#include <Adafruit\_SI5351.h>

Adafruit\_SI5351 clockgen = Adafruit\_SI5351();

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*

    Arduino setup function (automatically called at startup)

\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

void setup(void)

{

  Serial.begin(9600);

  Serial.println("Si5351 Clockgen Test"); Serial.println("");

  /\* Initialise the sensor \*/

  if (clockgen.begin() != ERROR\_NONE)

  {

    /\* There was a problem detecting the IC ... check your connections \*/

    Serial.print("Ooops, no Si5351 detected ... Check your wiring or I2C ADDR!");

    while(1);

  }

  Serial.println("OK!");

  /\* INTEGER ONLY MODE --> most accurate output \*/

  /\* Setup PLLA to integer only mode @ 900MHz (must be 600..900MHz) \*/

  /\* Set Multisynth 0 to 112.5MHz using integer only mode (div by 4/6/8) \*/

  /\* 25MHz \* 36 = 900 MHz, then 900 MHz / 8 = 112.5 MHz \*/

  Serial.println("Set PLLA to 900MHz");

  //clockgen.setupPLLInt(SI5351\_PLL\_A, 36);

  Serial.println("Set Output #0 to 112.5MHz");

  //clockgen.setupMultisynthInt(0, SI5351\_PLL\_A, SI5351\_MULTISYNTH\_DIV\_8);

  /\* FRACTIONAL MODE --> More flexible but introduce clock jitter \*/

  /\* Setup PLLB to fractional mode @616.66667MHz (XTAL \* 24 + 2/3) \*/

  /\* Setup Multisynth 1 to 13.55311MHz (PLLB/45.5) \*/

  clockgen.setupPLL(SI5351\_PLL\_B, 34, 505171, 781250);

  Serial.println("Set Output #1 to 60,15038 MHz");

  clockgen.setupMultisynth(0, SI5351\_PLL\_B, 900, 0, 1);

  clockgen.setupRdiv(0, SI5351\_R\_DIV\_16);

  delayMicroseconds(15);

  clockgen.setupMultisynth(2, SI5351\_PLL\_B, 900, 0, 1);

  clockgen.setupRdiv(2, SI5351\_R\_DIV\_16);

  /\* Multisynth 2 is not yet used and won't be enabled, but can be \*/

  /\* Use PLLB @ 616.66667MHz, then divide by 900 -> 685.185 KHz \*/

  /\* then divide by 64 for 10.706 KHz \*/

  /\* configured using either PLL in either integer or fractional mode \*/

  Serial.println("Set Output #2 to 10.706 KHz");

  //clockgen.setupMultisynth(2, SI5351\_PLL\_B, 900, 0, 1);

  //clockgen.setupRdiv(2, SI5351\_R\_DIV\_64);

  /\* Enable the clocks \*/

  clockgen.enableOutputs(true);

}

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*

    Arduino loop function, called once 'setup' is complete (your own code

    should go here)

\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

void loop(void)

{

}