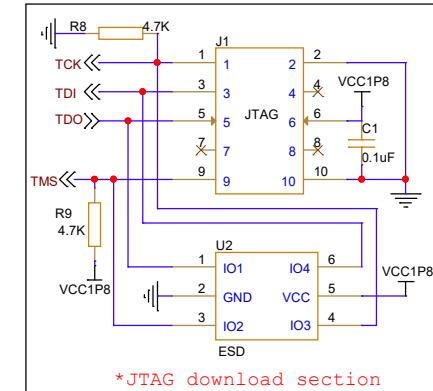
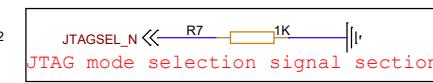
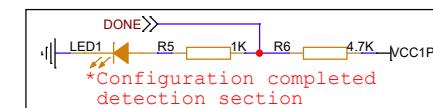
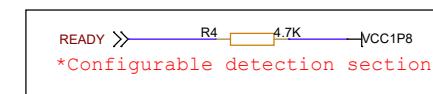
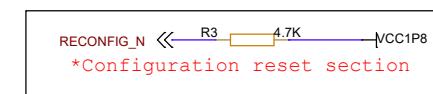
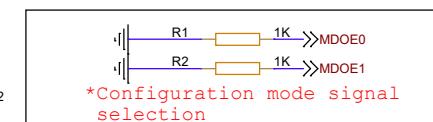
**Notes:**

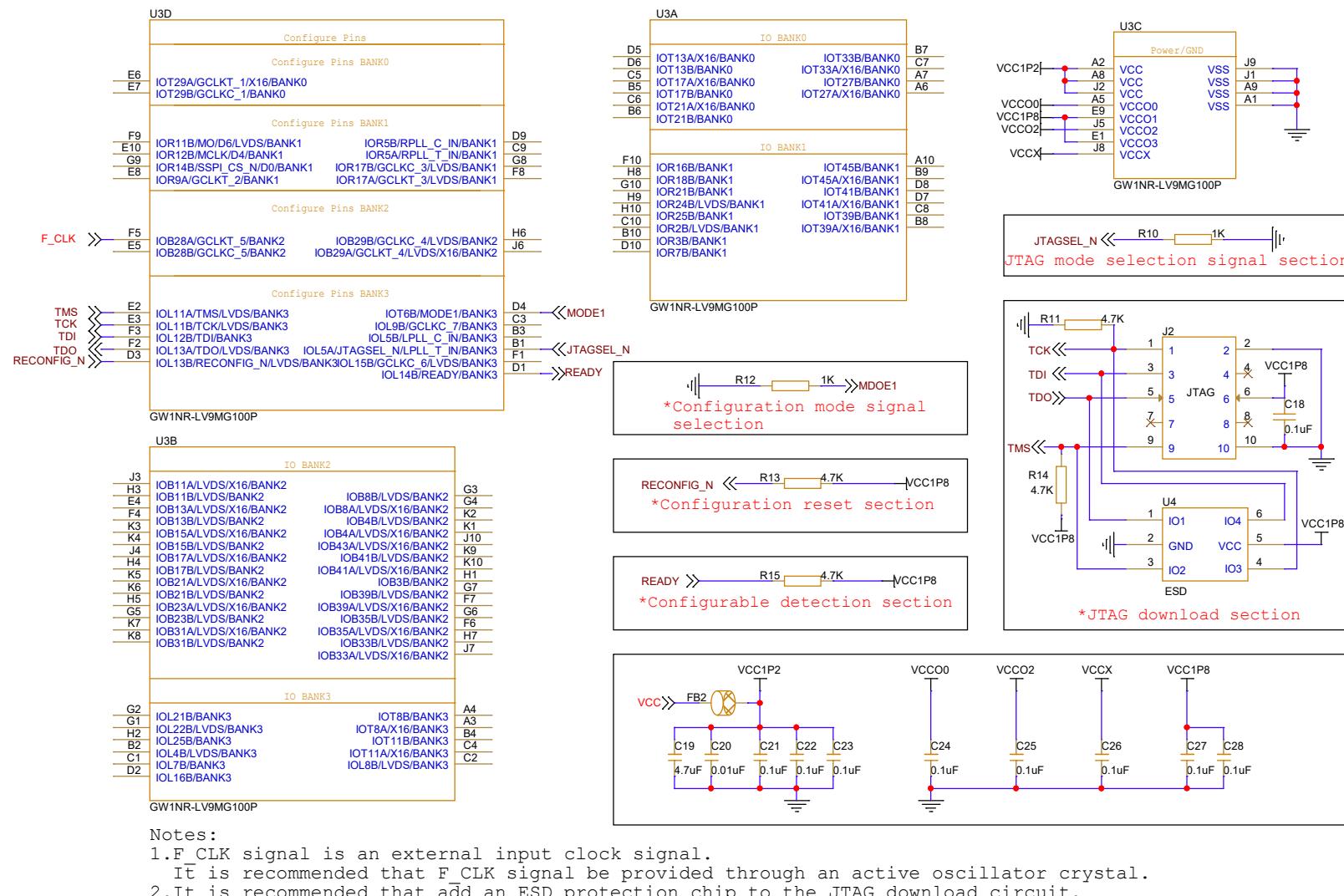
1. F_CLK signal is an external input clock signal.
It is recommended that F_CLK signal be provided through an active oscillator crystal.
2. It is recommended that add an ESD protection chip to the JTAG download circuit.



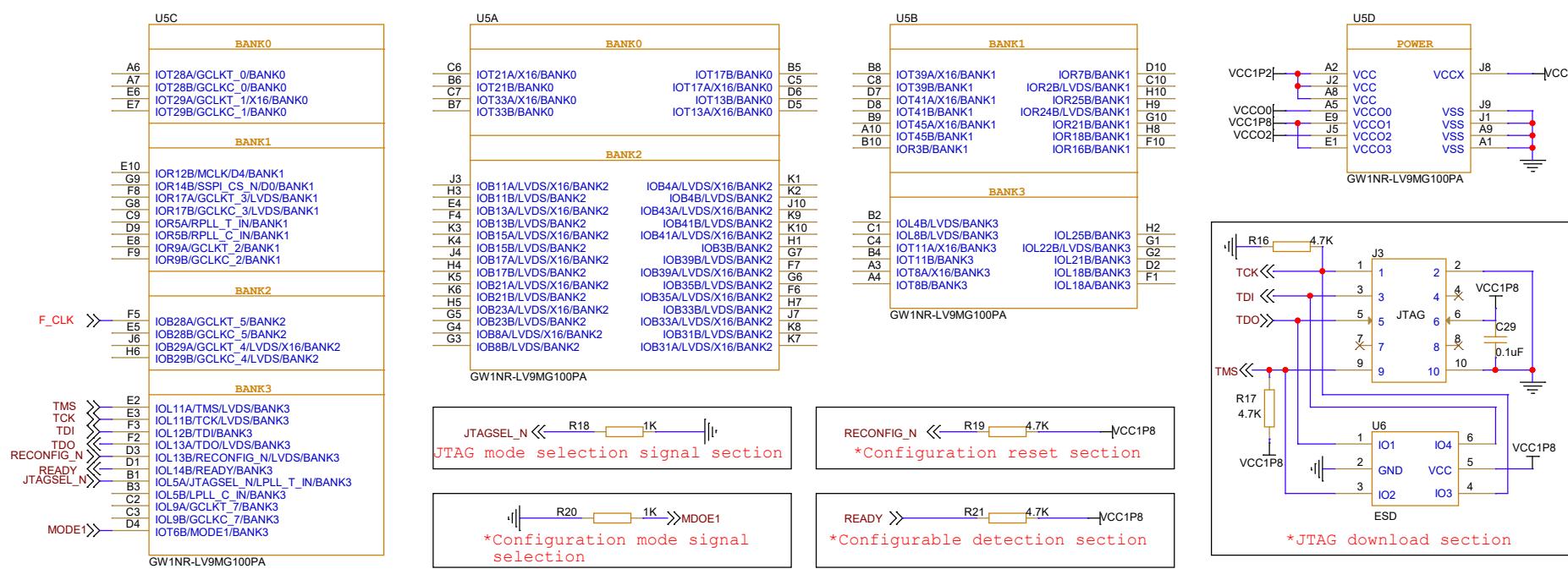
Title: GOWIN Minimum System Diagram
Size: B Document Number: GW1NR-LV9LQ144P

Rev 2.2

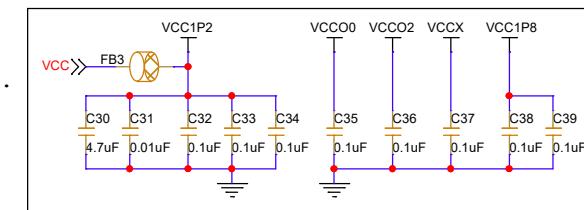
Date: Wednesday, April 10, 2024 Sheet 1 of 12



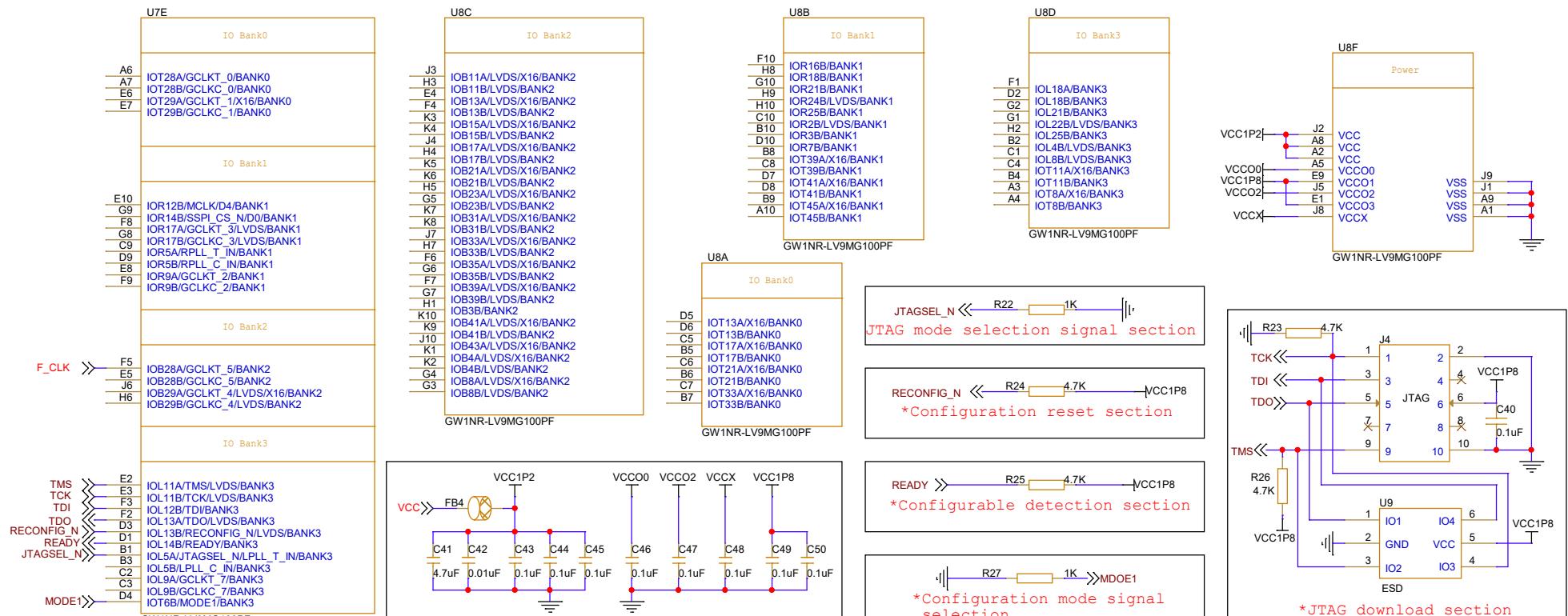
Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
B	GW1NR-LV9MG100P	2.2

