

## 4-Bit Microcontrollers--Competitive Analysis

The tables and figures in this section are organized as follows:

- Table 1 Estimated Market Share by Manufacturer for 4-Bit Microcontrollers, 1975-1979
- Table 2 Estimated Market Share by Manufacturer for 4-Bit Microcontrollers, 1980-1984
- Table 3 Estimated Market Share by Manufacturer for 4-Bit Microcontrollers, 1985-1988
- Figure 1 Estimated Market Share by Manufacturer for 4-Bit Microcontrollers, 1987 and 1988
- Table 4 Estimated Market Share by Region for 4-Bit Microcontrollers, 1975-1979
- Table 5 Estimated Market Share by Region for 4-Bit Microcontrollers, 1980-1984
- Table 6 Estimated Market Share by Region for 4-Bit Microcontrollers, 1985-1988
- Figure 2 Estimated Market Share by Region for 4-Bit Microcontrollers, 1980-1988

# 4-Bit Microcontrollers--Competitive Analysis

Table 1

Estimated Market Share\* by Manufacturer  
for 4-Bit Microcontrollers  
1975-1979

<u>Manufacturer</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
Gould/AMI	0	0	0	0.2%	2.8%
Hitachi	0	0	0	2.6	1.3
Matsushita	0	0	0	0	8.7
Motorola	0	0	0	0.1	0.6
National	0	0	0	14.6	11.1
NEC	0	0	0	9.4	15.4
Rockwell	90.0%	59.2%	16.9%	14.2	7.7
Sharp	0	0	0	0	0.7
Texas Instruments	<u>10.0</u>	<u>40.8</u>	<u>83.1</u>	<u>58.9</u>	<u>51.7</u>
Total	100.0%	100.0%	100.0%	100.0%	100.0%

\*Based on units shipped

Source: Dataquest  
July 1989

# 4-Bit Microcontrollers--Competitive Analysis

Table 2

**Estimated Market Share\* by Manufacturer  
for 4-Bit Microcontrollers  
1980-1984**

<u>Manufacturer</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
Eurotechnique	0	0	0.1%	0.5%	0
Fujitsu	0.2%	8.4%	8.3	6.2	4.6%
Gould Semiconductor	1.2	0.3	0.4	0.1	0
Hitachi	1.5	14.2	13.0	12.0	11.6
Matsushita	10.7	9.4	10.2	14.4	15.0
Motorola	0.2	0.1	0.1	0.1	0
National	12.0	8.6	10.2	12.2	13.8
NEC	15.4	17.2	21.3	21.0	25.0
Oki	0.1	0.4	1.5	3.2	3.3
Rockwell	6.0	1.9	1.1	1.0	1.1
SGS-Thomson	0	0	0	0	1.4
Sharp	6.9	9.9	7.8	7.5	7.7
Texas Instruments	45.8	29.6	16.4	6.9	4.3
Toshiba	<u>0</u>	<u>0</u>	<u>9.5</u>	<u>14.9</u>	<u>12.2</u>
Total	100.0%	100.0%	100.0%	100.0%	100.0%

\*Based on units shipped

Source: Dataquest  
July 1989

# 4-Bit Microcontrollers--Competitive Analysis

Table 3

Estimated Market Share\* by Manufacturer  
for 4-Bit Microcontrollers  
1985-1988

<u>Manufacturer</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
Fujitsu	4.4%	3.7%	3.6%	3.5%
Hitachi	12.6	8.1	14.8	9.6
Matsushita	18.0	16.6	14.3	12.5
Mitsubishi	0	10.2	11.3	10.7
National	13.3	11.5	8.1	6.1
NEC	23.4	18.9	17.4	17.5
Oki	3.7	2.7	1.7	1.5
Rockwell	0.8	0.4	0.2	0.1
SGS-Thomson	3.0	2.3	1.9	1.8
Sharp	5.9	3.4	2.4	4.3
Texas Instruments	2.2	5.9	3.4	1.6
Toshiba	12.7	12.6	9.6	13.2
Others	<u>0</u>	<u>3.7</u>	<u>11.3</u>	<u>17.7</u>
Total	100.0%	100.0%	100.0%	100.0%

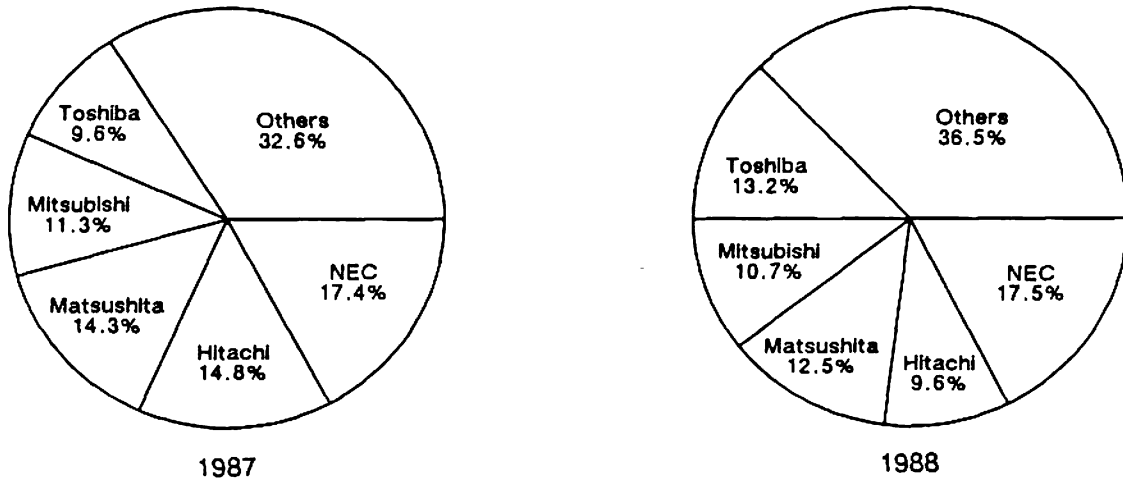
Note: Columns may not add to totals shown because of rounding.

