

compare3bit.vhd

-- 3 bit comparator

```
library ieee;  
use ieee.std_logic_1164.all;
```

```
package compare_pkg is  
    component compare  
        port (  
            a: in std_logic_vector(2 downto 0);  
            b: in std_logic_vector(2 downto 0);  
            c: buffer std_logic  
        );  
    end component;  
end compare_pkg;
```

```
library ieee;  
use ieee.std_logic_1164.all;
```

```
library cypress;  
use cypress.std_arith.all;  
use cypress.lpm_pkg.all;
```

```
entity compare is  
    port (  
        a: in std_logic_vector(2 downto 0);  
        b: in std_logic_vector(2 downto 0);  
        c: buffer std_logic  
    );  
end;
```

```
architecture compare_arch of compare is  
begin  
    c <= '1' when (a = b) else '0';  
end compare_arch;
```