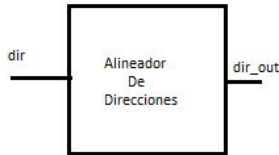


| Identificación | Nombre | Símbolo | Descripción | Tabla de verdad | Simplificación | Funciones Lógicas | Código | Nombre del archivo | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|--------------------------|---|--|--|----------------|-------------------|---------|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
| 14 | Alineador de Direcciones |  | Unidad que realiza la suma de dos números de 32 bits | Utiliza el sumador completo el cual a su vez utiliza half Adders: <table border="1" data-bbox="763 410 956 707"><thead><tr><th colspan="2">Entradas</th><th colspan="2">Salidas</th></tr><tr><th>A</th><th>B</th><th>S</th><th>C</th></tr></thead><tbody><tr><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>0</td><td>1</td><td>1</td><td>0</td></tr><tr><td>1</td><td>0</td><td>1</td><td>0</td></tr><tr><td>1</td><td>1</td><td>0</td><td>1</td></tr></tbody></table> <p>No posee otra tabla de verdad puesto que su única función es sumar 4 al dato entrante</p> | Entradas | | Salidas | | A | B | S | C | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | <p>S =</p> <table border="1" data-bbox="996 330 1196 397"><tr><td>0</td><td>1</td><td>0</td><td>1</td></tr></table> <p>C =</p> <table border="1" data-bbox="996 477 1196 544"><tr><td>0</td><td>0</td><td>1</td><td>0</td></tr></table> <p>La simplificación se da mediante el método de mapas de Karnaugh.</p> <p>Por si mismo no posee más ecuaciones puesto que sólo suma 4 a la entrada con la instanciación del sumador.</p> | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | <p>Funciones del sumador completo:</p> $S = A \oplus B$ $C = A \cdot B$ $c1 = G_0 + P_0 \cdot c0$ $c2 = G_1 + P_1 \cdot G_0 + P_1 \cdot P_0 \cdot c0$ $c3 = G_2 + P_2 \cdot G_1 + P_2 \cdot P_1 \cdot G_0 + P_2 \cdot P_1 \cdot P_0 \cdot c0$ $c4 = G_3 + P_3 \cdot G_2 + P_3 \cdot P_2 \cdot G_1 + P_3 \cdot P_2 \cdot P_1 \cdot G_0 + P_3 \cdot P_2 \cdot P_1 \cdot P_0 \cdot c0$ <p>Por si mismo no posee más ecuaciones puesto que sólo suma 4 a la entrada con la instanciación del sumador.</p> | <pre>module AlineadorDirecciones_V1_Chav arriaOrtizOrtegaVillalobos(input [31:0] dir, output [31:0] dirOut); thirtyTwoBitsFullAdder ttbfa (.a(dir), .b(4), .s(dirOut), .c0(0), .cout());endmodule</pre> | AlineadorDirecciones_V1_Chav arriaOrtizOrtega Villalobos.v |
| Entradas | | Salidas | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | B | S | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 1 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 0 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 1 | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 1 | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 0 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |