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| 1. As a digital designer, you will occasionally need to redesign an existing circuit. In doing so, you will come across part numbers that you are not familiar with. Use the Internet to identify the functionality and manufacturer of each of the part numbers listed below. Note that many parts will have several manufacturers. For the purpose of completing this table, list one. Also, do not print these datasheets. Simply view them online and extract the necessary information.

|  |  |  |
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| Part Number | IC Name / Function | Manufacturer |
| DM74LS00 | Quad 2-input NAND gate  | Fairchild semiconductor |
| SN74LS02 | Quad 2-input NOR gate | Texas Instruments |
| DM74LS75 | 4-bit bistable Latch | Fairchild Semiconductor |
| SN74LS86 | Quad 2-input XOR gate | Texas Instruments |
| MAN6760 | Seven Segment Display | Everlight |

1. When you design a digital logic circuit, you will often need a gate that performs a specific function. You may be unsure of its part number. Use the Internet to identify the 74LS series part number for each of the following five gates. Again, do not print these datasheets. Simply view them online and extract the necessary information.

|  |  |  |
| --- | --- | --- |
| Gate Symbol | Gate Name / Function | 74LS Series Part Number |
|  | Triple 3-input AND gate | 7411 |
|  | Triple 3-input NANA gate | 7410 |
|  | Dual 4-input AND gate | 7421 |
|  | Dual 4-input NAND gate | 7420 |
|  | Triple 3-input NOR gate | 7427 |

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| 1. The world of electronics is filled with TLAs (Three Letter Acronyms). Use the Internet to identify the following IC package styles and download a sample picture of each type.

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| IC Package Style | Full Name | Picture (copy-and-paste) |
| DIP | Dual Inline Packages |  |
| SOIC | Small Outline Integrated Chip |  |
| QFP | Quad Flat PAck |  |
| PLCC | Plastic Leaded Chip Carrier |  |
| BGA | Ball Grid Array | http://www.plasmarugged.com/images/articles/istockphoto_11527444-bga-chip-in-prospect.jpg |

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