

```
1  LIBRARY ieee;
2  USE ieee.std_logic_1164.all;
3  use IEEE.NUMERIC_STD.ALL;
4
5
6  entity observer is
7  generic (
8      observernumber:unsigned(15 downto 0):=x"0001" -- how many observer are instan
          tiated
9      );
10 port (
11
12     clk           :in    std_logic;
13     reset         :in    std_logic;
14     enable_in     :in    std_logic;
15     invariance_tau :in    std_logic_vector(7 downto 0);
16     signal_phi    :in    std_logic;
17     output        :out   std_logic;
18     enable_out    :out   std_logic
19 );
20
21 end entity;
22
```