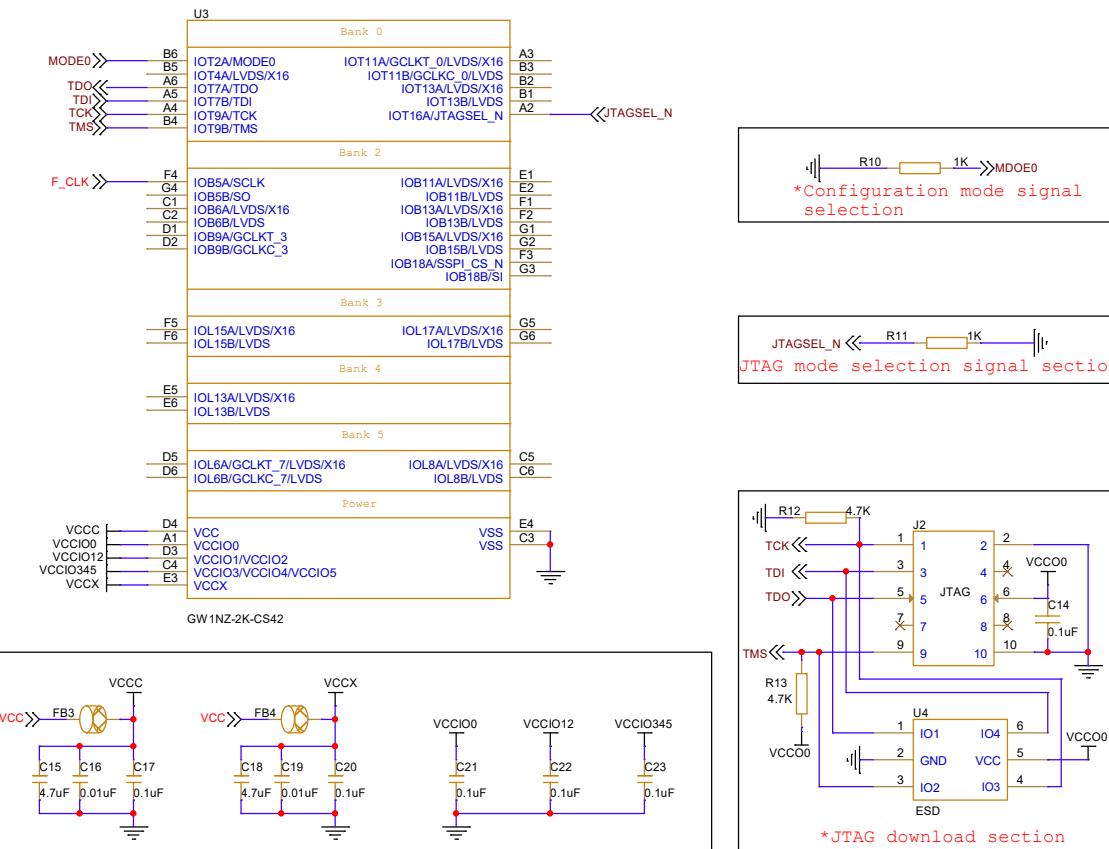
**Notes:**

1. F_CLK signal is an external input clock signal.

It is recommended that F_CLK signal be provided through an active oscillator crystal.