\*Based on units shipped

Source: Dataquest  
July 1989

# 4-Bit Microcontrollers--Competitive Analysis

**Figure 1**  
**Estimated Market Share by Manufacturer**  
**for 4-Bit Microcontrollers**  
**1987 and 1988**



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Source: Dataquest  
July 1989

**Table 4**  
**Estimated Market Share by Region**  
**for 4-Bit Microcontrollers**  
**1975-1979**  
**(Thousands of Units)**

<u>Region</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
<b>United States</b>					
Shipments	500	760	3,400	14,049	37,310
Percent	100.0%	100.0%	100.0%	88.0%	73.8%
<b>Japan</b>					
Shipments	0	0	0	1,910	13,215
Percent	0	0	0	12.0%	26.2%
<b>Europe</b>					
Shipments	0	0	0	0	0
Percent	0	0	0	0	0
<b>Total Shipments</b>	<b>500</b>	<b>760</b>	<b>3,400</b>	<b>15,959</b>	<b>50,525</b>

Source: Dataquest  
July 1989

# 4-Bit Microcontrollers--Competitive Analysis

Table 5

**Estimated Market Share by Region  
for 4-Bit Microcontrollers  
1980-1984  
(Thousands of Units)**

<u>Region</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
United States					
Shipments	62,660	54,039	44,553	34,945	37,215
Percent	65.2%	40.5%	28.2%	20.3%	19.2%
Japan	—				
Shipments	33,420	79,510	113,440	136,160	153,430
Percent	34.8%	59.5%	71.7%	79.2%	79.3%
Europe					
Shipments	0	0	190	840	2,790
Percent	0	0	0.1%	0.5%	1.4%
<b>Total Shipments</b>	<b>96,080</b>	<b>133,549</b>	<b>158,183</b>	<b>171,945</b>	<b>193,435</b>

Source: Dataquest  
July 1989

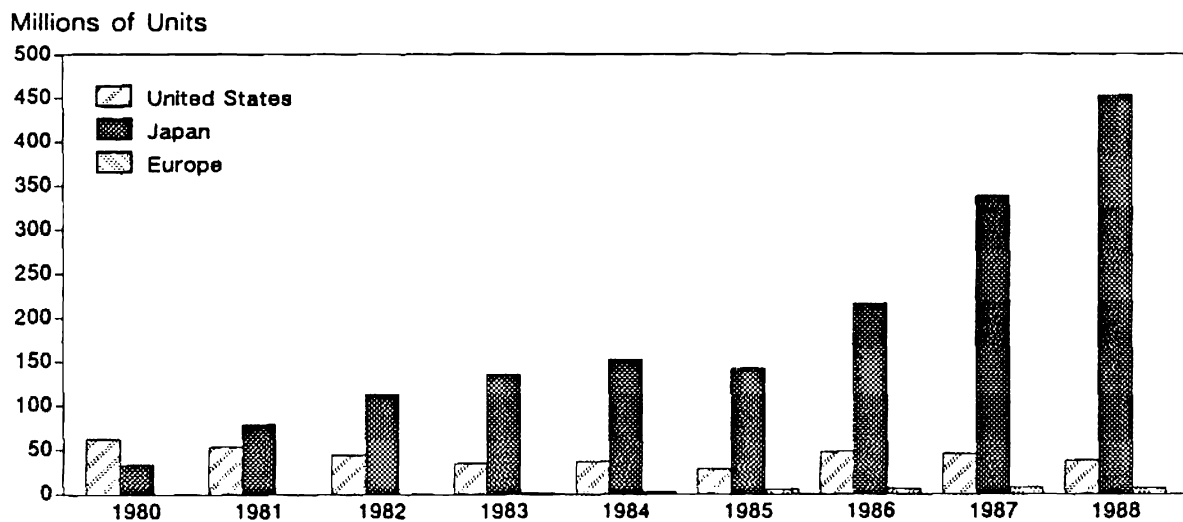
# 4-Bit Microcontrollers--Competitive Analysis

**Table 6**  
**Estimated Market Share by Region**  
**for 4-Bit Microcontrollers**  
**1985-1988**  
**(Thousands of Units)**

<u>Region</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
<b>United States</b>				
Shipments	28,804	48,458	46,160	38,575
Percent	16.3%	17.8%	11.8%	7.7%
<b>Japan</b>				
Shipments	142,992	217,095	338,657	453,650
Percent	80.8%	79.8%	86.3%	90.5%
<b>Europe</b>				
Shipments	5,242	6,330	7,515	8,850
Percent	3.0%	2.3%	1.9%	1.8%
<b>Total Shipments</b>	<b>177,038</b>	<b>271,883</b>	<b>392,332</b>	<b>501,075</b>

Source: Dataquest  
July 1989

**Figure 2**  
**Estimated Market Share by Region**  
**for 4-Bit Microcontrollers**  
**1980-1988**



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Source: Dataquest  
July 1989

# 4-Bit Microcontrollers--Competitive Analysis

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