

| ASCII | Decimal | Hexadecimal | Binary |
|---------------------------|---------|-------------|--------|
| null | 0 | 0 | 0 |
| start of header | 1 | 1 | 1 |
| start of text | 2 | 2 | 10 |
| end of text | 3 | 3 | 11 |
| end of transmission | 4 | 4 | 100 |
| enquire | 5 | 5 | 101 |
| acknowledge | 6 | 6 | 110 |
| bell | 7 | 7 | 111 |
| backspace | 8 | 8 | 1000 |
| horizontal tab | 9 | 9 | 1001 |
| linefeed | 10 | A | 1010 |
| vertical tab | 11 | B | 1011 |
| form feed | 12 | C | 1100 |
| carriage return | 13 | D | 1101 |
| shift out | 14 | E | 1110 |
| shift in | 15 | F | 1111 |
| data link escape | 16 | 10 | 10000 |
| device control 1/Xon | 17 | 11 | 10001 |
| device control 2 | 18 | 12 | 10010 |
| device control 3/Xoff | 19 | 13 | 10011 |
| device control 4 | 20 | 14 | 10100 |
| negative acknowledge | 21 | 15 | 10101 |
| synchronous idle | 22 | 16 | 10110 |
| end of transmission block | 23 | 17 | 10111 |
| cancel | 24 | 18 | 11000 |
| end of medium | 25 | 19 | 11001 |
| end of file/ substitute | 26 | 1A | 11010 |
| escape | 27 | 1B | 11011 |
| file separator | 28 | 1C | 11100 |
| group separator | 29 | 1D | 11101 |
| record separator | 30 | 1E | 11110 |
| unit separator | 31 | 1F | 11111 |
| space | 32 | 20 | 100000 |
| ! | 33 | 21 | 100001 |
| " | 34 | 22 | 100010 |
| # | 35 | 23 | 100011 |
| \$ | 36 | 24 | 100100 |
| % | 37 | 25 | 100101 |
| & | 38 | 26 | 100110 |
| ' | 39 | 27 | 100111 |
| (| 40 | 28 | 101000 |
|) | 41 | 29 | 101001 |
| * | 42 | 2A | 101010 |
| + | 43 | 2B | 101011 |
| , | 44 | 2C | 101100 |
| - | 45 | 2D | 101101 |

| | | | |
|---|----|----|---------|
| . | 46 | 2E | 101110 |
| / | 47 | 2F | 101111 |
| 0 | 48 | 30 | 110000 |
| 1 | 49 | 31 | 110001 |
| 2 | 50 | 32 | 110010 |
| 3 | 51 | 33 | 110011 |
| 4 | 52 | 34 | 110100 |
| 5 | 53 | 35 | 110101 |
| 6 | 54 | 36 | 110110 |
| 7 | 55 | 37 | 110111 |
| 8 | 56 | 38 | 111000 |
| 9 | 57 | 39 | 111001 |
| : | 58 | 3A | 111010 |
| ; | 59 | 3B | 111011 |
| < | 60 | 3C | 111100 |
| = | 61 | 3D | 111101 |
| > | 62 | 3E | 111110 |
| ? | 63 | 3F | 111111 |
| @ | 64 | 40 | 1000000 |
| A | 65 | 41 | 1000001 |
| B | 66 | 42 | 1000010 |
| C | 67 | 43 | 1000011 |
| D | 68 | 44 | 1000100 |
| E | 69 | 45 | 1000101 |
| F | 70 | 46 | 1000110 |
| G | 71 | 47 | 1000111 |
| H | 72 | 48 | 1001000 |
| I | 73 | 49 | 1001001 |
| J | 74 | 4A | 1001010 |
| K | 75 | 4B | 1001011 |
| L | 76 | 4C | 1001100 |
| M | 77 | 4D | 1001101 |
| N | 78 | 4E | 1001110 |
| O | 79 | 4F | 1001111 |
| P | 80 | 50 | 1010000 |
| Q | 81 | 51 | 1010001 |
| R | 82 | 52 | 1010010 |
| S | 83 | 53 | 1010011 |
| T | 84 | 54 | 1010100 |
| U | 85 | 55 | 1010101 |
| V | 86 | 56 | 1010110 |
| W | 87 | 57 | 1010111 |
| X | 88 | 58 | 1011000 |
| Y | 89 | 59 | 1011001 |
| Z | 90 | 5A | 1011010 |
| [| 91 | 5B | 1011011 |
| \ | 92 | 5C | 1011100 |

