

# 8-Bit Microcontroller Analysis

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# 8-Bit Microcontroller Analysis

Table 1

Estimated Market Share by Product Type  
for 8-Bit Microcontrollers  
1975-1986

	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
50XXX						
6805/14805/68705/1468705					0.03%	2.12%
8049/80C49/8749					4.05	9.71
8051/80C51/8751						
uPD78XX						
6801/6301/68701					0.11	0.90
84XX/84CXX						
8048/80C48/8748			11.87%	24.12%	27.50	31.86
387X/F8			3.95	19.97	21.83	21.30
PIC-1650				20.29	35.37	25.76
Z8						0.06
6500					0.07	0.50
8052/80C52						
8041/8741						
8050/80C50						
802XX					1.38	0.09
Others	<u>100.00%</u>	<u>100.00%</u>	<u>84.18</u>	<u>35.62</u>	<u>9.66</u>	<u>7.70</u>
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

(Continued)

# 8-Bit Microcontroller Analysis

Table 1 (Continued)

Estimated Market Share by Product Type  
for 8-Bit Microcontrollers  
1975-1986

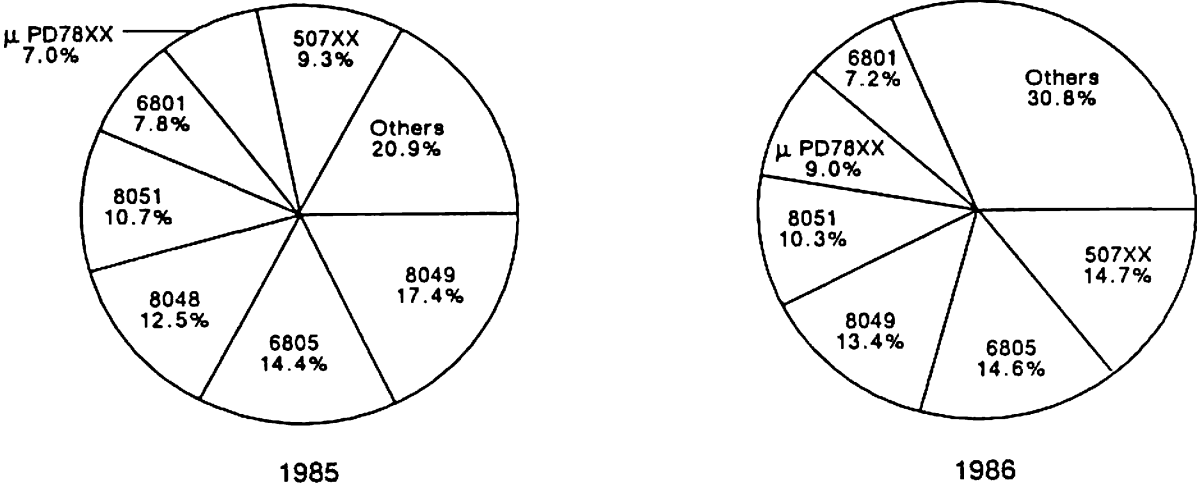
	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
50XXX					9.28%	14.65%
6805/14805/68705/1468705	8.00%	12.12%	12.19%	11.36%	14.40	14.57
8049/80C49/8749	15.02	18.48	18.38	18.86	17.39	13.35
8051/80C51/8751	0.07	0.88	5.78	13.08	10.72	10.30
uPD78XX	1.40	3.79	5.47	7.20	7.02	9.01
6801/6301/68701	5.38	7.84	10.49	7.77	7.80	7.17
84XX/84CXX		0.15	2.14	1.53	3.80	7.04
8048/80C48/8748	26.44	25.00	20.89	20.72	12.54	6.06
387X/F8	18.74	9.06	4.76	2.57	2.68	3.01
PIC-1650	11.81	7.76	7.31	5.75	4.46	2.25
Z8	0.99	1.73	2.17	2.54	1.70	2.16
6500	0.99	0.58	1.26	1.18	1.20	1.75
8052/80C52					0.18	1.60
8041/8741				1.60	2.28	1.48
8050/80C50	1.16	1.86	2.42	1.70	1.30	1.32
802XX	7.28	8.14	3.90	2.02	1.67	0.87
Others	<u>2.72</u>	<u>2.61</u>	<u>2.84</u>	<u>2.12</u>	<u>1.58</u>	<u>3.41</u>
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

