAT YOU MADE FROM MATERIALS OWNED BY OTHERS. Report only the amount that you received for "commission or contract receipts" under Census product code 93000 00 8.

4. Resales – Do not report on the specific product lines those PRODUCTS BOUGHT AND SOLD OR TRANSFERRED FROM OTHER ESTABLISHMENTS OF YOUR COMPANY AND SOLD WITHOUT FURTHER MANUFACTURE. Report only a value under Census product code 99989 00 6, "Resales."

5. Detailed Data Reported Elsewhere – Items denoted by an asterisk (*) require totals for groups of products covered in the more frequent Current Industrial Reports (CIR). If you report on the following CIR forms, the sum of the detailed CIR products should equal the total reported on this census form. For corresponding survey item codes, see paragraph 4 or 5, "Comparability," of CIR instruction manuals for respective surveys as follows:

- a. MA35R, Computers and Office and Accounting Machines
- b. MA36P, Communication Equipment
- c. MA36Q, Semiconductors, Printed Circuit Boards, and Other Electronic Components
- d. MA38B, Selected Instruments and Related Products

NOTE: Only CIR totals are requested; do not duplicate detail reported on the CIR.

6. Leased Machines – If any of these products are leased rather than sold when shipped, report the number and an estimated value of such machines produced. The estimated value should approximate the value of products sold outright and may be based on the valuation placed on these items for tax, insurance, or similar purposes.

7. Computer Processor Parts – Computer processor subassemblies and other boards for insertion in or use with a complete computer system should be classified as "loaded computer processor boards and board subassemblies for replacement, upgrade, further assembly, or installation in another computer system" on line 5. Generally these products are not encased in a housing when shipped and/or will require further assembly in order to function as a computer system.

8. Parts for Peripheral Equipment – (Lines 12–15) – Report a component or subassembly in the parts category only if:

- a. Your company fabricates or assembles the item at the reporting location; and
- b. The item is not explicitly specified within the seven digit Standard Industrial Classification based product classifications below or the Current Industrial Reports (CIR) program.

Exclude: Loaded boards (report on line 5); electronic components, such as semiconductors (report on line 28); discrete components (report on line 51); power supplies (report on line 51); switches (report on line 51); printed circuit boards (report on line 4); peripherals (report on lines 6–11); drives and auxiliary memory (report on line 6); fasteners, metal stampings, and similar hardware (report on line 51); equipment enclosures (report on line 51); connecting devices (report on lines 35–39).

Also exclude any equipment transferred from another location and shipped without fabrication or substantive assembly.

Include: Other subassemblies, not specified elsewhere, that are specialized for use only in complete equipment you manufacture (Report on lines 12–15)

9. If you have any questions concerning proper reporting, please call us on 301–457–4821.

Line No.	Products and services (A)		Census product code	CIR form	Products shipped and other receipts		
			581		Value, f.o.b. plant (E)		
			(B)		(C)	584	Millions
1	ELECTRIC COMPUTER MANUFACTURING	Host computers (MULTI-USERS)-mainframes, super computers, medium-scale systems, unix servers, PC servers (35711)*	35711 00 1	MA35R			
2		Single user computers – microprocessing based capable of supporting attached peripherals – personal computers, workstations, portable computers (35712)*	35712 00 9				
3		Other computers – array, analog, hybrid or special purpose computers (35719)*	35719 00 4				
4	PRINTED CIRCUIT (WIRING) BOARDS OR ASSEMBLIES (Report contract work receipts for work done by you for others on their own materials on lines 55 and 56)	Printed circuit (wiring) boards (36720)*	36720 00 1	MA36Q			
5		Loaded computer processor boards and board subassemblies for replacement, upgrade, further assembly, or installation in another computer system (36798)*	36798 00 7				

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Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997 – Continued

