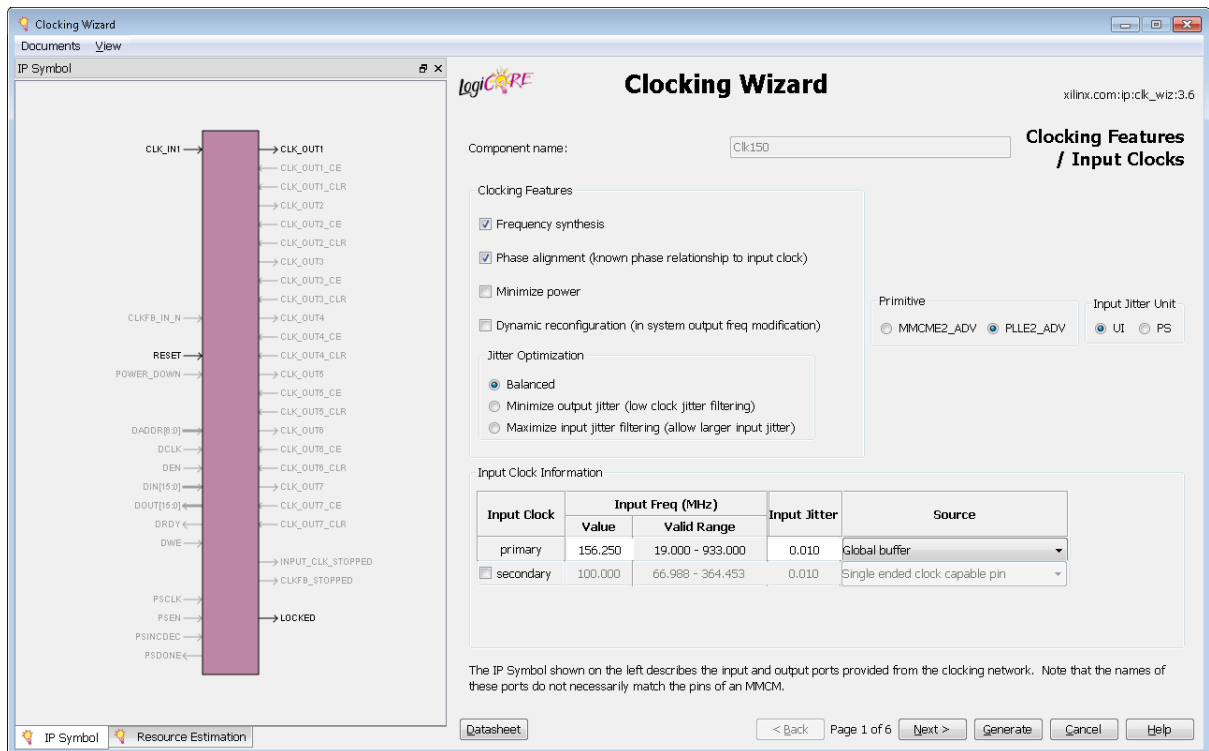


Steps to create Clk150 ip core:

Step 1:



The screenshot shows the Clocking Wizard interface for creating a Clk150 IP core. The component name is set to "Clk150". The "Clocking Features" section includes checkboxes for "Frequency synthesis", "Phase alignment (known phase relationship to input clock)", "Minimize power", and "Dynamic reconfiguration (in system output freq modification)". The "Jitter Optimization" section has radio buttons for "Balanced", "Minimize output jitter (low clock jitter filtering)", and "Maximize input jitter filtering (allow larger input jitter)". The "Input Clock Information" table shows the primary clock at 156.250 MHz and the secondary clock at 100.000 MHz. The "Primitive" is set to "PLLE2_ADV" and the "Input Jitter Unit" is "UI".

Clocking Wizard

Component name: Clk150

Clocking Features / Input Clocks

Clocking Features

- ☒ Frequency synthesis
- ☒ Phase alignment (known phase relationship to input clock)
- ☐ Minimize power
- ☐ Dynamic reconfiguration (in system output freq modification)

Jitter Optimization

- ☒ Balanced
- ☐ Minimize output jitter (low clock jitter filtering)
- ☐ Maximize input jitter filtering (allow larger input jitter)

Primitive: ☐ MMCM2_ADV ☒ PLLE2_ADV

Input Jitter Unit: ☒ UI ☐ PS

Input Clock Information

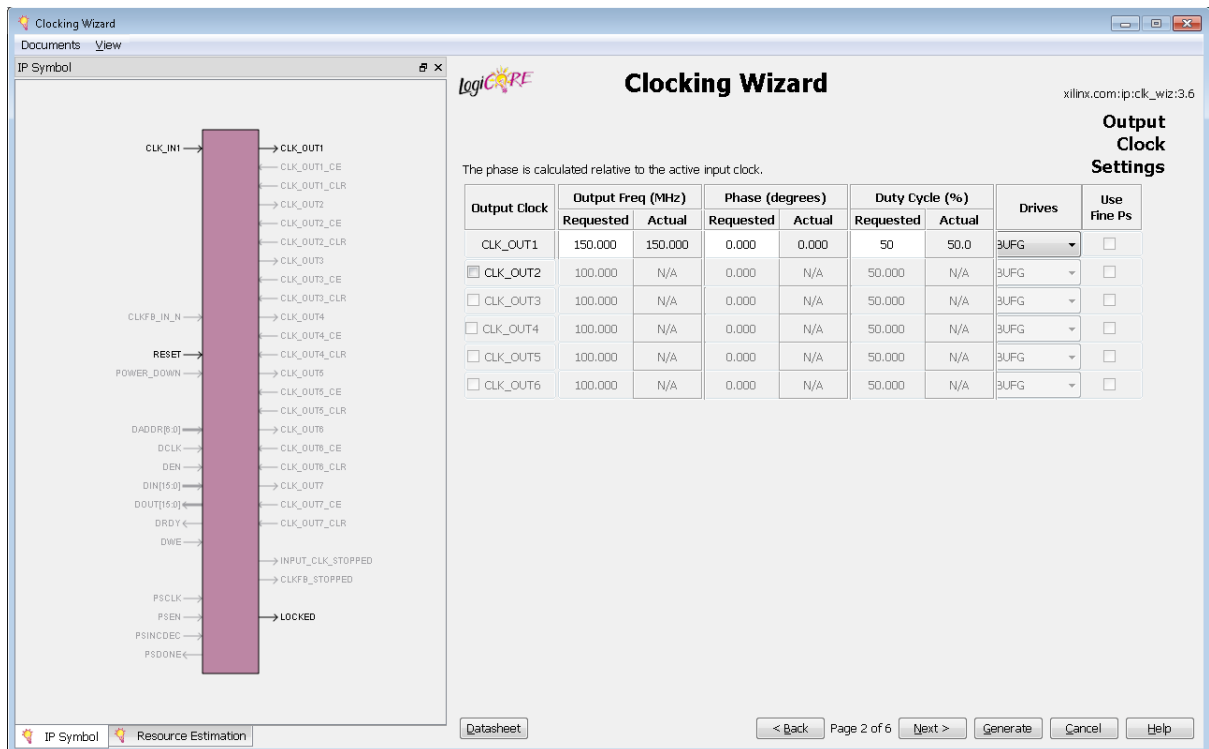
Input Clock	Input Freq (MHz)		Input Jitter	Source
	Value	Valid Range		
primary	156.250	19.000 - 933.000	0.010	Global buffer
<input checked="" type="checkbox"/> secondary	100.000	66.988 - 364.453	0.010	Single ended clock capable pin

The IP Symbol shown on the left describes the input and output ports provided from the clocking network. Note that the names of these ports do not necessarily match the pins of an MMCM.

IP Symbol Resource Estimation

Datasheet < Back Page 1 of 6 Next > Generate Cancel Help

Step 2:



The screenshot shows the Clocking Wizard interface for setting output clock settings. The "Output Clock Settings" table lists the output clocks and their parameters. The "Phase" is calculated relative to the active input clock.