Source: Dataquest  
October 1987

# 8-Bit Microcontroller Analysis

Figure 1

Estimated Market Share by Product Type  
for 8-Bit Microcontrollers  
1985 and 1986



Source: Dataquest  
October 1987

# 8-Bit Microcontroller Analysis

Table 2

**Estimated Market Share by Manufacturer  
for 8-Bit Microcontrollers  
1981-1986**

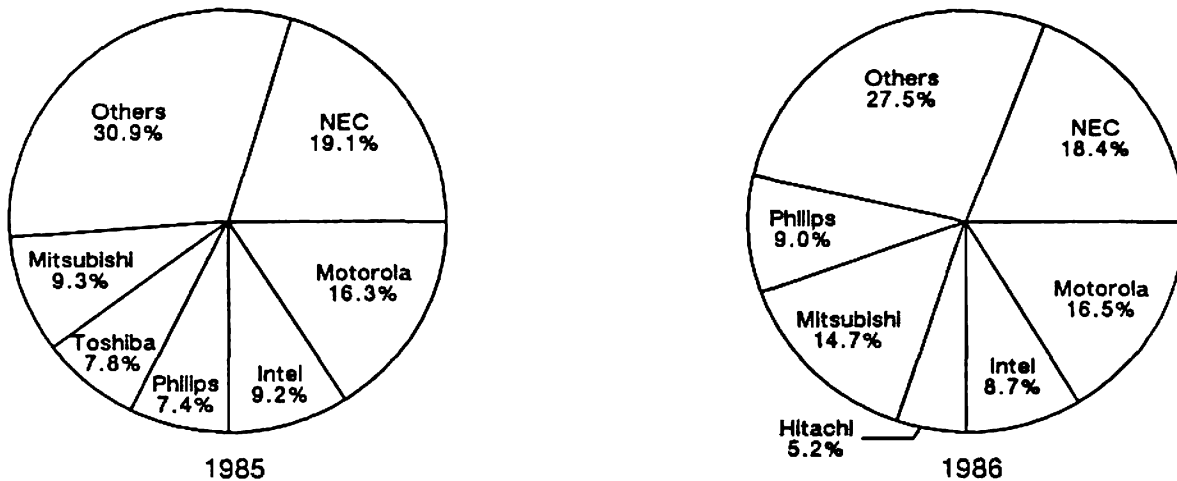
	1981	1982	1983	1984	1985	1986
NEC	13.88%	18.13%	19.26%	22.42%	19.08%	18.41%
Motorola	13.98	17.55	18.77	13.99	16.30	16.49
Mitsubishi					9.28	14.65
Philips	1.06	2.34	3.97	6.34	7.36	9.00
Intel	23.94	21.49	17.92	16.68	9.15	8.66
Hitachi	1.40	3.34	4.10	4.34	4.79	5.19
Toshiba	1.00	2.42	3.88	5.96	7.75	3.58
Signetics	0.00	0.32	2.35	4.71	3.99	2.94
SGS	0.74	1.29	1.28	0.99	1.50	2.65
General Instrument	11.81	7.76	7.31	5.80	4.57	2.61
Oki		0.30	1.14	1.47	1.53	2.50
Siemens	2.42	4.05	3.13	2.39	2.68	2.36
National	4.71	5.75	4.76	4.27	3.44	1.63
Zilog	0.98	1.26	0.94	1.25	1.29	1.52
Rockwell*						1.25
Texas Instruments*						1.25
Natra-Harris*						1.05
AMD*	0.79	0.79	0.75	1.41	1.03	-
Others*	<u>23.22</u>	<u>13.21</u>	<u>10.44</u>	<u>7.98</u>	<u>6.26</u>	<u>4.26</u>
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

\*Companies combined with Others category in current or prior years, where Others represent companies each with less than 1 percent of total.