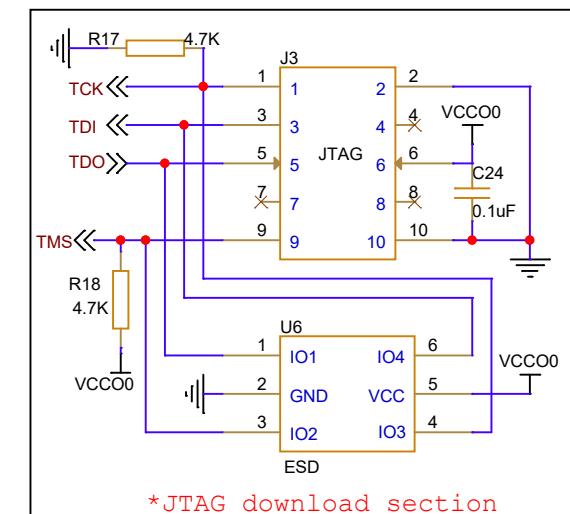
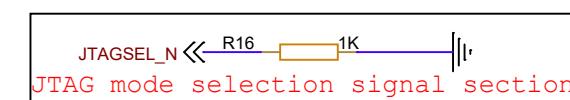
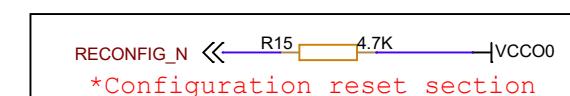
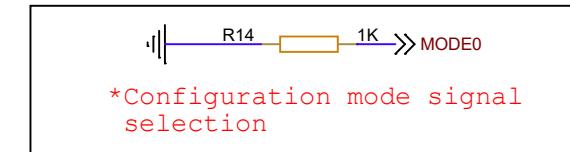
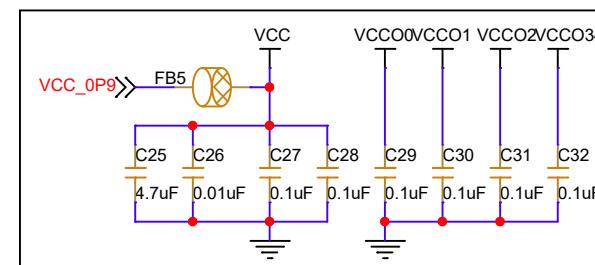
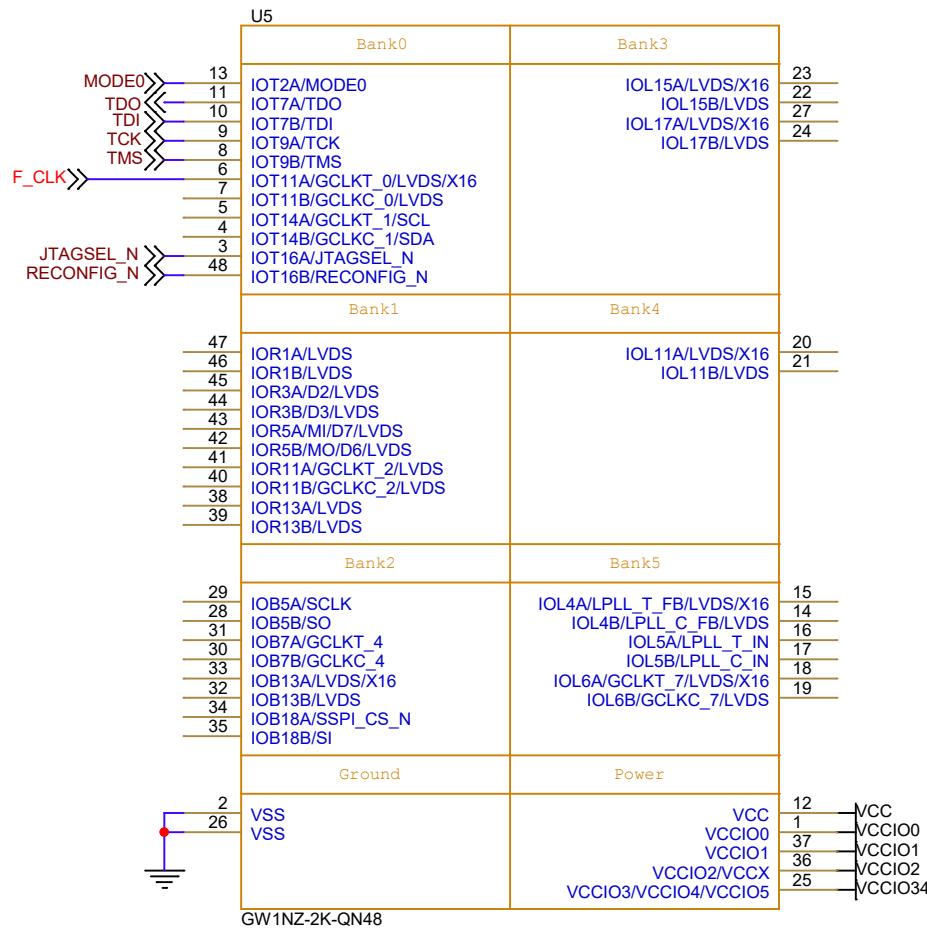
2. It is recommended that add an ESD protection chip to the JTAG download circuit.

Title	
GOWIN Minimum System Diagram	
Size A3	Document Number GW1NZ-2K-CS100H
Rev 2.2	Date: Wednesday, April 10, 2024

**Notes:**

1. F_CLK signal is an external input clock signal.
It is recommended that F_CLK signal be provided through an active oscillator crystal.
2. It is recommended that add an ESD protection chip to the JTAG download circuit.

Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
A3	GW1NZ-2K-CS42	2.2
Date:	Wednesday, April 10, 2024	Sheet 2 of 3

**Notes:**

1. F_CLK signal is an external input clock signal.
It is recommended that F_CLK signal be provided through an active oscillator crystal.
2. It is recommended that add an ESD protection chip to the JTAG download circuit.

Title	
GOWIN Minimum System Diagram	
Size	Document Number
A4	GW1NZ-2K-QN48
Rev 2.2	
Date: Wednesday, April 10, 2024	Sheet 3 of 3