Clocking Wizard

The phase is calculated relative to the active input clock.

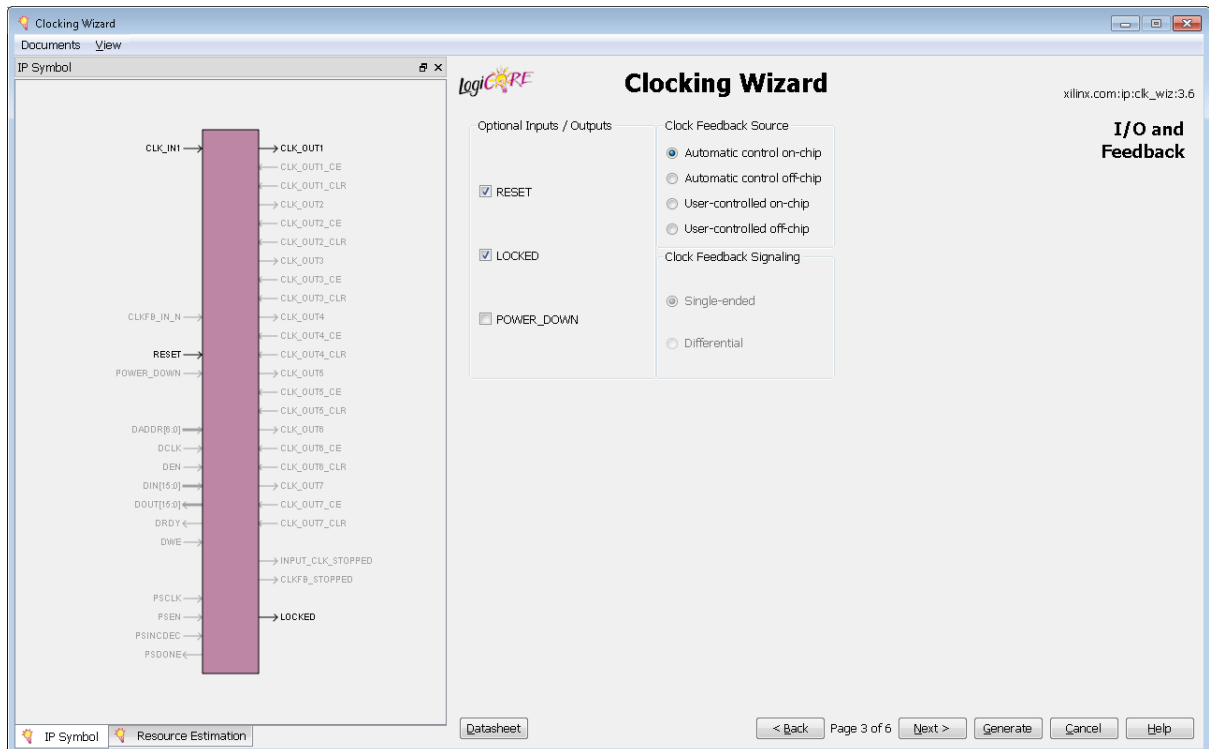
Output Clock Settings

Output Clock	Output Freq (MHz)		Phase (degrees)		Duty Cycle (%)		Drives	Use Fine Ps
	Requested	Actual	Requested	Actual	Requested	Actual		
<input checked="" type="checkbox"/> CLK_OUT1	150.000	150.000	0.000	0.000	50	50.0	BUFG	<input type="checkbox"/>
<input checked="" type="checkbox"/> CLK_OUT2	100.000	N/A	0.000	N/A	50.000	N/A	BUFG	<input type="checkbox"/>
<input type="checkbox"/> CLK_OUT3	100.000	N/A	0.000	N/A	50.000	N/A	BUFG	<input type="checkbox"/>
<input type="checkbox"/> CLK_OUT4	100.000	N/A	0.000	N/A	50.000	N/A	BUFG	<input type="checkbox"/>
<input type="checkbox"/> CLK_OUT5	100.000	N/A	0.000	N/A	50.000	N/A	BUFG	<input type="checkbox"/>
<input type="checkbox"/> CLK_OUT6	100.000	N/A	0.000	N/A	50.000	N/A	BUFG	<input type="checkbox"/>

IP Symbol Resource Estimation

Datasheet < Back Page 2 of 6 Next > Generate Cancel Help

Step 3:



The screenshot shows the 'Clocking Wizard' window at Step 3, 'I/O and Feedback'. The left pane displays the IP Symbol with various input and output pins. The right pane contains configuration options for the clocking wizard.