Source: Dataquest  
October 1987

Figure 2

**Estimated Market Share by Manufacturer  
for 8-Bit Microcontrollers  
1985 and 1986**



Source: Dataquest  
October 1987

# 8-Bit Microcontroller Analysis

Table 3

**Estimated Market Share by Region  
for 8-Bit Microcontrollers  
1981-1986**

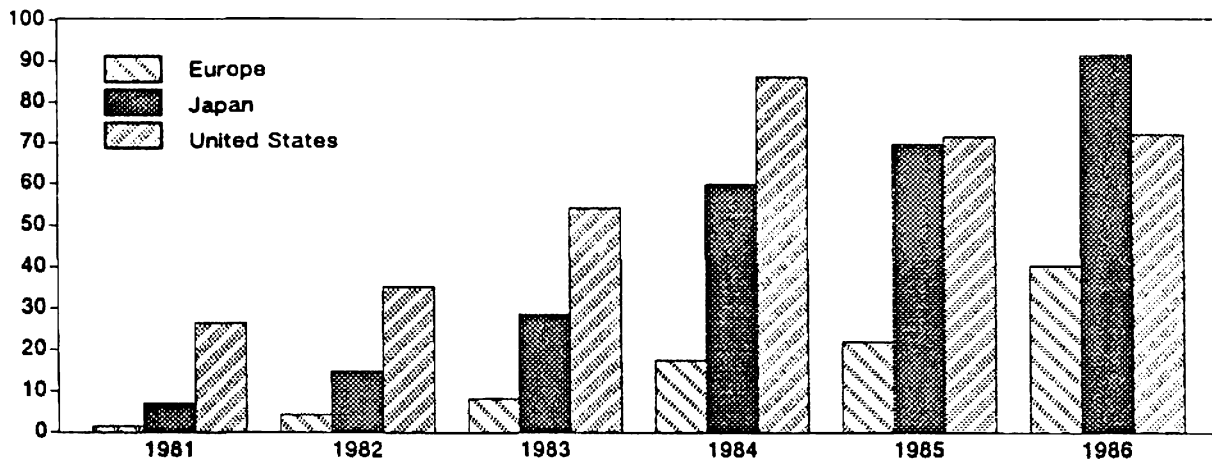
	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
<b>Europe</b>						
Shipments	1,475	4,327	8,138	17,423	21,702	40,262
Percent	4.22%	8.00%	8.98%	11.36%	13.31%	19.73%
<b>Japan</b>						
Shipments	7,014	14,689	28,400	59,835	69,726	91,570
Percent	20.08%	27.14%	31.34%	36.31%	42.76%	44.87%
<b>United States</b>						
Shipments	26,442	35,098	54,077	86,252	71,639	72,252
Percent	75.70%	64.86%	59.68%	52.33%	43.93%	35.40%
<b>Total</b>						
Shipments	34,931	54,114	90,615	163,510	163,067	204,084
Percent	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Dataquest  
October 1987