Line No.	Products and services *Item corresponds to products reported on Current Industrial Reports		Census product code 581	CIR form (C)	Products shipped and other receipts		
					Value, f.o.b. plant (E)		
					584 Millions	Thousands	Dollars
(A)	(B)	(C)	Millions	Thousands	Dollars		
6	PERIPHERAL EQUIPMENT FOR COMPUTERS	Computer storage devices (35721)*	35721 00 0	MA35R	\$		
7		Magnetic and optical recording media (36950)*	36950 00 4				
8		Input/output equipment (35771)*	35771 00 5				
9		Computer terminals (excluding point-of-sale and funds-transfer devices) (35751)*	35751 00 7	MA36P			
10		Communication interface equipment (36613)*	36613 00 8				
11		Other (35771)*	35771 00 5				
12	PARTS, ATTACHMENTS, AND SUBASSEMBLIES FOR PERIPHERAL EQUIPMENT (See lines 9-10 and 28-39 before completing lines 17-20)	For computer storage devices (35722)*	35722 00 8	MA35R			
13		For input/output equipment (35772)*	35772 00 3				
14		For computer terminals (excluding point-of-sale and funds-transfer devices) (35752)*	35752 00 5				
15		For other peripheral equipment (except for communication interface equipment) (35772)*	35772 00 3				
16	Calculating and accounting machines, except point of sale terminals and fund transfer devices	35784 10 7					
17	Parts and attachments for calculating and accounting machines	35789 10 6					
18	Point of sale terminals and fund-transfer devices	35784 20 6					
19	Parts and attachments for point of sale terminals and fund transfer devices	35789 20 5					
20	Time recording and time stamp machines	35799 20 4					
21	Parts and attachments for time recording and time stamp machines	3579A 20 1					
22	Pencil sharpeners and staplers	35799 30 3					
23	Automatic typing and work processing machines (including parts and attachments) (35792)	35792 00 1					
24	Duplicating machines (except parts and attachments) (35793)*	35793 00 9					
25	Mailing, letter handling, and addressing machines (except parts and attachments) (35795)*	35795 00 4					
26	Standard typewriters, dictating, transcribing and recording machines, and other office machines, n.e.c. (except parts and attachments) (35799)*	35799 10 5					
27	Parts and attachments for standard typewriters, dictating, duplicating, mailing, letter handling, addressing, and other office machines, n.e.c. (3579A)*	3579A 10 2					
28	Integrated microcircuits (including semiconductor networks, microprocessors, and MOS memories) (36741)*	36741 00 7	MA36Q				
29	Transistors (36742)*	36742 00 5					
30	Diodes and rectifiers (36743)*	36743 00 3					
31	Other semiconductor devices (including semiconductor parts such as chips, wafers, and heat sinks) (36749)*	36749 00 0					
32	Capacitors for electronic circuitry (36750)*	36750 00 8					
33	Resistors for electronic circuitry (36760)*	36760 00 7					
34	Coils, transformers, reactors, and chokes for electronic circuitry (36770)*	36770 00 6					

CONTINUE WITH ITEM 18B ON PAGE 10

Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997 – Continued							
Line No.	Products and services *Item corresponds to products reported on Current Industrial Reports (A)		Census product code 581 (B)	CIR form (C)	Products shipped and other receipts		
					Value, f.o.b. plant (E)		
					584 Millions	Thou- sands	Dollars
35	CONNECTORS FOR ELECTRONIC CIRCUITRY	Coaxial (RF) (36781)*	36781 00 3	MA36Q	\$		
36		Cylindrical (36782)*	36782 00 1				
37		Rack and panel (rectangular) (36783)*	36783 00 9				
38		Printed circuit (36784)*	36784 00 7				
39		Other (including parts) (36785)*	36785 00 4				
40	Communication systems and equipment, except broadcast, but including microwave equipment such as transmitters, receivers, and amplifiers (36631)*		36631 00 0	MA36P			
41	Test equipment for testing electrical, radio and communication circuits, and motors (38252)*		38252 00 3	MA38B			
42	Custom computer programming services		97372 10 6				
43	Reproduction of computer software		73790 01 5				
44	Computer integrated system design		97372 30 4				
45	Computer processing and data preparation services		97374 30 0				
46	Electronic information retrieval services		97374 40 9				
47	Computer facilities management services		97374 20 1				
48	Computer rental and leasing		97379 10 1				
49	Computer maintenance and repair		97379 20 0				
50	Computer related services, not elsewhere classified		97379 90 3				
51	ALL OTHER PRODUCTS MADE IN THIS ESTABLISHMENT	<i>Describe and report separately each product with a sales value of \$50,000 or more which cannot be assigned to one of the lines above. For all remaining products, write "Other" and report a single total value.</i>	18				
52			26				
53			34				
54			42				
55	CONTRACT WORK (Receipts for work done for others on their own materials)	Printed circuit (wiring) boards*	93000 31 3	MA36Q			
56		Printed circuit assemblies, loaded boards or modules (printed circuit boards with inserted electronic components)	93000 32 1				
57		Receipts for work done for others on their own materials . . . Describe below products worked on and kind of work.	93000 14 9				
58	MISCELLANEOUS RECEIPTS	Sales of scrap and refuse	99980 13 8				
59		Receipts for research and developmental work	99980 41 9				
60		Other miscellaneous receipts	99980 98 9				
61	RESALES	Sales of products bought and sold without further manufacture, processing, or assembly in this establishment. The cost of such items should be reported in item 10, line b.	99989 00 6				
62	TOTAL value of shipments and other receipts Sum of lines 1-61, column (E)		77000 00 8		\$		

