

4-Bit Microcontrollers--Data

The following section, 4-Bit Microcontroller Data Tables, includes historical microcontroller unit shipments by year, manufacturer, product name, and process technology.

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Table 1

Estimated 4-Bit Microcontroller Unit Shipments by Manufacturer
1975-1979
(Thousands of Units)

	<u>Product</u>	<u>Process</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
Gould/AMI	S2000	N	0	0	0	29	1,425
Hitachi	HMCS-40	P,N,C	0	0	0	410	655
Matsushita	MN1400	P,N,C	0	0	0	0	4,400
Motorola	141000	C	0	0	0	20	285
National	COPS	N,C	0	0	0	2,325	5,600
NEC	uCOM-4	P,C	0	0	0	1,500	7,800
Rockwell	PPS-4	P,N	450	450	575	2,275	3,900
Sharp	SM-3	P	0	0	0	0	360
TI	TMS1000	P,C	<u>50</u>	<u>310</u>	<u>2,825</u>	<u>9,400</u>	<u>26,100</u>
Total 4-Bit MCUs			500	760	3,400	15,959	50,525

Source: Dataquest
September 1988

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Table 2

**Estimated 4-Bit Microcontroller Unit Shipments by Manufacturer
1980-1984
(Thousands of Units)**

	<u>Product</u>	<u>Process</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
Eurotechnique	COPS	N,C	0	0	190	840	0
Fujitsu	MB884X	N	0	9,200	9,900	7,500	6,100
	MB885X	C	185	2,050	3,150	3,110	2,720
Gould/AMI	S2000	N	1,120	390	566	115	0
Hitachi	HMCS-40	P,N,C	1,425	19,000	20,600	20,600	22,400
Matsushita	MN1400	P,N,C	10,300	11,250	14,580	18,420	20,400
	MN1500	N	20	1,250	1,620	6,360	8,600
Motorola	141000	C	240	149	112	130	80
National	COPS	N,C	11,500	11,500	16,200	21,000	26,700
NEC	uCOM-4	P,C	14,800	19,800	25,700	21,000	16,930
	uPD75XX	C	0	3,200	8,000	15,100	31,500
Oki	Series-40	C	90	550	2,450	5,480	6,400
Rockwell	PPS-4	P,N	5,800	2,500	1,675	1,800	2,135
SGS-Thomson	COPS	N	0	0	0	0	2,790
Sharp	SM-3	P	600	920	990	840	800
	SM-4	C	1,200	1,600	1,950	1,750	1,840
	SM-5	C	4,800	10,690	9,400	10,350	12,190
TI	TMS1000	P,C	44,000	39,500	26,000	11,900	8,300
Toshiba	T-Series	C	0	0	8,300	9,800	6,000
	TLCS-43	N	0	0	3,300	9,200	8,000
	TLCS-46	C	0	0	2,900	3,580	3,250
	TLCS-47	N	0	0	600	3,070	6,300
Total 4-Bit MCUs			96,080	133,549	158,183	171,945	193,435