Figure 3

**Estimated Market Share by Region  
for 8-Bit Microcontrollers  
1981-1986**

Millions of Units



Source: Dataquest  
October 1987

# 8-Bit Microcontroller Analysis

Table 4

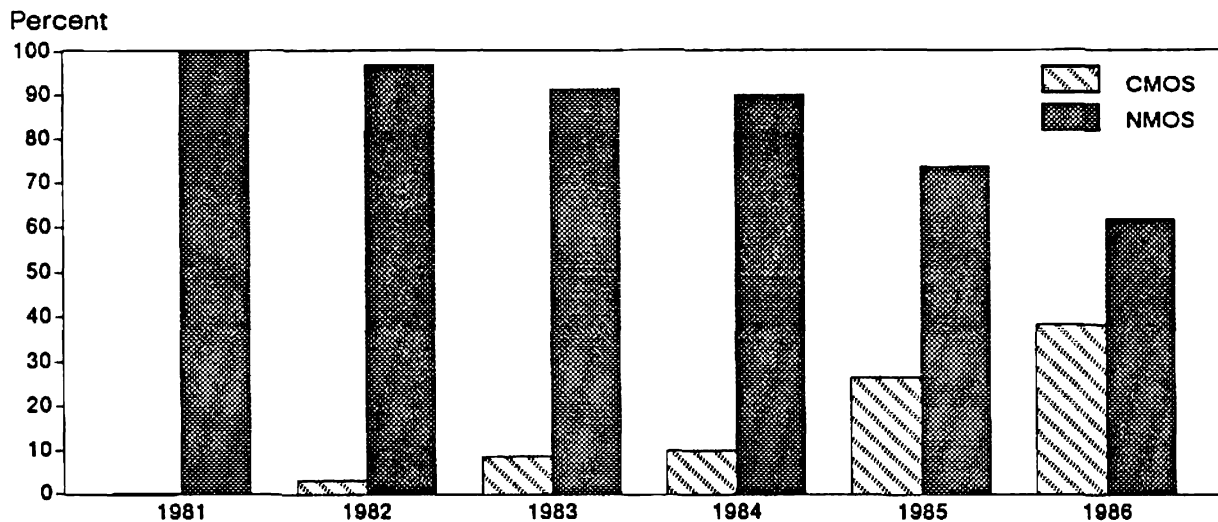
**Estimated Market Share by Process Technology  
for 8-Bit Microcontrollers  
1981-1986  
(Thousands of Units)**

	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
CMOS						
Shipments	95	1,728	7,808	16,411	42,974	77,901
Percent	0.27%	3.19%	8.62%	10.04%	26.35%	38.17%
NMOS						
Shipments	34,836	52,386	82,807	147,099	120,093	126,184
Percent	<u>99.73%</u>	<u>96.81%</u>	<u>91.38%</u>	<u>89.96%</u>	<u>73.65%</u>	<u>61.83%</u>
Total						
Shipments	34,931	54,114	90,615	163,510	163,067	204,084

Source: Dataquest  
October 1987

Figure 4

**Estimated Market Share by Process Technology  
for 8-Bit Microcontrollers  
1981-1986**



Source: Dataquest  
October 1987

# 8-Bit Microcontroller Analysis

Table 5

Estimated Market Share by Process Technology and Region  
for 8-Bit Microcontrollers  
1981-1986  
(Thousands of Units)

	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
<b>CMOS</b>						
Europe						
Shipments				23	155	782.5
Percent				0.01%	0.10%	0.38%
Japan						
Shipments	0	1,033	4,732	10,832	36,447	68,767
Percent	0	1.91%	5.22%	6.62%	22.35%	33.70%
United States						
Shipments	95	695	3,076	5,556	6,372	8,351.8
Percent	<u>0.27%</u>	<u>1.28%</u>	<u>3.39%</u>	<u>3.40%</u>	<u>3.91%</u>	<u>4.09%</u>
Subtotal						
Shipments	95	1,728	7,808	16,411	42,974	77,900.3
Percent of Total	0.27%	3.19%	8.62%	10.04%	26.35%	38.17%
<b>NMOS</b>						
Europe						
Shipments	1,475	4,327	8,138	17,400	21,547	39,479.5
Percent	4.22%	8.00%	8.98%	10.64%	13.21%	19.34%
Japan						
Shipments	7,014	13,656	23,668	49,003	33,279	22,803
Percent	20.08%	25.24%	26.12%	29.97%	20.41%	11.17%
United States						
Shipments	26,347	34,403	51,001	80,696	65,267	63,901
Percent	<u>75.43%</u>	<u>63.57%</u>	<u>56.29%</u>	<u>49.35%</u>	<u>40.02%</u>	<u>31.31%</u>
Subtotal						
Shipments	34,836	52,386	82,807	147,099	120,093	126,183.5
Percent of Total	99.73%	96.81%	91.38%	89.96%	73.65%	61.83%
Total						
Shipments	34,931	54,114	90,615	163,510	163,067	204,084
Percent	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