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Item 19 – SHIPMENTS OF COMPUTERS FOR OWN USE

INSTRUCTIONS

General – The purpose of this inquiry is to measure the effect of computers manufactured for own use on the statistics for the computer industry. These are complete computers manufactured by your own company and then used at this manufacturing location or transferred to other units of the company for internal company use and not for further assembly, upgrade, or sale.

Questions 1 and 2 – These questions refer to complete computers produced at this establishment for internal use

by this establishment and not for further assembly, modification, upgrade, or sale.

Questions 3 and 4 – These questions refer to any complete computer produced at this location for transfer to other units of the company for internal company use other than for sale or lease.

Questions 5 and 6 – These questions refer to complete computers transferred to this location from other units of your company for internal use at this location.

Item (A)	Census code	Response (C)
	591 (B)	
1. Were any complete computers produced in this establishment for use at this establishment?	7011 0	592 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No – Go to question 3 below
2. If "YES" report: Value of complete computers produced at this location for INTERNAL USE BY THIS ESTABLISHMENT		592 Amount Millions Thou- Dollars sands
a. Value of these computers	7012 8	\$
b. Reported in Item 18B, Products and Services of This Establishment During 1997?	7013 6	592 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
3. Were any complete computers produced in this establishment transferred to other units of your company for internal company use other than for sale or lease?	7021 9	592 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No – Go to question 5 below
4. If "YES" report: Value of complete computers produced at this location for INTERNAL USE BY OTHER UNITS OF YOUR COMPANY (i.e., not for resale):		592 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
a. Was the value of these computers included in Item 18B, Products and Services of This Establishment During 1997?	7023 5	
b. Was the value of these computers included in Item 6, New Capital Expenditures?	7024 3	592 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
c. Value of these computers	7025 0	592 Amount Millions Thou- Dollars sands
5. Were any complete computers transferred to this location manufactured by other units of your company for internal use by this establishment?	7031 8	592 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No – Go to item 22
6. If "YES" report: Value of complete computers manufactured by other units of your company RECEIVED at this location for internal use at this location		592 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
a. Was the value of these computers included in Item 6, New Capital Expenditures?	7032 6	
b. Value of these computers	7033 4	592 Amount Millions Thou- Dollars sands

Items 20 and 21 – Not applicable to this report.

REMARKS – Please use this space for any explanations that may be essential in understanding your reported data.

Item 22. CERTIFICATION – This report is substantially accurate and has been prepared in accordance with instructions.

Name of person to contact regarding this report (<i>Print or type</i>)		Telephone	Area code	Number	Extension	
667	1	2				
Name of company			Address (<i>Number and street, city, State, ZIP Code</i>)			
Period covered	FROM: Month	Day	Year	TO: Month	Day	Year
	666	1		2		
Signature of authorized person			Title		Date	