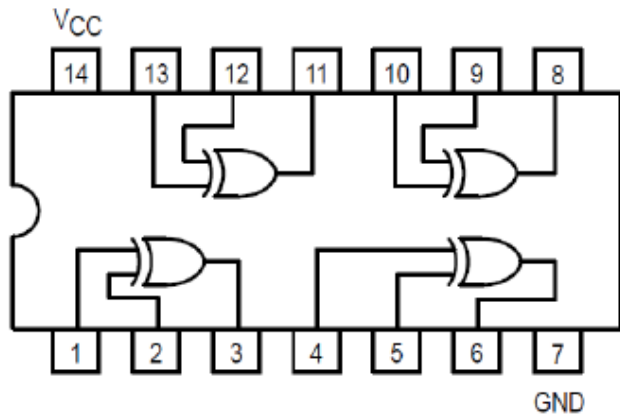




EEE 324 – Digital Design
Integrated Circuit Connections

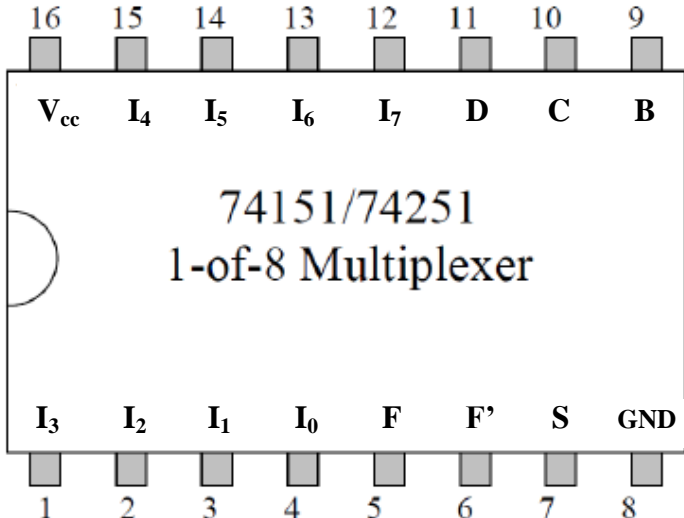
| 74LS32 | | <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> </tr> </tbody> </table> | A | B | C | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
|---------------|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | B | C | | | | | | | | | | | | | | | |
| 0 | 0 | 0 | | | | | | | | | | | | | | | |
| 0 | 1 | 1 | | | | | | | | | | | | | | | |
| 1 | 0 | 1 | | | | | | | | | | | | | | | |
| 1 | 1 | 1 | | | | | | | | | | | | | | | |
| 74LS08 | | <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> </tr> </tbody> </table> | A | B | C | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 |
| A | B | C | | | | | | | | | | | | | | | |
| 0 | 0 | 0 | | | | | | | | | | | | | | | |
| 0 | 1 | 0 | | | | | | | | | | | | | | | |
| 1 | 0 | 0 | | | | | | | | | | | | | | | |
| 1 | 1 | 1 | | | | | | | | | | | | | | | |
| 74LS04 | | <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>A</th> <th>B</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>1</td> </tr> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>0</td> <td>1</td> </tr> <tr> <td>1</td> <td>0</td> </tr> </tbody> </table> | A | B | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | | | | | |
| A | B | | | | | | | | | | | | | | | | |
| 0 | 1 | | | | | | | | | | | | | | | | |
| 1 | 0 | | | | | | | | | | | | | | | | |
| 0 | 1 | | | | | | | | | | | | | | | | |
| 1 | 0 | | | | | | | | | | | | | | | | |

74LS86



| A | B | C |
|---|---|---|
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 0 |

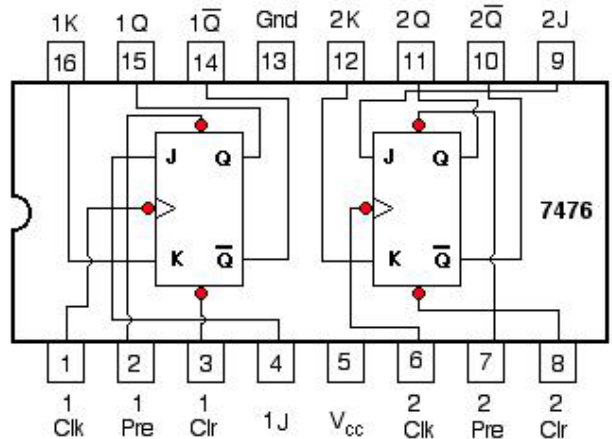
74151



74151/74251
1-of-8 Multiplexer

| Input Select | | | S | Output | |
|--------------|---|---|---|--------|-------------|
| B | C | D | | F | \bar{F} |
| X | X | X | 1 | 0 | 1 |
| 0 | 0 | 0 | 0 | I_0 | \bar{I}_0 |
| 0 | 0 | 1 | 0 | I_1 | \bar{I}_1 |
| 0 | 1 | 0 | 0 | I_2 | \bar{I}_2 |
| 0 | 1 | 1 | 0 | I_3 | \bar{I}_3 |
| 1 | 0 | 0 | 0 | I_4 | \bar{I}_4 |
| 1 | 0 | 1 | 0 | I_5 | \bar{I}_5 |
| 1 | 1 | 0 | 0 | I_6 | \bar{I}_6 |
| 1 | 1 | 1 | 0 | I_7 | \bar{I}_7 |

74LS76



| J | K | $Q(t+1)$ |
|---|---|--------------|
| 0 | 0 | $Q(t)$ |
| 0 | 1 | 0 |
| 1 | 0 | 1 |
| 1 | 1 | $\bar{Q}(t)$ |