

Ce projet initialise l'afficheur OLED et allume tous les pixels (voir machine d'état oledinit)

```
entity oledinit is
  Port ( CLK : in STD_LOGIC;
         RST : in STD_LOGIC; -- poussoir BTNC
         EN : in std_logic; -- poussoir BTND
         SDO : out STD_LOGIC; -- spi data
         SCLK : out STD_LOGIC; -- spi clock
         DC : out STD_LOGIC; -- Data/command pin
         RES : out STD_LOGIC; -- reset
         VBAT : out STD_LOGIC;
         VDD : out STD_LOGIC;
         FIN : out STD_LOGIC); -- LED0
end oledinit;

architecture Behavioral of oledinit is

  component Delay is
    Port ( CLK : in STD_LOGIC; --System CLK
          RST : in STD_LOGIC; --Global RST
          DELAY_MS : in STD_LOGIC_VECTOR (11 downto 0);
          DELAY_EN : in STD_LOGIC; --Delay block enable
          DELAY_FIN : out STD_LOGIC); --Delay finish flag
  end component;

  component spictrl is
    Port ( clk : in STD_LOGIC;
          rst : in STD_LOGIC;
          spi_en : in STD_LOGIC;
          spi_data : in STD_LOGIC_VECTOR (7 downto 0);
          sdo : out STD_LOGIC;
          sclk : out STD_LOGIC;
          spi_fin : out STD_LOGIC);
  end component;

  type etat_type is (spi, spiEnd, tempo, tempoEnd, back, idle,
                    vddOn, wait1, dispOff, resetOn, wait2,
                    resetOff, chargePump1, chargePump2,
                    preCharge1, preCharge2, vbatOn, wait3,
                    dispContrast1, dispContrast2,
                    invertDispl, invertDisp2,
                    comConfig1, comConfig2,
                    dispOn, fullDisp, done);

  signal etat, etat_retour : etat_type := idle;

  signal temp_dc : STD_LOGIC := '0'; -- commande (0) / data (1)
  signal temp_res : STD_LOGIC := '1'; -- reset actif à 0
  signal temp_vbat : STD_LOGIC := '1'; -- vbat actif à 0
  signal temp_vdd : STD_LOGIC := '1'; -- vdd actif à 0
  signal temp_fin : STD_LOGIC := '0';

  signal temp_delay_ms : STD_LOGIC_VECTOR (11 downto 0) := (others => '0');
  signal temp_delay_en : STD_LOGIC := '0';
  signal temp_delay_fin : STD_LOGIC;
  signal temp_spi_en : STD_LOGIC := '0';
  signal temp_spi_data : STD_LOGIC_VECTOR (7 downto 0) := (others => '0');
  signal temp_spi_fin : STD_LOGIC;
```