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|-----|-----|----|----------|
|] | 93 | 5D | 1011101 |
| ^ | 94 | 5E | 1011110 |
| _ | 95 | 5F | 1011111 |
| ` | 96 | 60 | 1100000 |
| a | 97 | 61 | 1100001 |
| b | 98 | 62 | 1100010 |
| c | 99 | 63 | 1100011 |
| d | 100 | 64 | 1100100 |
| e | 101 | 65 | 1100101 |
| f | 102 | 66 | 1100110 |
| g | 103 | 67 | 1100111 |
| h | 104 | 68 | 1101000 |
| i | 105 | 69 | 1101001 |
| j | 106 | 6A | 1101010 |
| k | 107 | 6B | 1101011 |
| l | 108 | 6C | 1101100 |
| m | 109 | 6D | 1101101 |
| n | 110 | 6E | 1101110 |
| o | 111 | 6F | 1101111 |
| p | 112 | 70 | 1110000 |
| q | 113 | 71 | 1110001 |
| r | 114 | 72 | 1110010 |
| s | 115 | 73 | 1110011 |
| t | 116 | 74 | 1110100 |
| u | 117 | 75 | 1110101 |
| v | 118 | 76 | 1110110 |
| w | 119 | 77 | 1110111 |
| x | 120 | 78 | 1111000 |
| y | 121 | 79 | 1111001 |
| z | 122 | 7A | 1111010 |
| { | 123 | 7B | 1111011 |
| | 124 | 7C | 1111100 |
| } | 125 | 7D | 1111101 |
| ~ | 126 | 7E | 1111110 |
| DEL | 127 | 7F | 1111111 |
| | 128 | 80 | 10000000 |
| | 129 | 81 | 10000001 |
| | 130 | 82 | 10000010 |
| | 131 | 83 | 10000011 |
| | 132 | 84 | 10000100 |
| | 133 | 85 | 10000101 |
| | 134 | 86 | 10000110 |
| | 135 | 87 | 10000111 |
| | 136 | 88 | 10001000 |
| | 137 | 89 | 10001001 |
| | 138 | 8A | 10001010 |
| | 139 | 8B | 10001011 |

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|--|-----|----|----------|
| | 140 | 8C | 10001100 |
| | 141 | 8D | 10001101 |
| | 142 | 8E | 10001110 |
| | 143 | 8F | 10001111 |
| | 144 | 90 | 10010000 |
| | 145 | 91 | 10010001 |
| | 146 | 92 | 10010010 |
| | 147 | 93 | 10010011 |
| | 148 | 94 | 10010100 |
| | 149 | 95 | 10010101 |
| | 150 | 96 | 10010110 |
| | 151 | 97 | 10010111 |
| | 152 | 98 | 10011000 |
| | 153 | 99 | 10011001 |
| | 154 | 9A | 10011010 |
| | 155 | 9B | 10011011 |
| | 156 | 9C | 10011100 |
| | 157 | 9D | 10011101 |
| | 158 | 9E | 10011110 |
| | 159 | 9F | 10011111 |
| | 160 | A0 | 10100000 |
| | 161 | A1 | 10100001 |
| | 162 | A2 | 10100010 |
| | 163 | A3 | 10100011 |
| | 164 | A4 | 10100100 |
| | 165 | A5 | 10100101 |
| | 166 | A6 | 10100110 |
| | 167 | A7 | 10100111 |
| | 168 | A8 | 10101000 |
| | 169 | A9 | 10101001 |
| | 170 | AA | 10101010 |
| | 171 | AB | 10101011 |
| | 172 | AC | 10101100 |
| | 173 | AD | 10101101 |
| | 174 | AE | 10101110 |
| | 175 | AF | 10101111 |
| | 176 | B0 | 10110000 |
| | 177 | B1 | 10110001 |
| | 178 | B2 | 10110010 |
| | 179 | B3 | 10110011 |
| | 180 | B4 | 10110100 |
| | 181 | B5 | 10110101 |
| | 182 | B6 | 10110110 |
| | 183 | B7 | 10110111 |
| | 184 | B8 | 10111000 |
| | 185 | B9 | 10111001 |
| | 186 | BA | 10111010 |

