VersaClock® III Evaluation Board Setup Guide

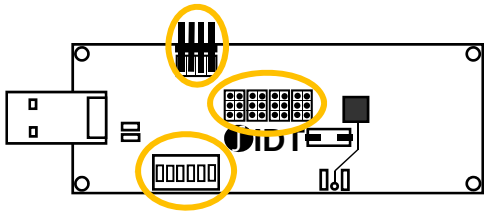
VersaClock®III Eval Board Getting Started Guide

1 Download and Install the Software

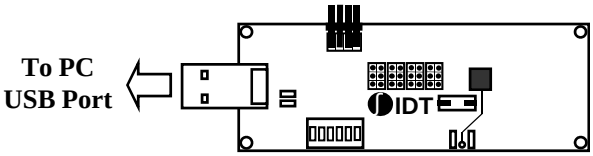
- ❑ Download the software from www.idt.com/go/versaclock3
- ❑ Install USB Driver
- ❑ Install VersaClock III Application

2 Set Jumpers and DIP Switches Correctly

- ❑ See next page



3 Insert Eval Board into PC USB



4 Launch VersaClock III Application

- ❑ If the application is already launched, please close the application and re-launch it again

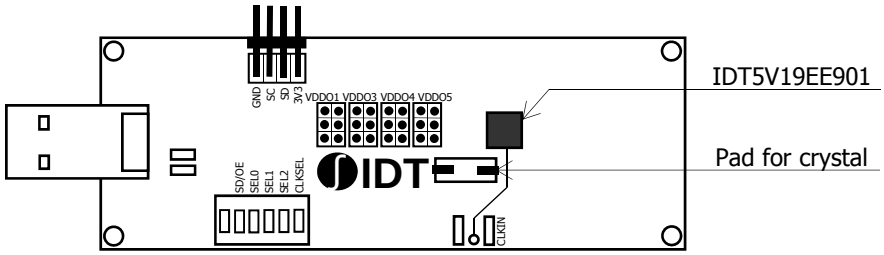
5 Configure the Frequencies

- ❑ Refer to “Configuring a Device” section in VersaClock III User Guide

6 Program the Device

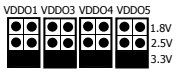
- ❑ Refer to “Programming a Device” section in VersaClock III User Guide

To Configure the Board



- To Program with USB Interface
  - USB interface will translate into I2C interface
  - Short SC jumper(J5B) and SD jumper(J5C)

- To Select I/O voltages
  - 1.8V, 2.5V and 3.3V power supplies are available
  - Select VDDO voltages
  - For 5V19EE901 and 5V49EE901, all jumpers should be set to 3.3V

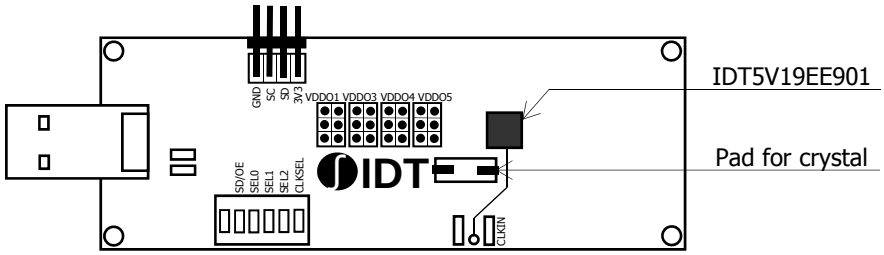


- To Select Clock Source
  - Connect external clock source to CLKIN, or mount a crystal
  - Set CLKSEL to 0 for crystal, 1 for CLKIN in manual switchover mode
  - CLKSEL is ignored in automatic switchover mode

- To Select Configuration
  - Up to six configurations are supported

- To Enable Outputs
  - Polarity is programmable (Default is active LOW)