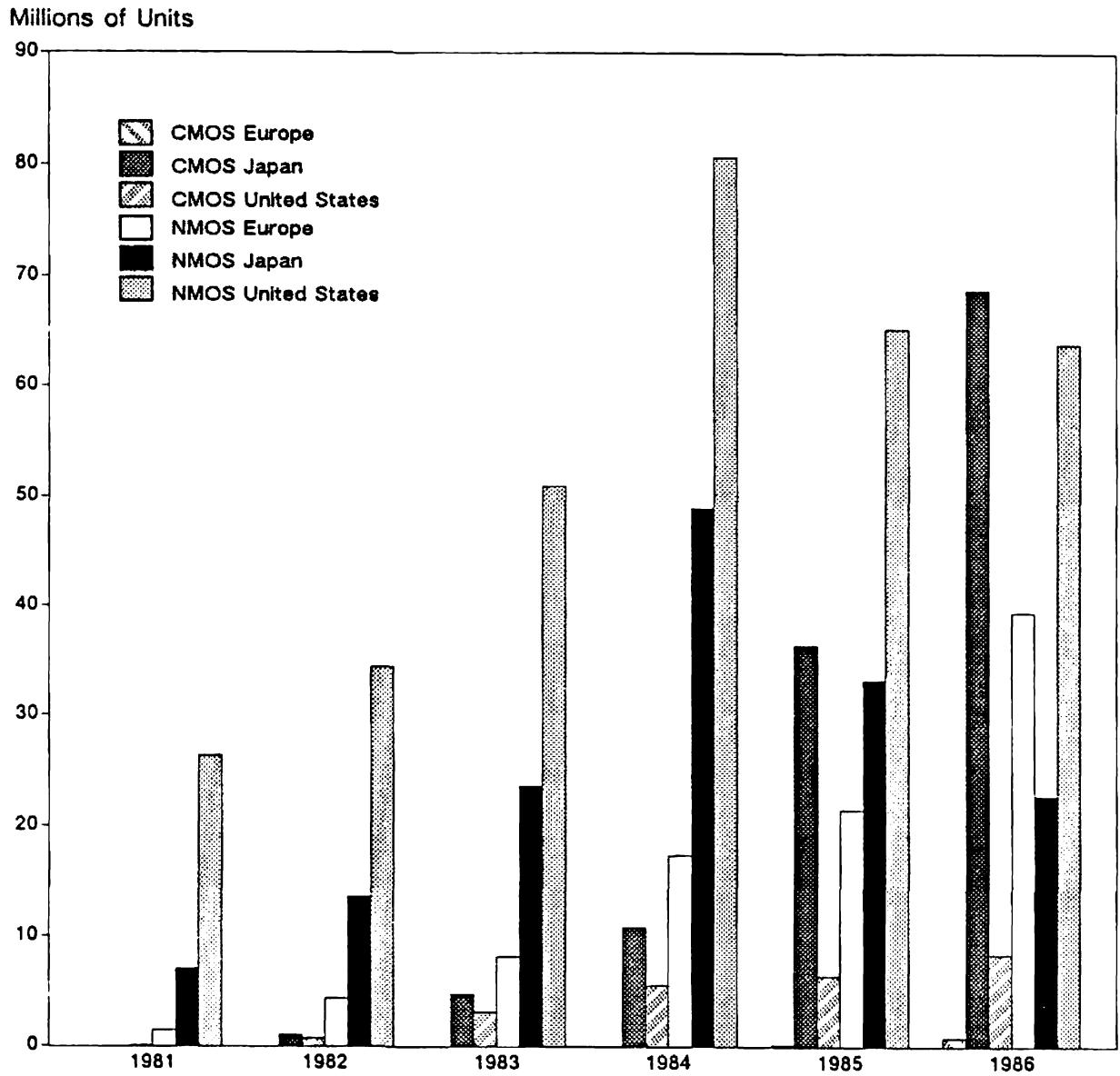
Source: Dataquest  
October 1987



# 8-Bit Microcontroller Analysis

Figure 5

Estimated Market Share by Process Technology and Region  
for 8-Bit Microcontrollers  
1981-1986



Source: Dataquest  
October 1987