The ARM810 is capable of sustaining 132 Dhrystone 2.1 MIPS at 113 MHz from a 3.3V supply, making it ideal for high performance applications.

The power consumption at 3.3V is just 170 mW (equivalent to 776 MIPS/Watt), which makes the ARM810 by far the best choice for high performance low power applications.

The ARM710 is capable of sustaining 48 Dhrystone 2.1 MIPS at 53 MHz from a 3.3V power supply (while the 5V port achieves 66 MIPS at 73MHz).

The ARM710 is ideal for cost-sensitive applications. The power consumption at 3.3V is just 105 mW (equivalent to 457 MIPS/Watt), which makes the ARM710 the best choice for high performance on a tight power budget.

To help the processor maintain high data throughput from inexpensive memory, the ARMX10 processors have a cache and a write buffer. A comprehensive Memory Management Unit (MMU) offers full memory protection facilities, including caching and write buffer control for different areas of memory.

**Features**

- High performance processor 32-bit RISC
- Very low power consumption
- 3.3V operation gives even higher performance per watt
- Fully-static design clock can be stopped to save power
- Flexible Memory Management Unit
- Big or little endian addressing
- Unified cache architecture
- Write buffer, so the processor doesn’t have to wait for slow memory
- Fast interrupt response time for real-time applications
- Independent processor and memory clocking to accommodate inexpensive memory
- JTAG Boundary Scan Test Interface
**Applications**
The ARM810 and ARM710 are ideal whenever high performance is required within tight cost and power constraints.

- Powerful real-time control
- Hand-held computing
- Portable telecom
- Data communications
- Consumer multi-media
- Automotive control
- Dual-Mode DSS/DBV-S receivers
- Direct Broadcast Satellite (DBS)

**Specifications**

<table>
<thead>
<tr>
<th></th>
<th>ARM810</th>
<th>ARM710A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Number</td>
<td>VY86C810</td>
<td>VY86C710A-2</td>
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<tr>
<td>Technology</td>
<td>0.5 mM</td>
<td>0.6 mM</td>
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<tr>
<td>Clock Frequency</td>
<td>0 to 50 MHz</td>
<td>0 to 28 MHz</td>
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<tr>
<td>Voltage</td>
<td>3.3 ± 10%</td>
<td>3.3 ± 10%</td>
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<tr>
<td>Power Consumption</td>
<td>500 mW</td>
<td>105 mW</td>
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<tr>
<td>MIPS (Dhrystone 2.1)</td>
<td>94</td>
<td>23</td>
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<tr>
<td>MIPS per Watt</td>
<td>187</td>
<td>219</td>
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<td>Pipeline Stages</td>
<td>5</td>
<td>3</td>
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<tr>
<td>Cache</td>
<td>8K</td>
<td>8K</td>
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<tr>
<td>Write Buffers</td>
<td>8 word, 4 address</td>
<td>8 word, 4 address</td>
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<tr>
<td>Package</td>
<td>144pin TQFP</td>
<td>144 pin TQFP</td>
</tr>
</tbody>
</table>

*WC = Worst Case = 3.0V, Slow Silicon, 125°C  **TYP = Typical = 3.3V, Typical Silicon, 25°C

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