

```
1
2  -----Five to Ten Bit Converter : (Appends zeros to the mantissa to make them 10 bit long)-----
3
4  library IEEE;
5  use IEEE.STD_LOGIC_1164.ALL;
6  use IEEE.NUMERIC_STD.ALL;
7
8  entity FivetoTenBit is
9      Port ( Min : in  UNSIGNED (4 downto 0);
10           Mout : out UNSIGNED (9 downto 0));
11 end FivetoTenBit;
12
13 architecture Behavioral of FivetoTenBit is
14
15 begin
16 process (Min)
17
18     variable Min_new : UNSIGNED (9 downto 0);
19     begin
20         for i in 0 to 9 loop --First make all Bits to zero
21             Min_new(i) := '0';
22         end loop;
23         Min_new(9 downto 5) := Min;
24         Mout <= Min_new;
25     end process;
26 end Behavioral;
27
28
```