

| <b>Memory Type</b>     | <b>Rel. Speed</b> | <b>Approx. Size</b>      | <b>On Chip?</b> |
|------------------------|-------------------|--------------------------|-----------------|
| <b>Control store</b>   | <b>100</b>        | <b><math>10^3</math></b> | <b>yes</b>      |
| <b>G.P. Registers†</b> | <b>90</b>         | <b><math>10^2</math></b> | <b>yes</b>      |
| <b>Onboard Cache</b>   | <b>40</b>         | <b><math>10^3</math></b> | <b>yes</b>      |
| <b>Onboard RAM</b>     | <b>10</b>         | <b><math>10^3</math></b> | <b>yes</b>      |
| <b>Static RAM</b>      | <b>5</b>          | <b><math>10^7</math></b> | <b>no</b>       |
| <b>Dynamic RAM</b>     | <b>1</b>          | <b><math>10^8</math></b> | <b>no</b>       |

**Figure 13.2** An example of a memory hierarchy used with a network processor. The number of levels in the hierarchy as well as the exact memory size and performance depend on the network processor.