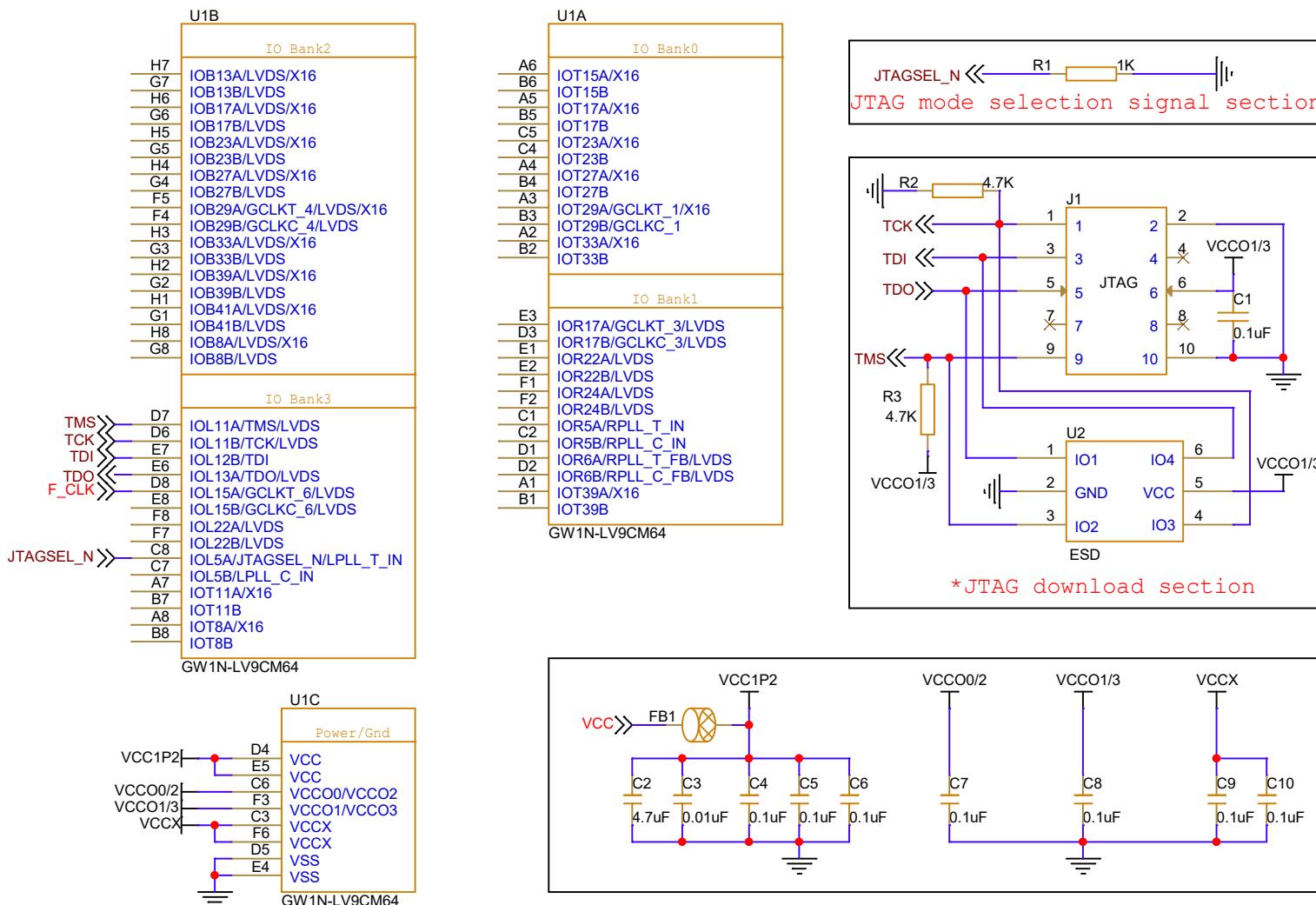
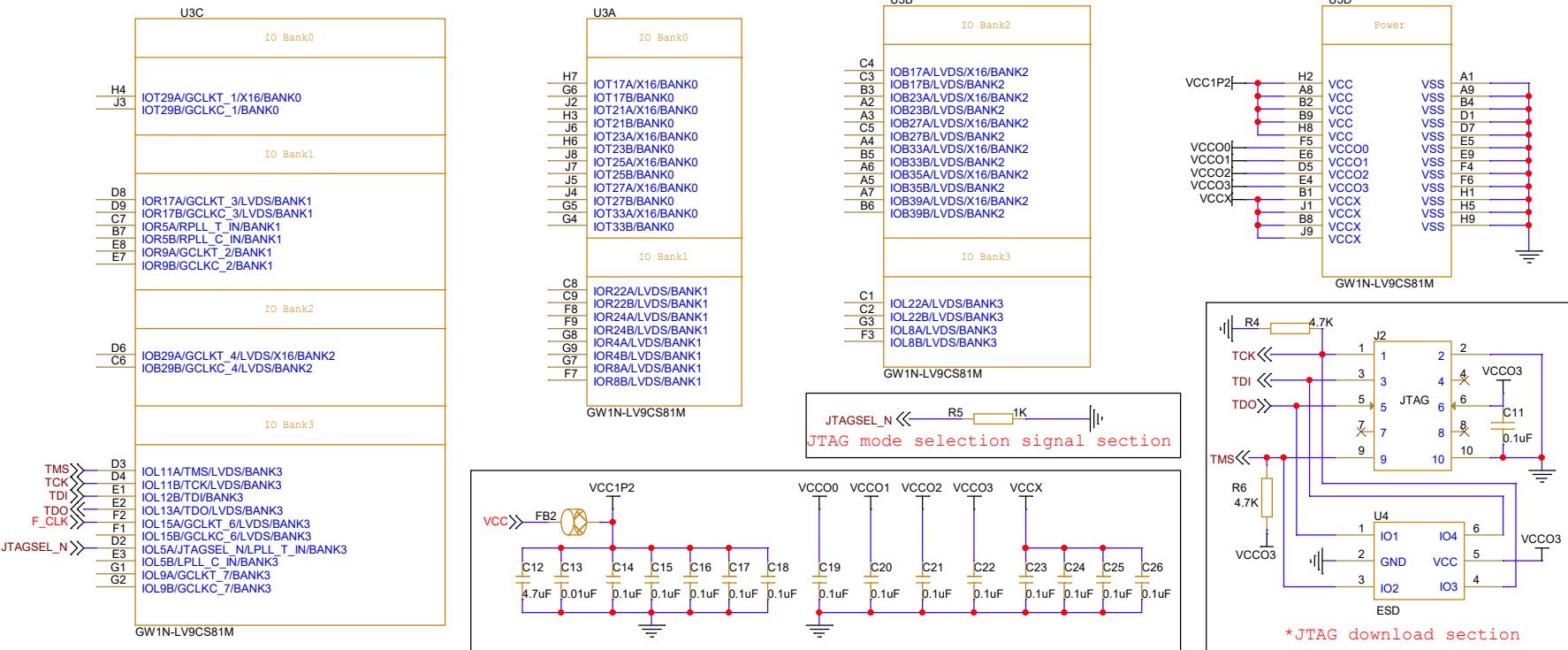


# GW1N-LV9CM64



## 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.

**GW1N-LV9CS81M**

## Notes:

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

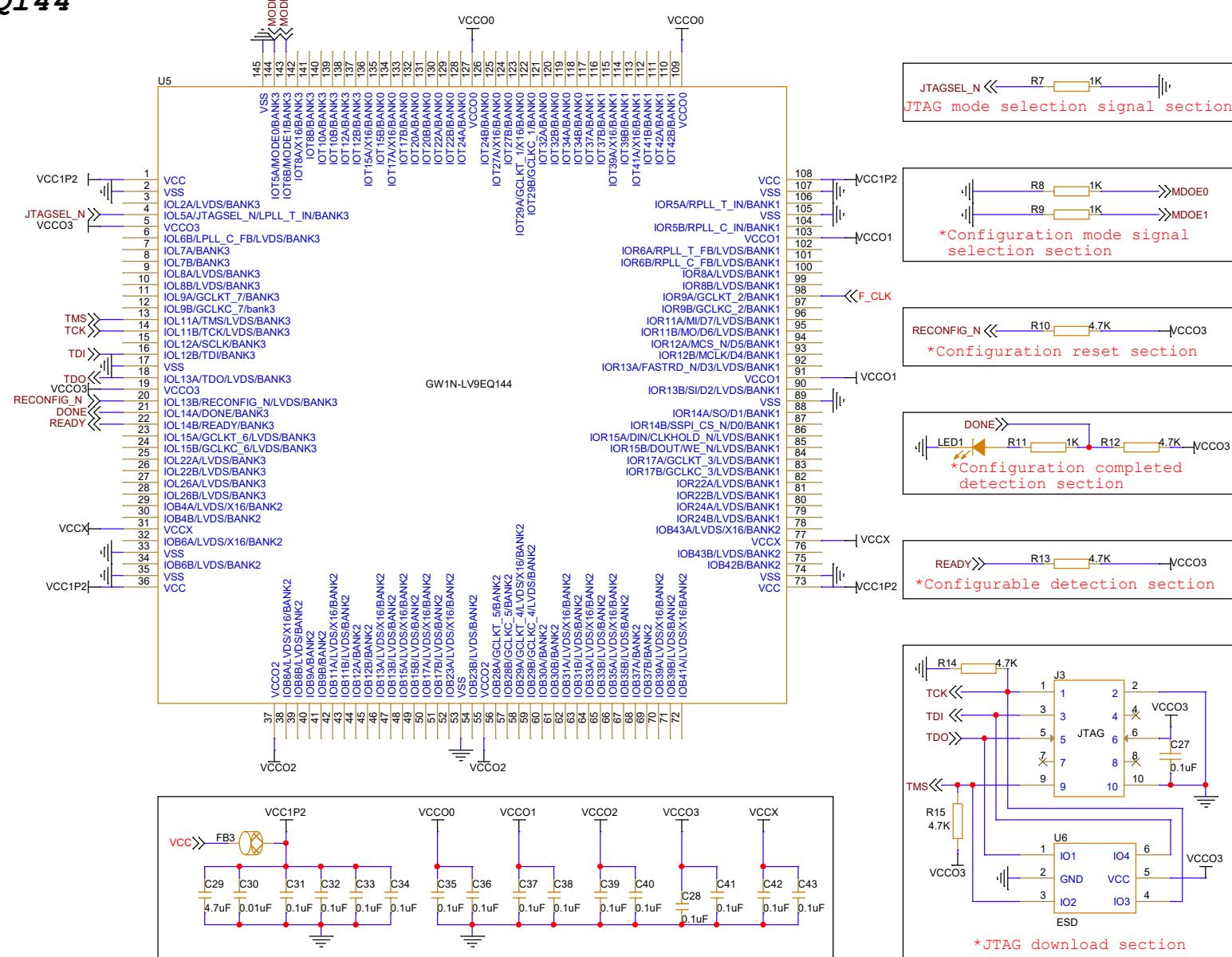
Title	
GOWIN Minimum System Diagram	

Size	Document Number
B	GW1N-LV9CS81M

Rev
2.1

Date: Tuesday, April 09, 2024

Sheet 2 of 32

**Notes:**

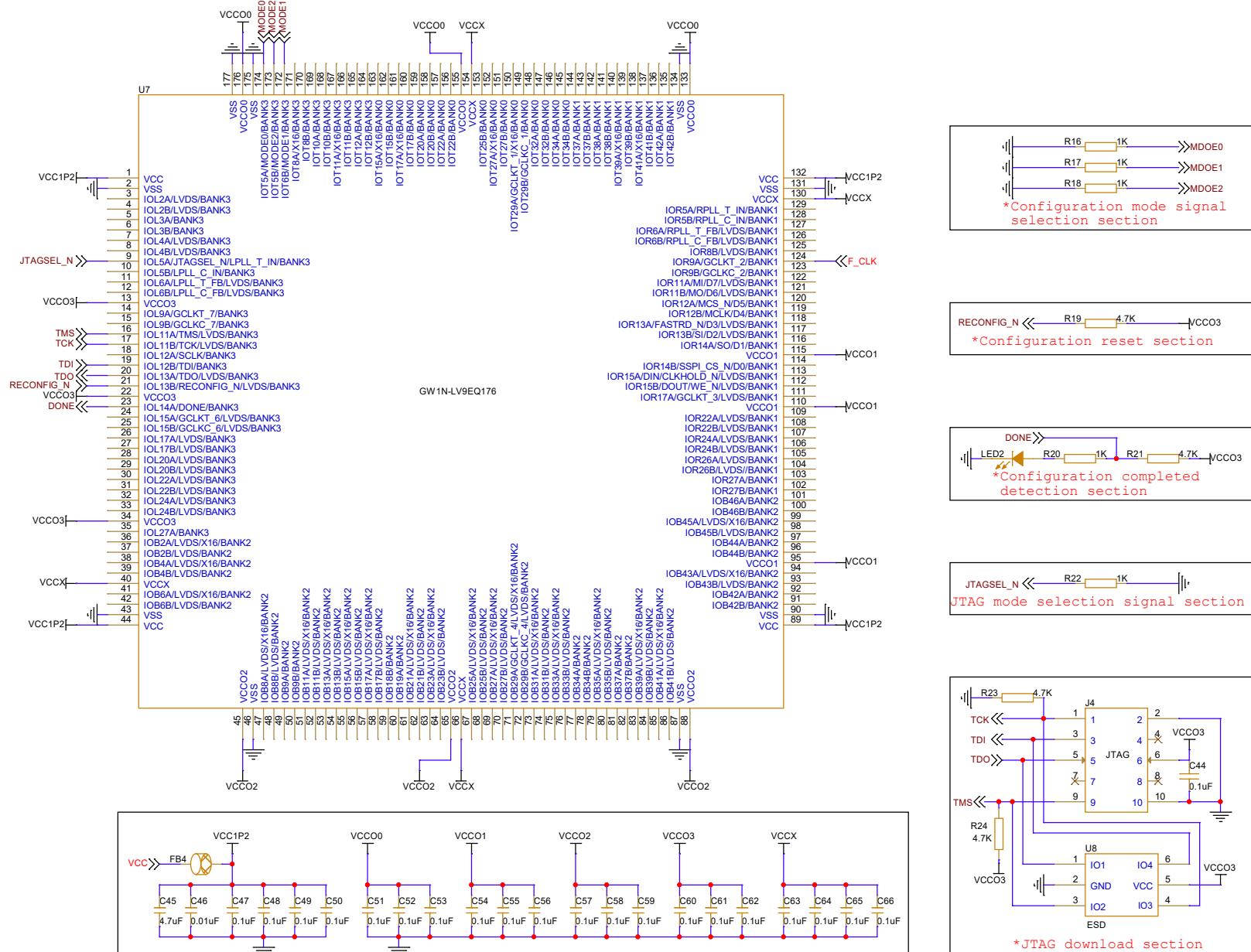
1. F\_CLK signal is an external input clock signal.

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: GW1N-LV9EQ144 Rev: 2.1

Date: Tuesday, April 09, 2024

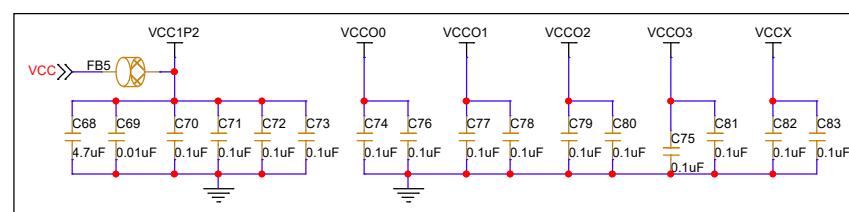
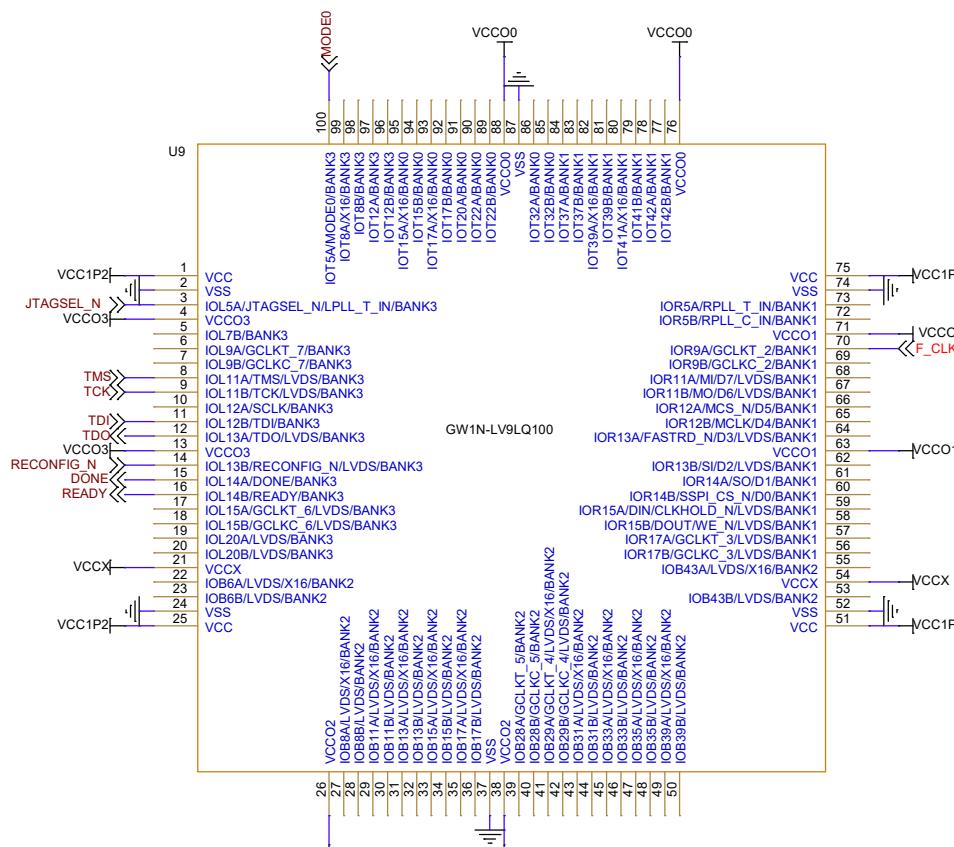
**Notes:**

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

Title		GOWIN Minimum System Diagram	
Size	Document Number	GW1N-LV9EQ176	
Date:	Rev.	Tuesday, April 09, 2024	2.1

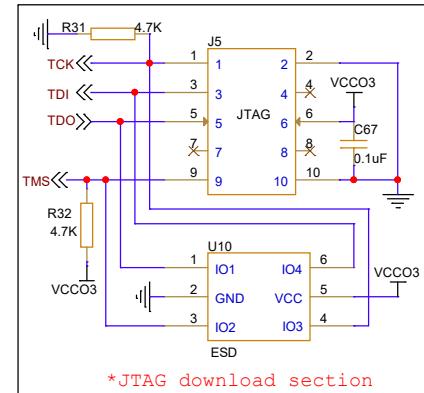
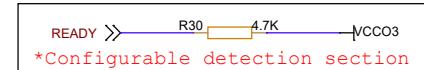
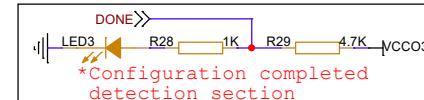
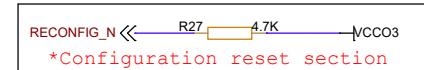
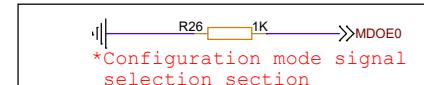
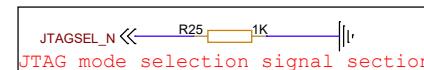
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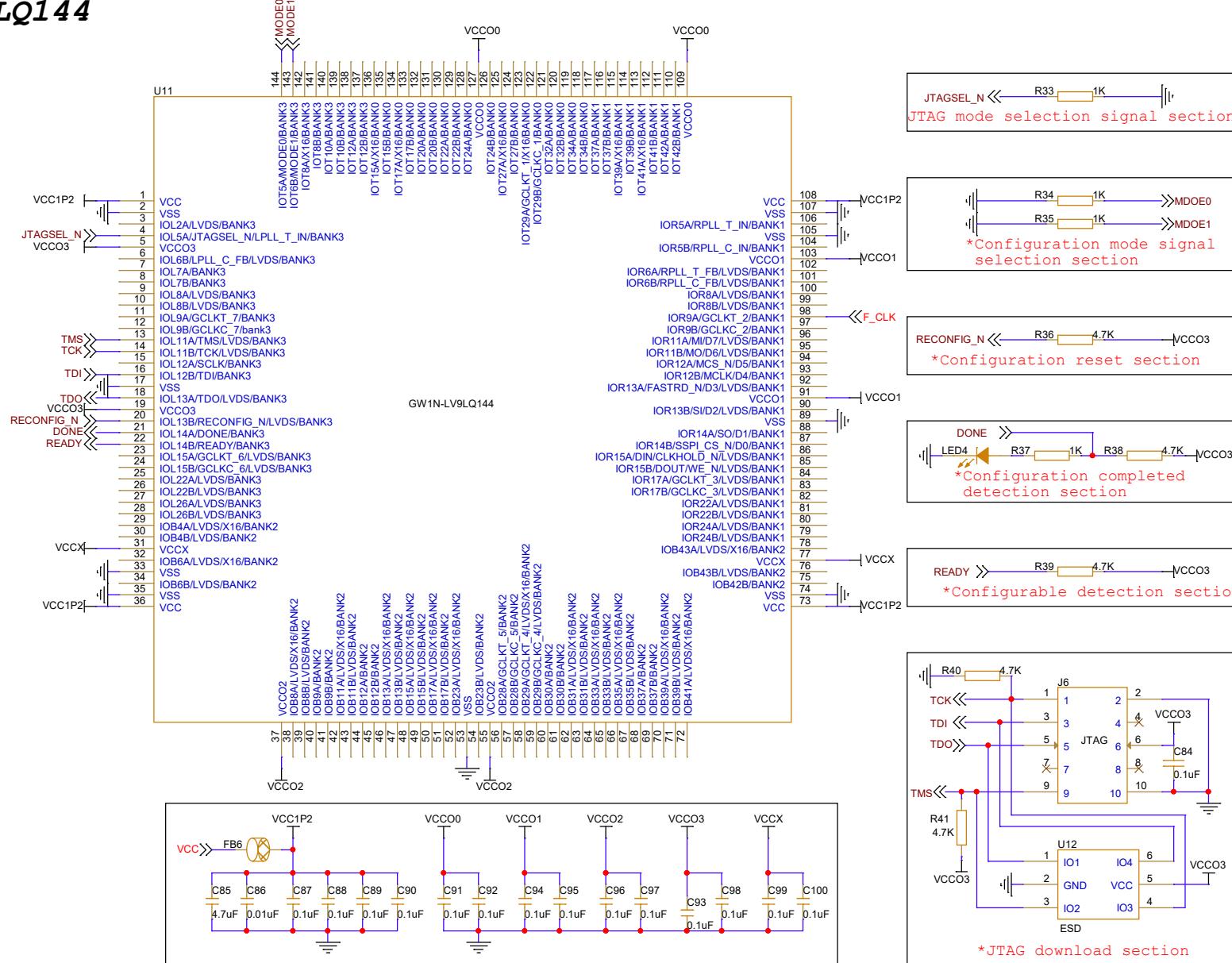
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## Notes:

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.

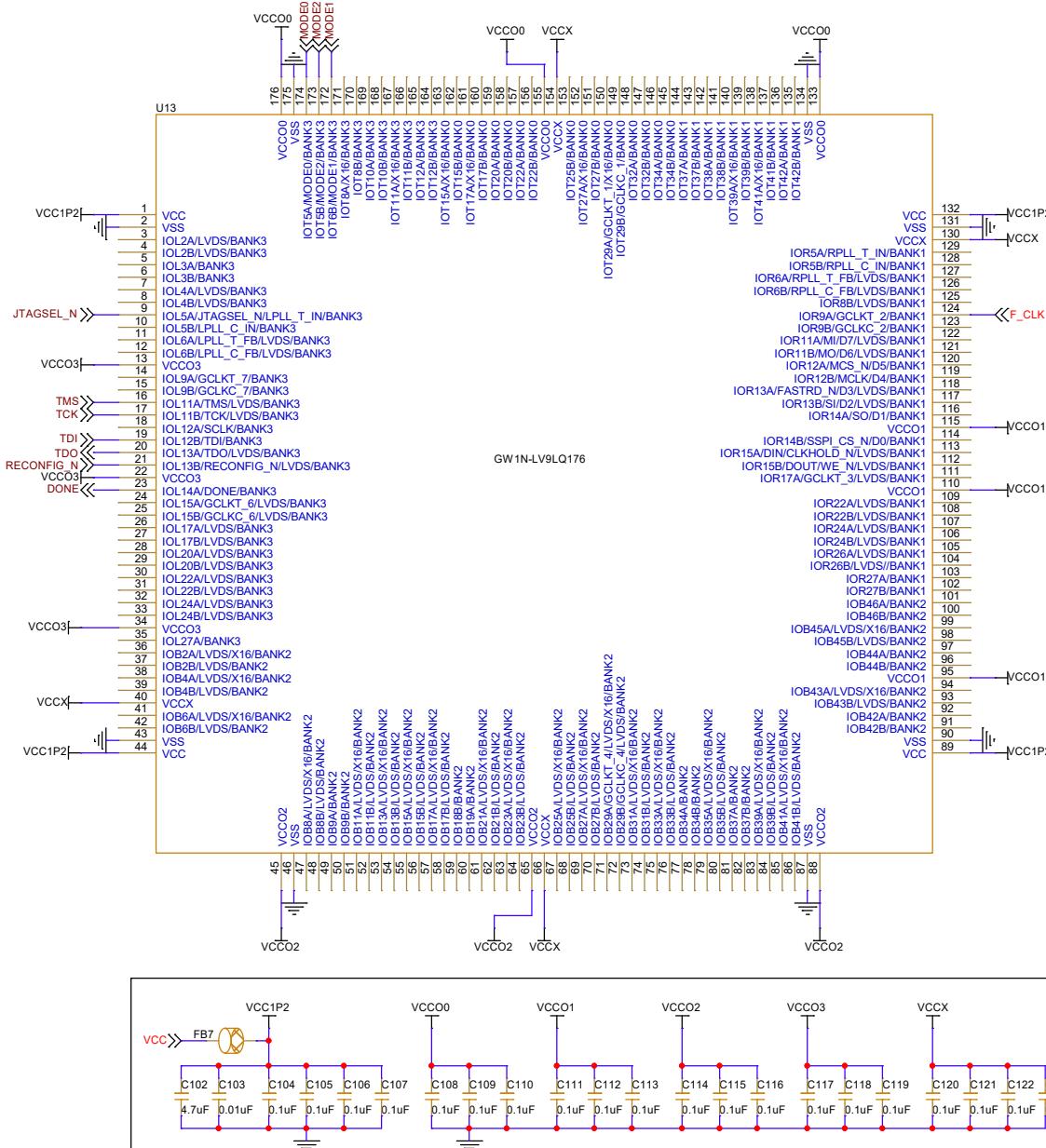


**Notes:**

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	GW1N-LV9LQ144

Date: Tuesday, April 09, 2024 Sheet 6 of 32 Rev 2.1

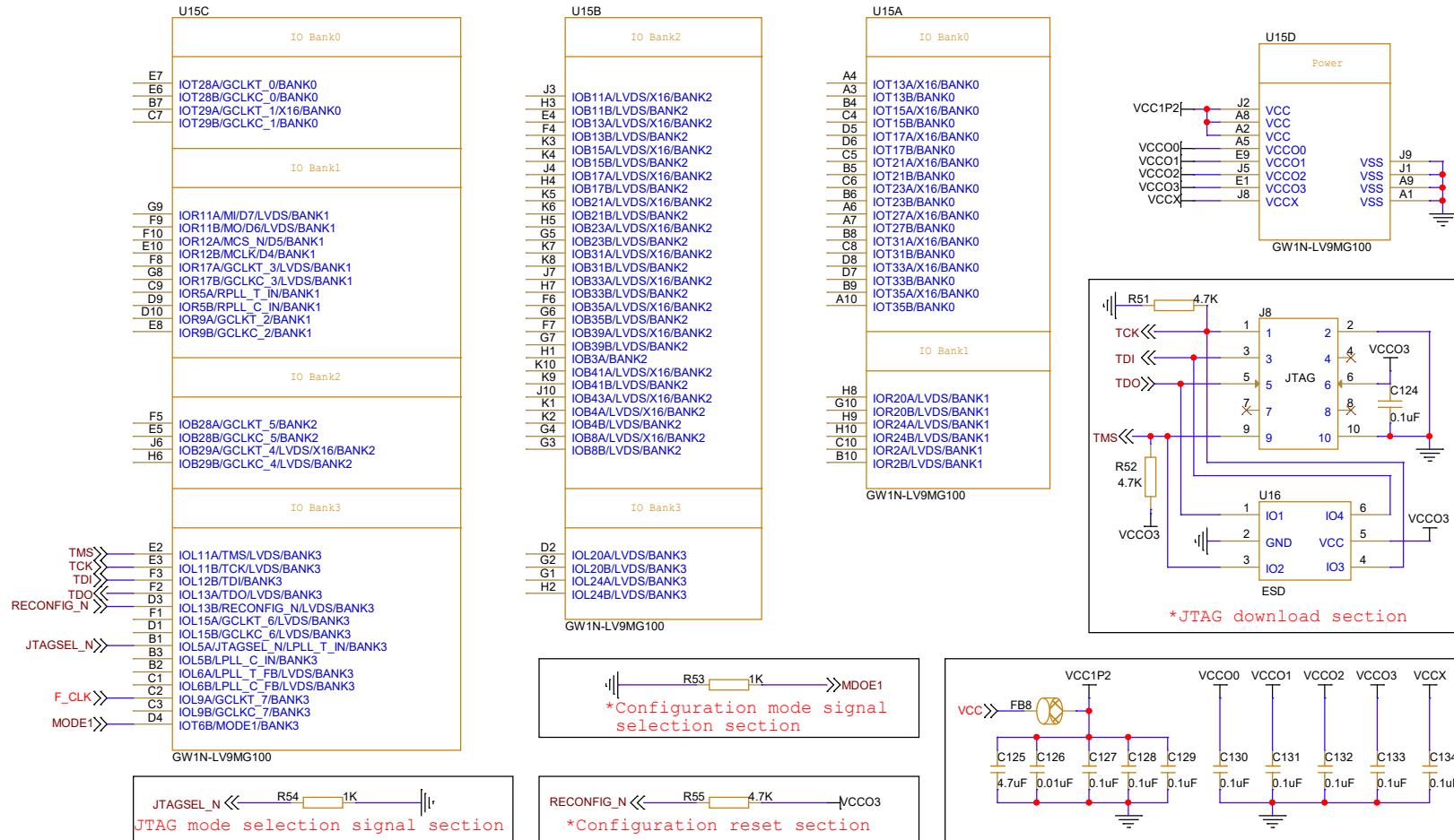
**Notes:**

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.

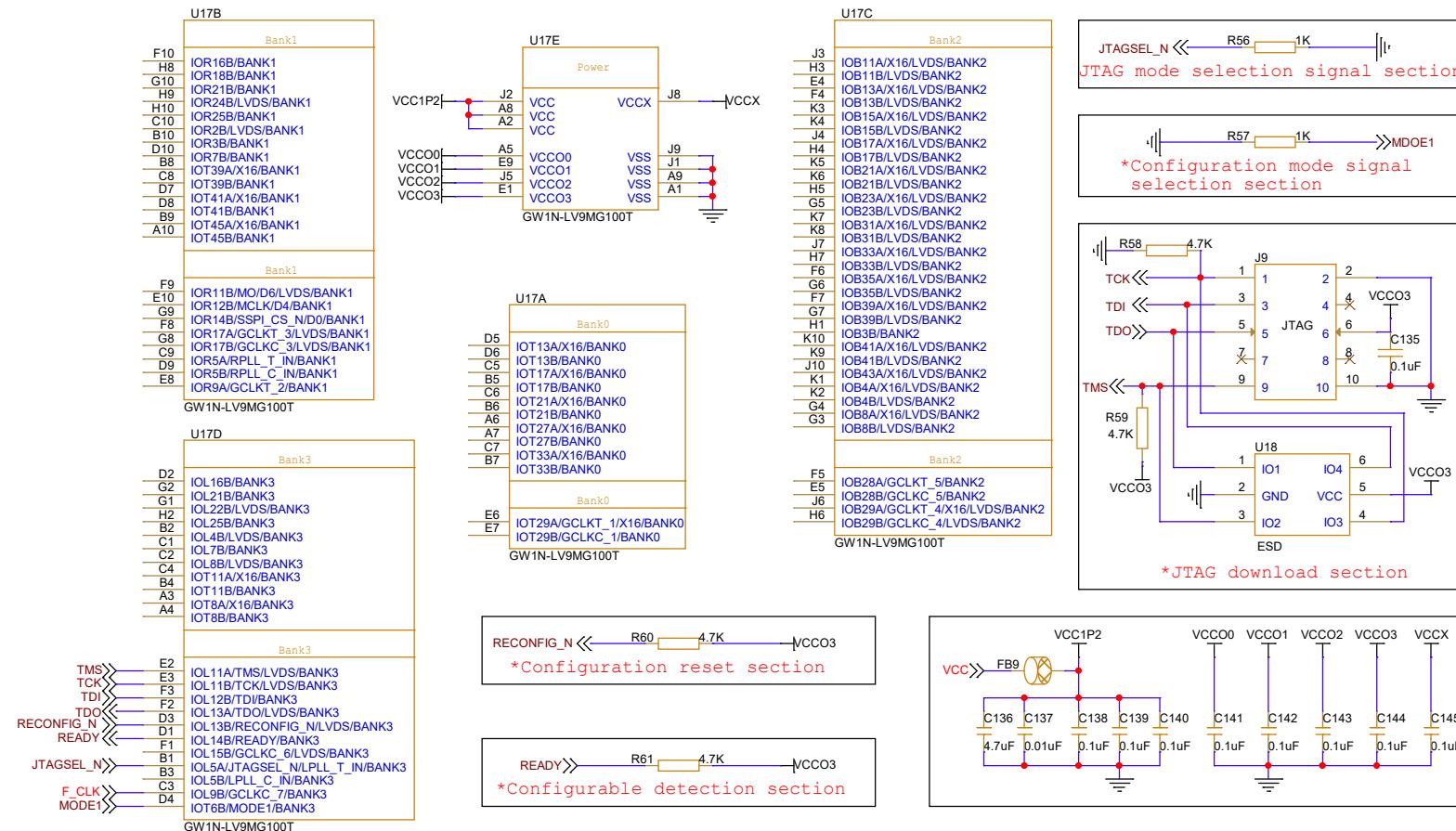
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GOWIN Minimum System Diagram	
Size	Document Number
A3	GW1N-LV9LQ176
Rev.	2.1
Date:	Wednesday, April 10, 2024
Sheet	7 of 32