Source: Dataquest
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Table 3

**Estimated 4-Bit Microcontroller Unit Shipments by Manufacturer
1985-1987
(Thousands of Units)**

	<u>Product</u>	<u>Process</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
Fujitsu	MB882XX	C	0	0	760
	MB8840X	N	0	0	1,843
	MB884X	N	5,634	6,580	7,160
	MB8850X	C	0	0	485
	MB885X	C	2,156	3,425	3,742
Hitachi	HMCS-40	P,N,C	22,352	21,919	25,900
	HMCS-400	C	N/A	N/A	32,100
Matsushita	MN1400	P,N,C	20,600	17,420	11,875
	MN1500	N	11,300	27,680	42,090
	MN1700	C	0	0	2,085
Mitsubishi	M5043X/44X	C	0	0	13,995
	M5046X/56X	C	0	0	13,105
	M5072/76	C	0	0	15,054
	M509X	C	0	0	2,056
	M50XXX	C	0	27,844	0
Motorola	141000	C	4	0	0
National	COPS	N,C	23,500	31,273	31,970
NEC	uCOM-4	P,C	9,920	5,700	3,680
	uCOM75X	N,C	0	3,900	16,810
	uPD75XX	C	31,590	41,920	47,670
Oki	Series-40	C	6,614	7,217	6,689
Rockwell	PPS-4	P,N	1,400	1,160	790
SGS-Thomson	COPS	N	5,242	6,330	7,515
Sharp	SM-Series*	C	10,370	9,140	9,510
TI	TMS1000	P,C	3,900	16,025	13,400
Toshiba	T-Series	C	5,580	4,600	6,265
	TLCS-42	N,C	1,250	3,850	4,060
	TLCS-43	N	5,672	2,600	2,209
	TLCS-46	C	2,198	400	202
	TLCS-47	N	7,756	7,200	5,935
	TLCS-47	C	0	15,300	17,497
	TLCS-470	C	0	400	1,360
Others**	Unspecified	C	0	10,000	44,520
Total 4-Bit MCUs			177,038	271,883	392,332

*Sharp SM-Series totaled in 1985.

**Dataquest estimate for companies not surveyed (i.e. Ricoh, Sanyo, Sony).

N/A = Not Available

Source: Dataquest
September 1988

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Table 4

Estimated 4-Bit Microcontroller Unit Shipments by Quarter for 1987
(Thousands of Units)

	<u>Product</u>	<u>Process</u>	<u>Q1/87</u>	<u>Q2/87</u>	<u>Q3/87</u>	<u>Q4/87</u>	<u>1987</u>
Fujitsu	882XX	C	120	150	225	265	760
	884X	N	1,705	1,765	1,800	1,890	7,160
	884XX	N	410	450	478	505	1,843
	885X	C	882	905	940	1,015	3,742
	885XX	C	100	110	125	150	485
Hitachi	HMCS-40	P,N,C	6,300	6,405	6,520	6,675	25,900
	HMCS-400	C	7,600	8,000	8,000	8,500	32,100
Matsushita	MN1400	P,N,C	4,500	3,500	1,885	1,990	11,875
	MN1500	N	7,250	11,000	11,600	12,240	42,090
	MN1700	C	0	0	1,015	1,070	2,085
Mitsubishi	M5043X/44X	C	3,393	3,294	3,767	3,541	13,995
	M5046X/56X	C	2,141	3,213	3,996	3,755	13,105
	M5072/76	C	2,701	2,908	4,337	5,108	15,054
	M509X	C	156	152	727	1,021	2,056
National	COPS	N,C	8,770	8,500	8,200	6,500	31,970
NEC	uCOM-4	P,C	970	110	1,300	1,300	3,680
	uCOM75X	N,C	3,500	4,610	5,000	3,700	16,810
	uPD75XX	C	11,000	10,970	13,500	12,200	47,670
Oki	Series-40	C	1,650	1,584	1,740	1,715	6,689
Rockwell	PPS-4	P,N	185	155	150	300	790
Sharp	SM-Series	C	2,170	1,820	2,170	3,350	9,510
TI	TMS1000	P,C	4,400	4,500	2,900	1,600	13,400
SGS-Thomson	COPS	N	1,810	1,880	1,925	1,900	7,515
Toshiba	T-Series	C	1,600	1,460	1,580	1,625	6,265
	TLCS-42	N,C	1,000	1,100	980	980	4,060
	TLCS-43	N	550	560	574	525	2,209
	TLCS-46	C	50	62	48	42	202
	TLCS-47	N	1,600	1,500	1,475	1,360	5,935
	TLCS-47	C	4,300	4,220	4,405	4,572	17,497
	TLCS-470	C	300	340	350	370	1,360
	Others*	Unspecified	C	<u>11,130</u>	<u>11,130</u>	<u>11,130</u>	<u>11,130</u>
Total 4-Bit MCUs			92,243	96,353	102,842	100,894	392,332

*Dataquest estimate for companies not surveyed (i.e. Ricoh, Sanyo, Sony).

Source: Dataquest
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