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|--|-----|----|----------|
| | 187 | BB | 10111011 |
| | 188 | BC | 10111100 |
| | 189 | BD | 10111101 |
| | 190 | BE | 10111110 |
| | 191 | BF | 10111111 |
| | 192 | C0 | 11000000 |
| | 193 | C1 | 11000001 |
| | 194 | C2 | 11000010 |
| | 195 | C3 | 11000011 |
| | 196 | C4 | 11000100 |
| | 197 | C5 | 11000101 |
| | 198 | C6 | 11000110 |
| | 199 | C7 | 11000111 |
| | 200 | C8 | 11001000 |
| | 201 | C9 | 11001001 |
| | 202 | CA | 11001010 |
| | 203 | CB | 11001011 |
| | 204 | CC | 11001100 |
| | 205 | CD | 11001101 |
| | 206 | CE | 11001110 |
| | 207 | CF | 11001111 |
| | 208 | D0 | 11010000 |
| | 209 | D1 | 11010001 |
| | 210 | D2 | 11010010 |
| | 211 | D3 | 11010011 |
| | 212 | D4 | 11010100 |
| | 213 | D5 | 11010101 |
| | 214 | D6 | 11010110 |
| | 215 | D7 | 11010111 |
| | 216 | D8 | 11011000 |
| | 217 | D9 | 11011001 |
| | 218 | DA | 11011010 |
| | 219 | DB | 11011011 |
| | 220 | DC | 11011100 |
| | 221 | DD | 11011101 |
| | 222 | DE | 11011110 |
| | 223 | DF | 11011111 |
| | 224 | E0 | 11100000 |
| | 225 | E1 | 11100001 |
| | 226 | E2 | 11100010 |
| | 227 | E3 | 11100011 |
| | 228 | E4 | 11100100 |
| | 229 | E5 | 11100101 |
| | 230 | E6 | 11100110 |
| | 231 | E7 | 11100111 |
| | 232 | E8 | 11101000 |
| | 233 | E9 | 11101001 |

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|--|-----|----|----------|
| | 234 | EA | 11101010 |
| | 235 | EB | 11101011 |
| | 236 | EC | 11101100 |
| | 237 | ED | 11101101 |
| | 238 | EE | 11101110 |
| | 239 | EF | 11101111 |
| | 240 | F0 | 11110000 |
| | 241 | F1 | 11110001 |
| | 242 | F2 | 11110010 |
| | 243 | F3 | 11110011 |
| | 244 | F4 | 11110100 |
| | 245 | F5 | 11110101 |
| | 246 | F6 | 11110110 |
| | 247 | F7 | 11110111 |
| | 248 | F8 | 11111000 |
| | 249 | F9 | 11111001 |
| | 250 | FA | 11111010 |
| | 251 | FB | 11111011 |
| | 252 | FC | 11111100 |
| | 253 | FD | 11111101 |
| | 254 | FE | 11111110 |
| | 255 | FF | 11111111 |