Classification of Integrated Circuits

- Small Scale Integration or (SSI) – Contain up to 10 transistors or a few gates within a single package such as AND, OR, NOT gates.

- Medium Scale Integration or (MSI) – between 10 and 100 transistors or tens of gates within a single package and perform digital operations such as adders, decoders, counters, flip-flops and multiplexers.

- Large Scale Integration or (LSI) – between 100 and 1,000 transistors or hundreds of gates and perform specific digital operations such as I/O chips, memory, arithmetic and logic units.

- Very-Large Scale Integration or (VLSI) – between 1,000 and 10,000 transistors or thousands of gates and perform computational operations such as processors, large memory arrays and programmable logic devices.

- Super-Large Scale Integration or (SLSI) – between 10,000 and 100,000 transistors within a single package and perform computational operations such as microprocessor chips, micro-controllers, basic PICs and calculators

- Ultra-Large Scale Integration or (ULSI) – more than 1 million transistors – the big boys that are used in computers CPUs, GPUs, video processors, micro-controllers, FPGAs and complex PICs.