Optional Inputs / Outputs

- ☒ RESET
- ☒ LOCKED
- ☐ POWER_DOWN

Clock Feedback Source

- ☒ Automatic control on-chip
- ☐ Automatic control off-chip
- ☐ User-controlled on-chip
- ☐ User-controlled off-chip

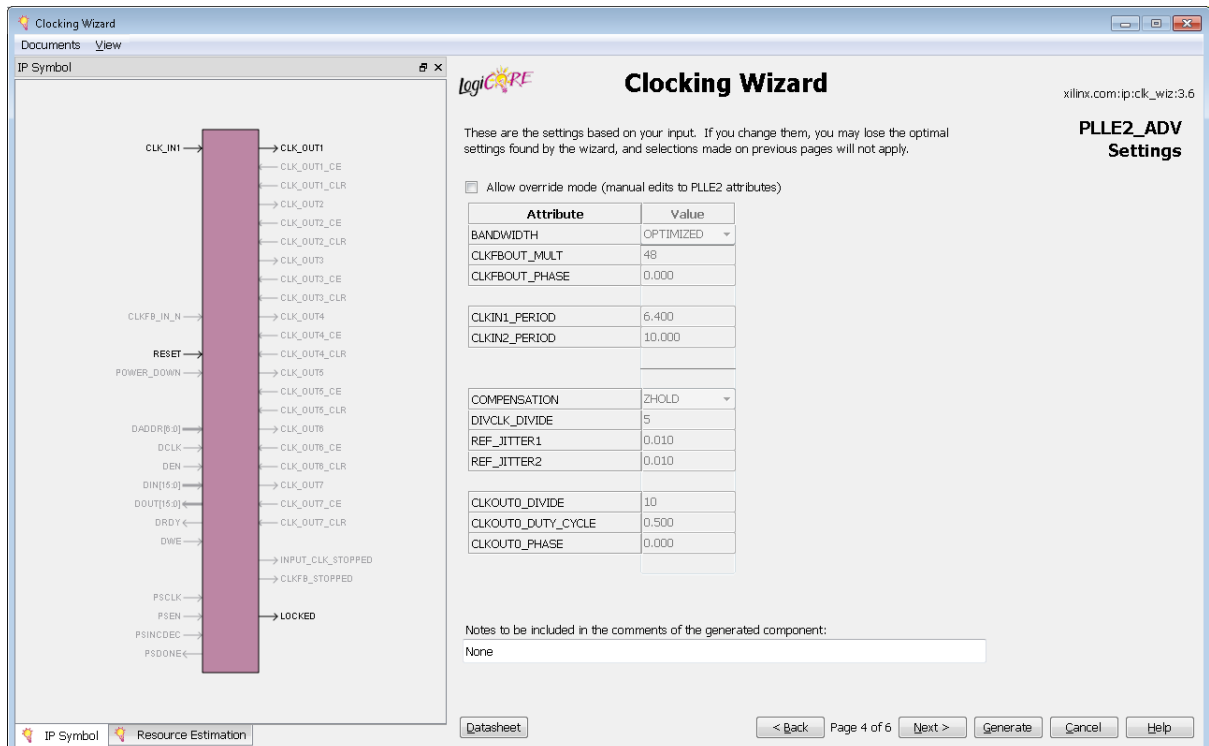
Clock Feedback Signaling

- ☒ Single-ended
- ☐ Differential

I/O and Feedback

At the bottom, there are navigation buttons: < Back, Page 3 of 6, Next >, Generate, Cancel, and Help.