**Notes:**

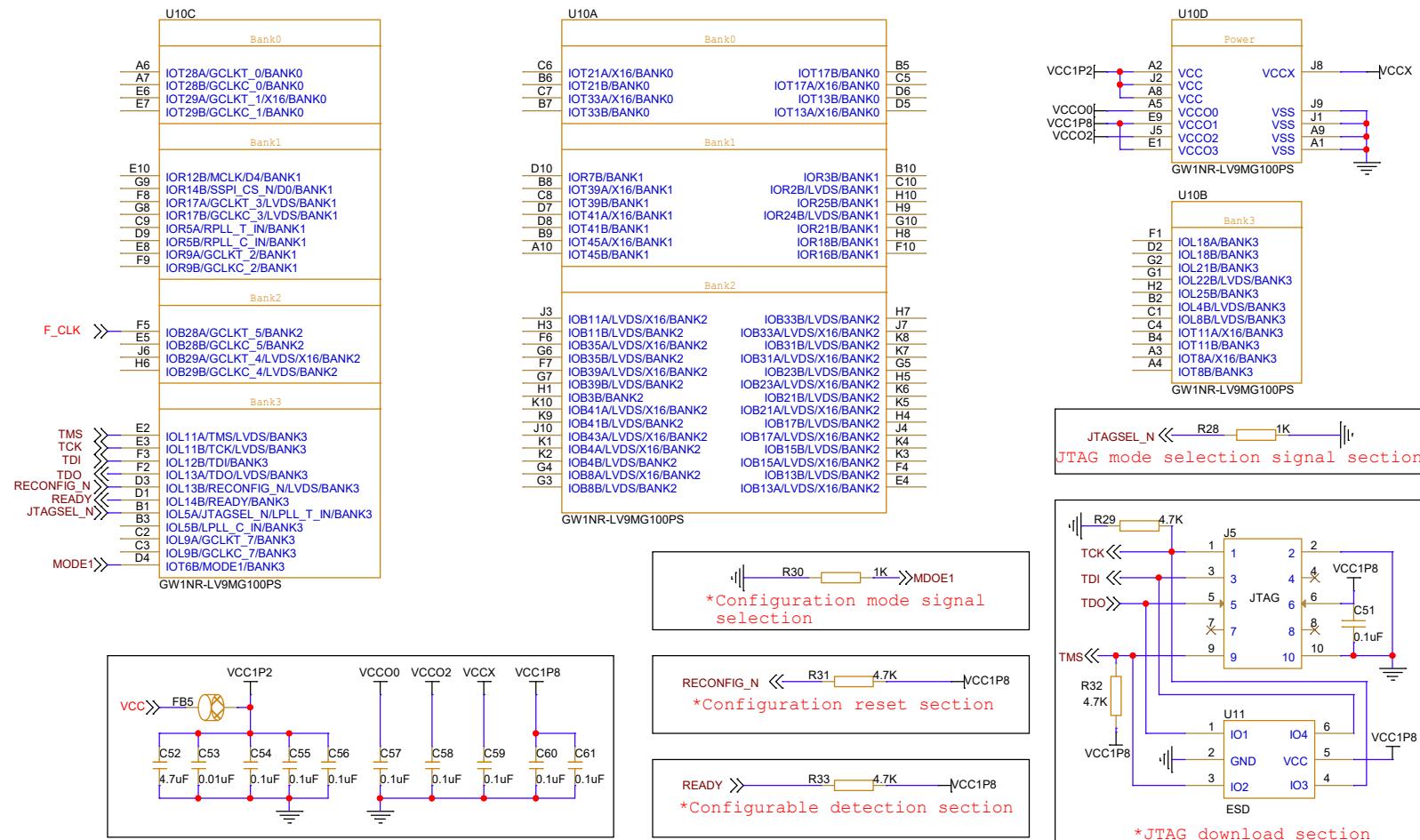
1. F CLK signal is an external input clock signal.
It is recommended that F CLK signal be provided through an active oscillator crystal.
2. It is recommended that add an ESD protection chip to the JTAG download circuit.



Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
B	GW1NR-LV9MG100PA	2.2
	Date: Wednesday, April 10, 2024	Sheet 3 of 12



Title	
GOWIN Minimum System Diagram	
Size B	Document Number GW1NR-LV9MG100PF
Rev 2.2	

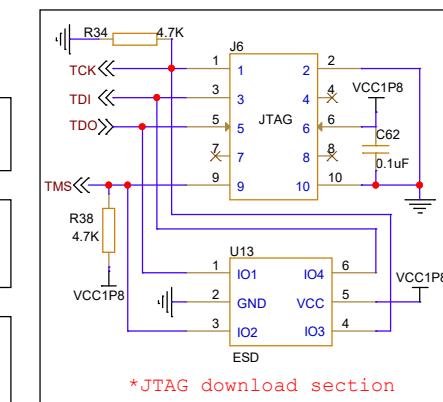
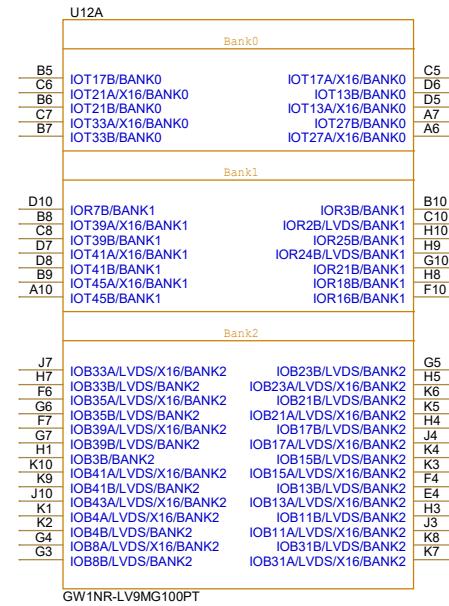
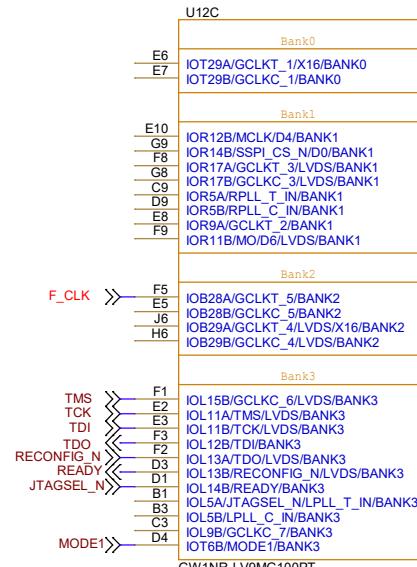
GW1NR-LV9MG100PS**Notes:**

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.

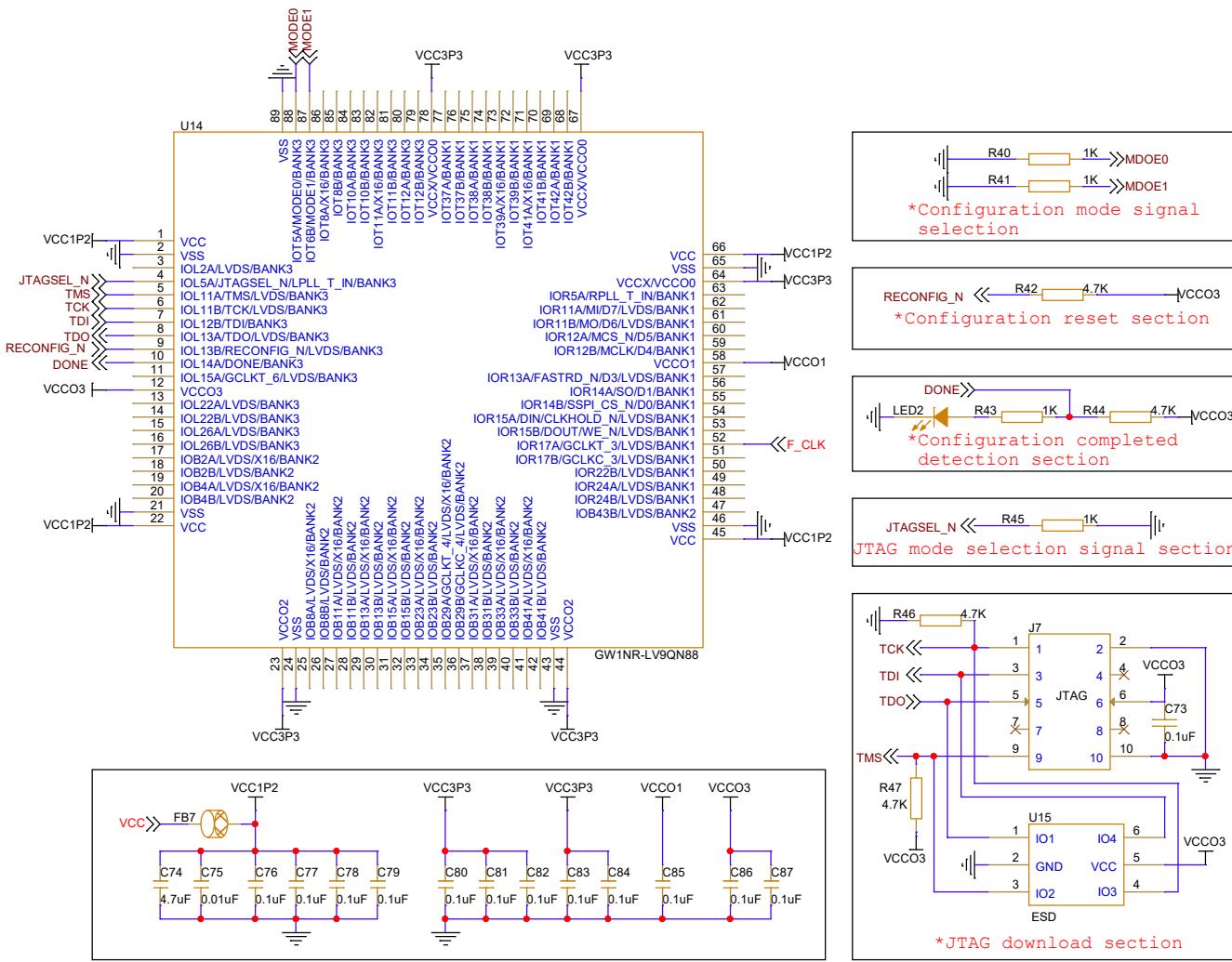
Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
B	GW1NR-LV9MG100PS	2.2
Date:	Wednesday, April 10, 2024	Sheet 5 of 12



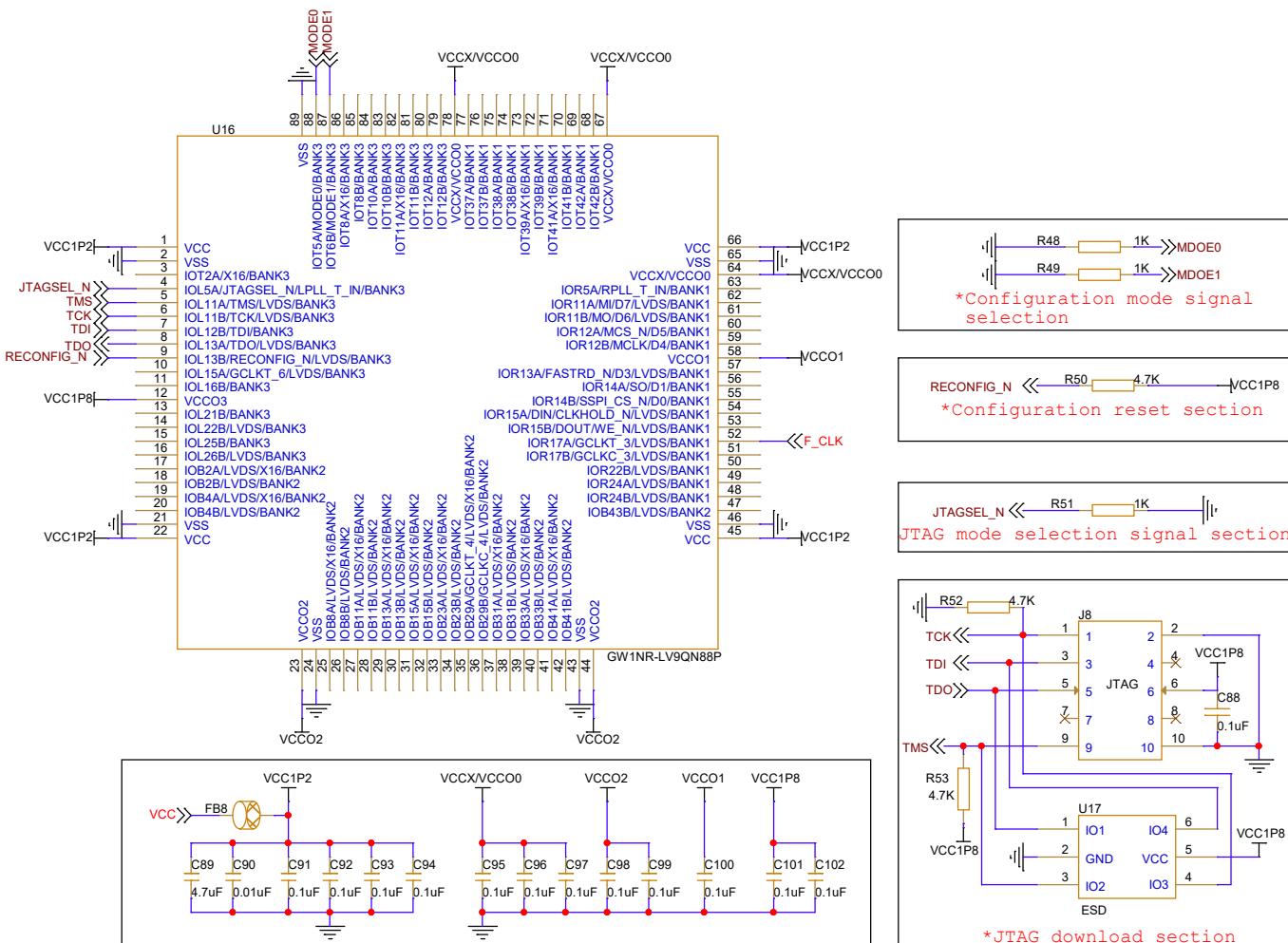
Notes:

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.

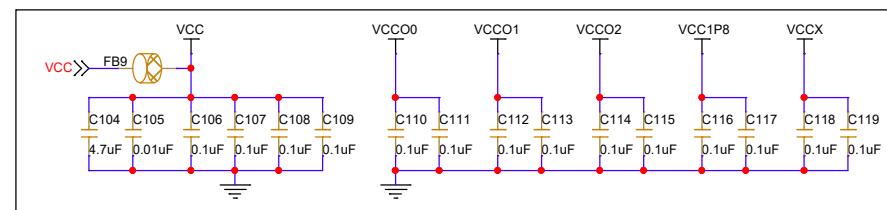
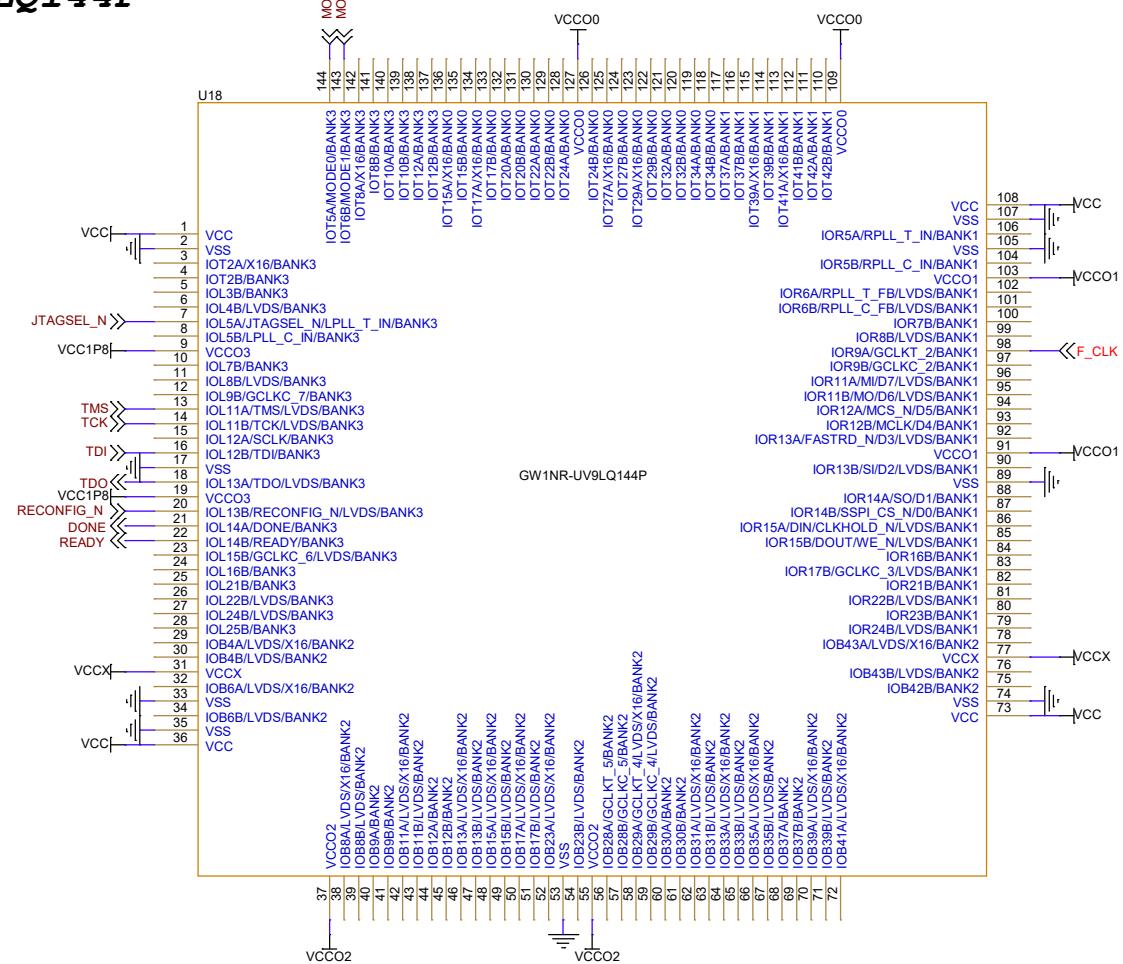
Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
B	GW1NR-LV9MG100PT	2.2
Date:	Wednesday, April 10, 2024	Sheet 6 of 12



Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
B	GW1NR-LV9QN88	2.2
	Date: Wednesday, April 10, 2024	Sheet 7 of 12

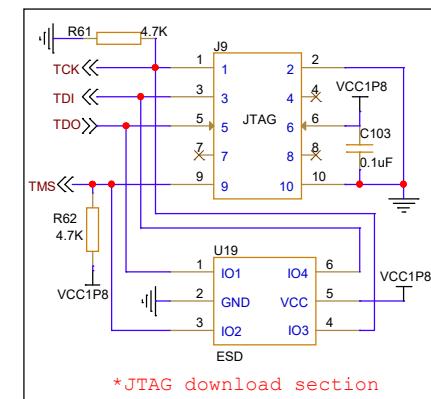
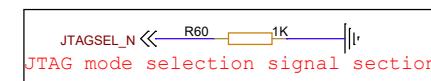
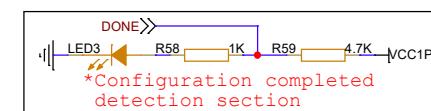
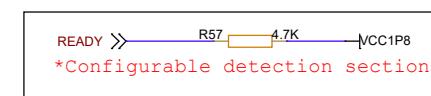
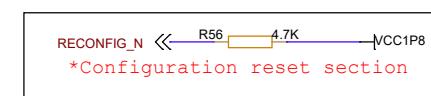
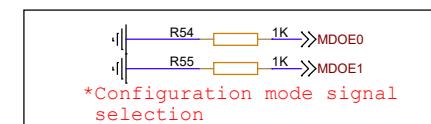


Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
B	GW1NR-LV9QN88P	2.2
Date:	Wednesday, April 10, 2024	Sheet 8 of 12

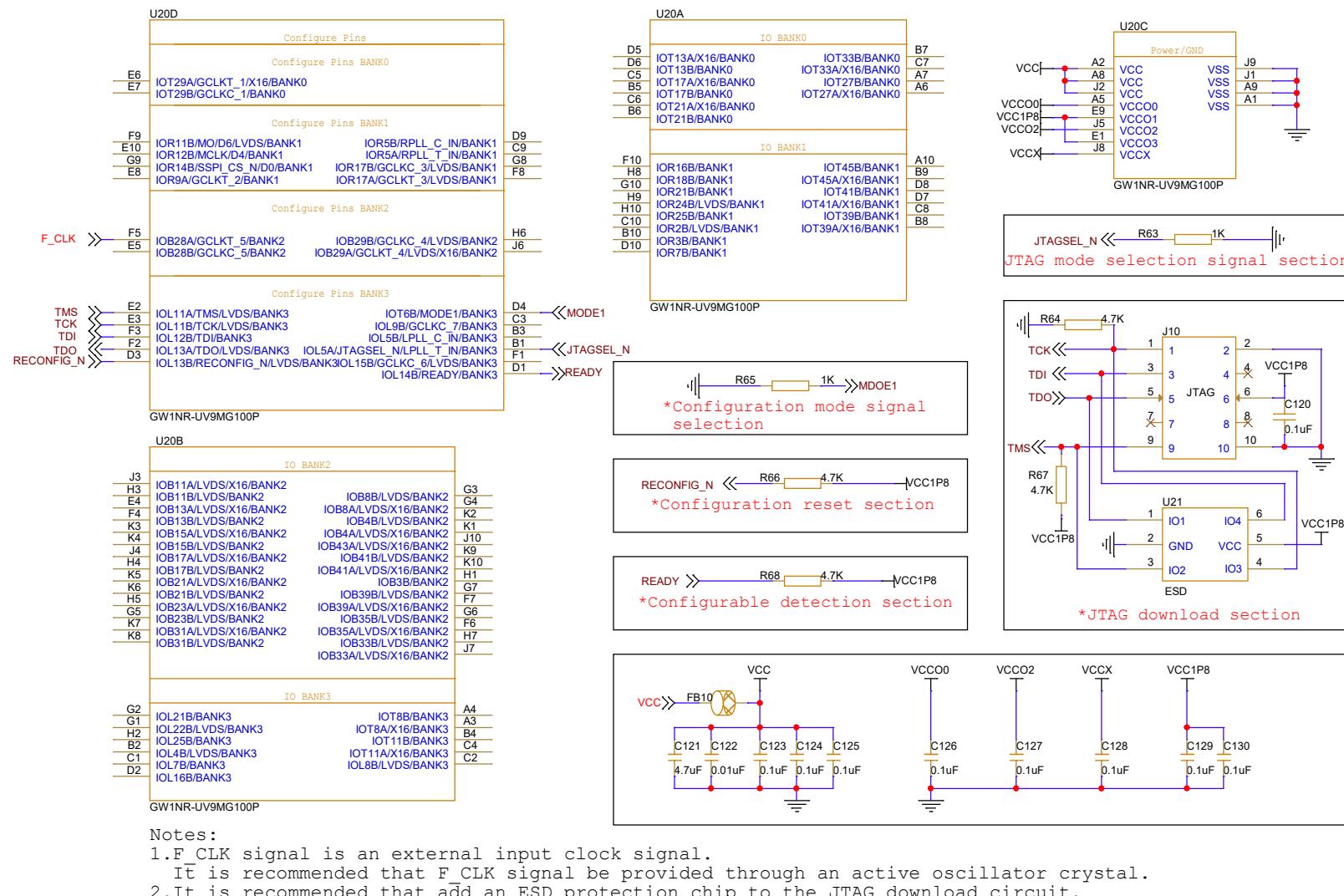


Notes:

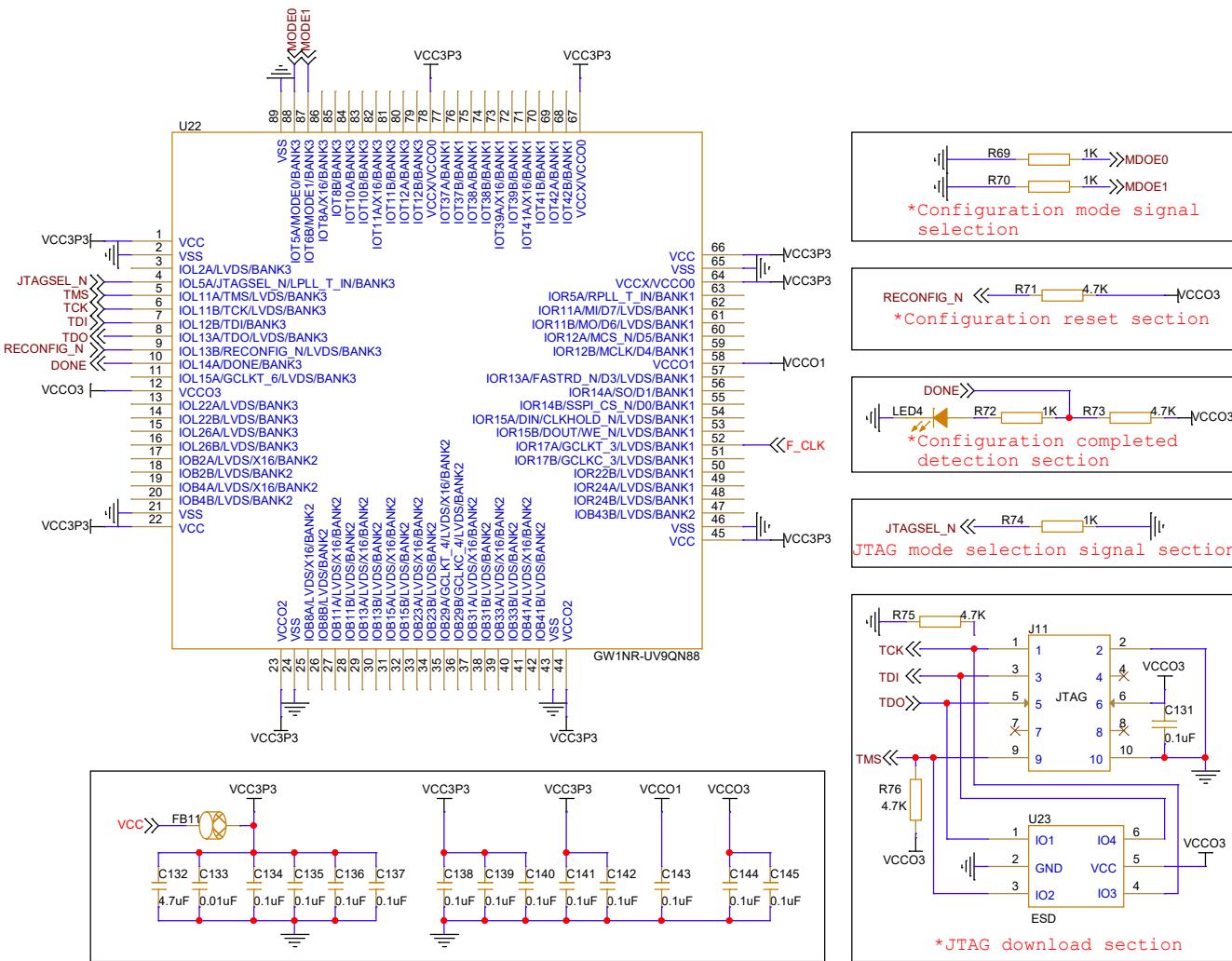
1. F_CLK signal is an external input clock signal.
It is recommended that F_CLK signal be provided through an active oscillator crystal.
2. It is recommended that add an ESD protection chip to the JTAG download circuit.



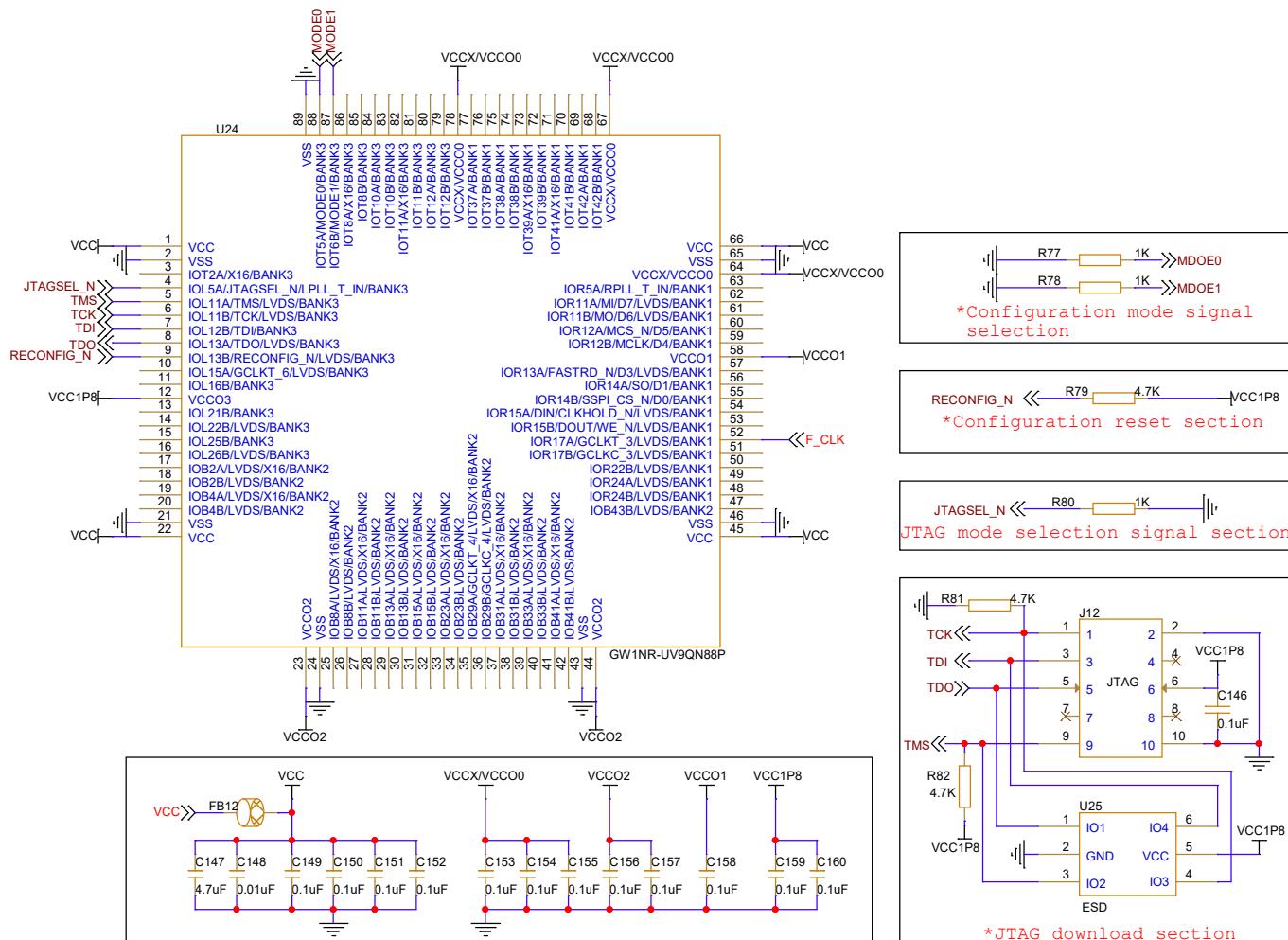
Title	
GOWIN Minimum System Diagram	
Size	Document Number
B	GW1NR-UV9LQ144P
Rev	2.2
Date:	Wednesday, April 10, 2024
Sheet	9 of 12



Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
B	GW1NR-UV9MG100P	2.2
Date:	Wednesday, April 10, 2024	Sheet 10 of 12



Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
B	GW1NR-UV9QN88	2.2
Date:	Wednesday, April 10, 2024	Sheet 11 of 12



Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
B	GW1NR-UV9QN88P	2.2
Date:	Wednesday, April 10, 2024	Sheet 12 of 12