To Configure the Board



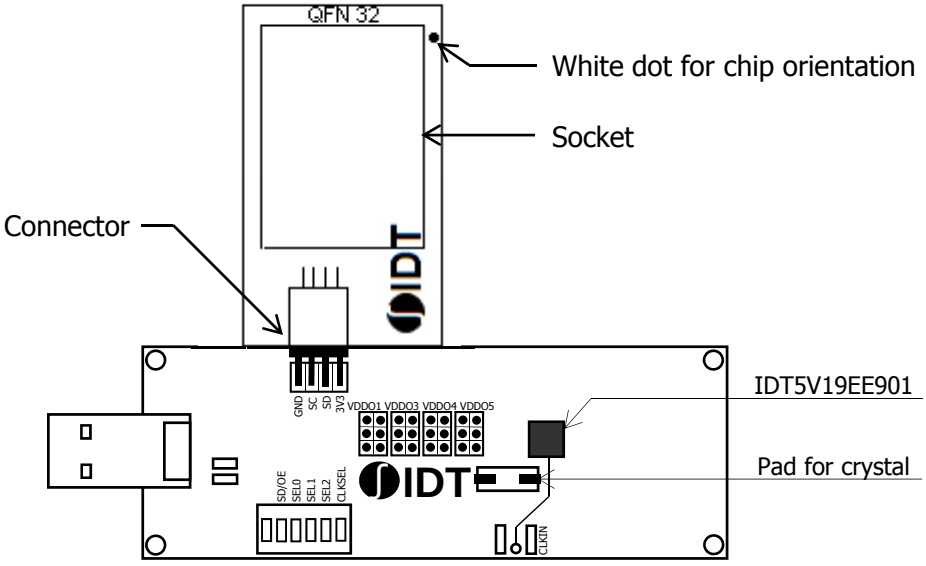
❑ To Configure the Output I/O standard

	Output Pair A		Output Pair B		Output Pair C		Output Pair D	
	Out 1	**Out2**	**Out3**	**Out6**	**Out4**	**Out4b**	**Out5**	**Out5b**
LVTTL	Leave R33, R34 and R35 open		Leave R37, R38 and R39 open		Leave R20, R21 and R22 open		Leave R23, R27 and R32 open	
LVDS	Leave R34 and R35 open Install 100 Ω resistor at R33		Leave R38 and R39 open Install 100 Ω resistor at R37		Leave R21 and R22 open Install 100 Ω resistor at R20		Leave R23 and R27 open Install 100 Ω resistor at R32	
LVPECL	Leave R33 and R45 open Install 50 Ω resistor at R34 and R35 and 0 Ω resistor at R44		Leave R37 and R49 open Install 50 Ω resistor at R38 and R39 and 0 Ω resistor at R48		Leave R20 and R43 open Install 50 Ω resistor at R21 and R22 and 0 Ω resistor at R42		Leave R32 and R47 open Install 50 Ω resistor at R23 and R27 and 0 Ω resistor at R46	
HCSL	Replace R3 and R4 with 33Ω resistors Leave R33 and R44 open Install 50 Ω resistor at R34 and R35 and 0 Ω resistor at R45		Replace R1 and R2 with 33Ω resistors Leave R37 and R48 open Install 50 Ω resistor at R38 and R39 and 0 Ω resistor at R49		Replace R7 and R8 with 33Ω resistors Leave R20 and R42 open Install 50 Ω resistor at R21 and R22 and 0 Ω resistor at R43		Replace R30 and R31 with 33Ω resistors Leave R23 and R46 open Install 50 Ω resistor at R23 and R27 and 0 Ω resistor at R47	

❑ Output Load

- The trace capacitance for each output is approximately 7pF.
- For additional capacitance, install a 8pF or any value of capacitor at C24 for Out0, C25 for Out1, C26 for Out2, C29 for Out3, C30 for Out6, C23 for Out4, C22 for Out4b, C28 for Out5, C27 for Out5b

To Program Devices Using the Socket Board



❑ Steps of Use

- Remove the two center jumpers on the board connector that would be plugged without the socket board;
- Plug in the socket board as shown above
- Place the device in the socket – please align the pin-1 dot on the chip with the white dot on the socket board, see above.
- Plug in the assembled board into USB port of your PC and continue on the programming process as described previously.

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