Step 4:



The screenshot shows the 'Clocking Wizard' window at Step 4, 'PLL2_ADV Settings'. The left pane displays the IP Symbol. The right pane shows the settings for the PLL2_ADV block.

These are the settings based on your input. If you change them, you may lose the optimal settings found by the wizard, and selections made on previous pages will not apply.

☐ Allow override mode (manual edits to PLL2 attributes)

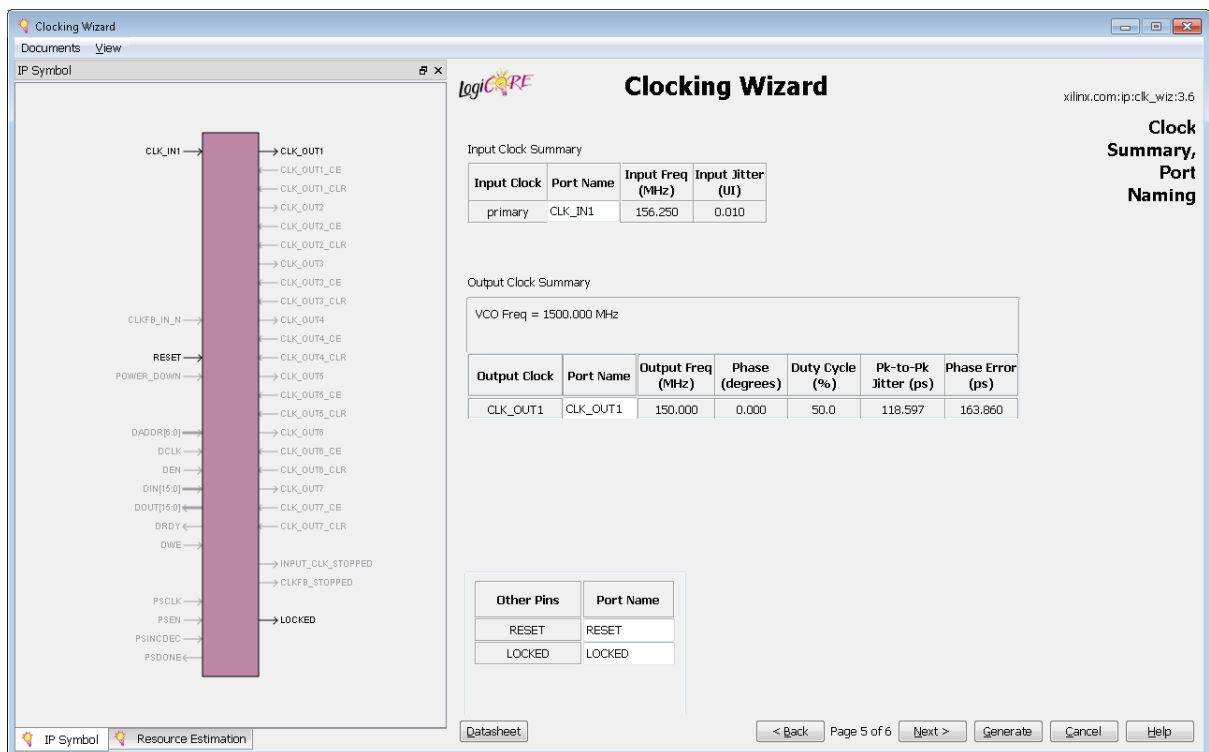
Attribute	Value
BANDWIDTH	OPTIMIZED
CLKFBOUT_MULT	48
CLKFBOUT_PHASE	0.000
CLKIN1_PERIOD	6.400
CLKIN2_PERIOD	10.000
COMPENSATION	ZHOLD
DIVCLK_DIVIDE	5
REF_JITTER1	0.010
REF_JITTER2	0.010
CLKOUT0_DIVIDE	10
CLKOUT0_DUTY_CYCLE	0.500
CLKOUT0_PHASE	0.000

Notes to be included in the comments of the generated component:

None

At the bottom, there are navigation buttons: < Back, Page 4 of 6, Next >, Generate, Cancel, and Help.

Step 5:



Step 6:

