

```
`timescale 1ns / 1ps

////////////////////////////////////
////////////////////////////////////
// Company:
// Engineer:
//
// Create Date: 10/14/2020 11:41:22 PM
// Design Name:
// Module Name: Converter
// Project Name:
// Target Devices:
// Tool Versions:
// Description:
//
// Dependencies:
//
// Revision:
// Revision 0.01 - File Created
// Additional Comments:
//
////////////////////////////////////
////////////////////////////////////
```

```
module Converter(
    input n0,
    input n1,
```

```
input n2,  
input n3,  
output Aout,  
output Bout,  
output Cout,  
output Dout,  
output Eout,  
output Fout,  
output Gout  
);
```

```
assign Aout = (n0 & ~n1 & ~n2 & ~n3) | (~n0  
& ~n1 & n2 & ~n3) | (n0 & n1 & ~n2 & n3) | (n0 &  
~n1 & n2 & n3);
```

```
assign Bout = (n0 & ~n1 & n2 & ~n3) | (~n0 &  
n1 & n2 & ~n3) | (n0 & n1 & ~n2 & n3) | (~n0 & ~n1  
& n2 & n3) | (~n0 & n1 & n2 & n3) | (n0 & n1 & n2  
& n3);
```

```
assign Cout = (~n0 & n1 & ~n2 & ~n3) | (~n0  
& ~n1 & n2 & n3) | (~n0 & n1 & n2 & n3) | (n0 & n1  
& n2 & n3);
```

```
assign Dout = (n0 & ~n1 & ~n2 & ~n3) | (~n0  
& ~n1 & n2 & ~n3) | (n0 & n1 & n2 & ~n3) | (n0 &  
~n1 & ~n2 & n3) | (~n0 & n1 & ~n2 & n3) | (n0 & n1  
& n2 & n3);
```

```
assign Eout = (n0 & ~n1 & ~n2 & ~n3) | (n0 &  
n1 & ~n2 & ~n3) | (~n0 & ~n1 & n2 & ~n3) | (n0 &
```

```
~n1 & n2 & ~n3) | (n0 & n1 & n2 & ~n3) | (n0 & ~n1  
& ~n2 & n3);
```

```
    assign Fout = (n0 & ~n1 & ~n2 & ~n3) | (~n0  
& n1 & ~n2 & ~n3) | (n0 & n1 & ~n2 & ~n3) | (n0 &  
n1 & n2 & ~n3) | (n0 & ~n1 & n2 & n3);
```

```
    assign Gout = (~n0 & ~n1 & ~n2 & ~n3) | (n0  
& ~n1 & ~n2 & ~n3) | (n0 & n1 & n2 & ~n3) | (~n0 &  
~n1 & n2 & n3);
```

```
endmodule
```