**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 GW1N-LV9MG100
Rev 2.1	

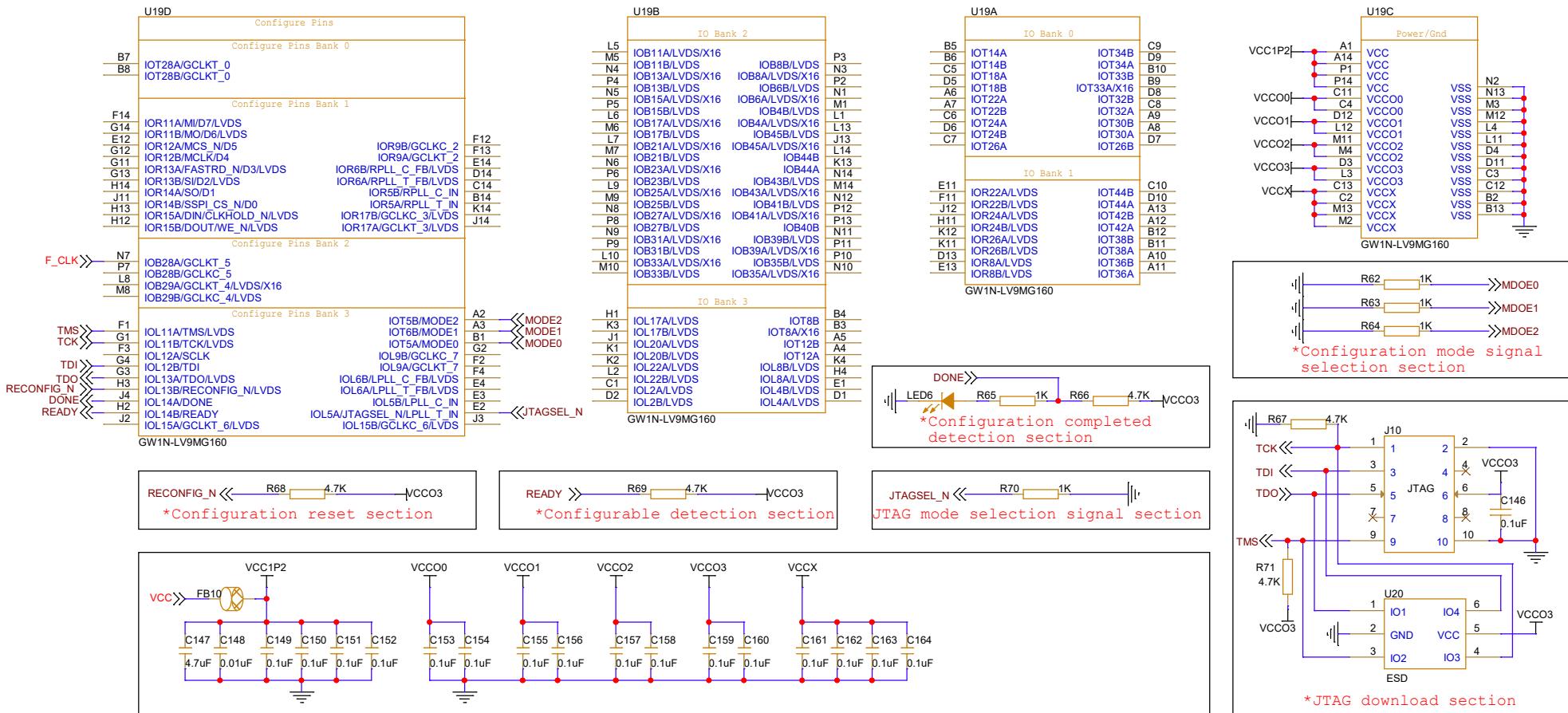
Date: Wednesday, April 10, 2024 Sheet 8 of 32

**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.

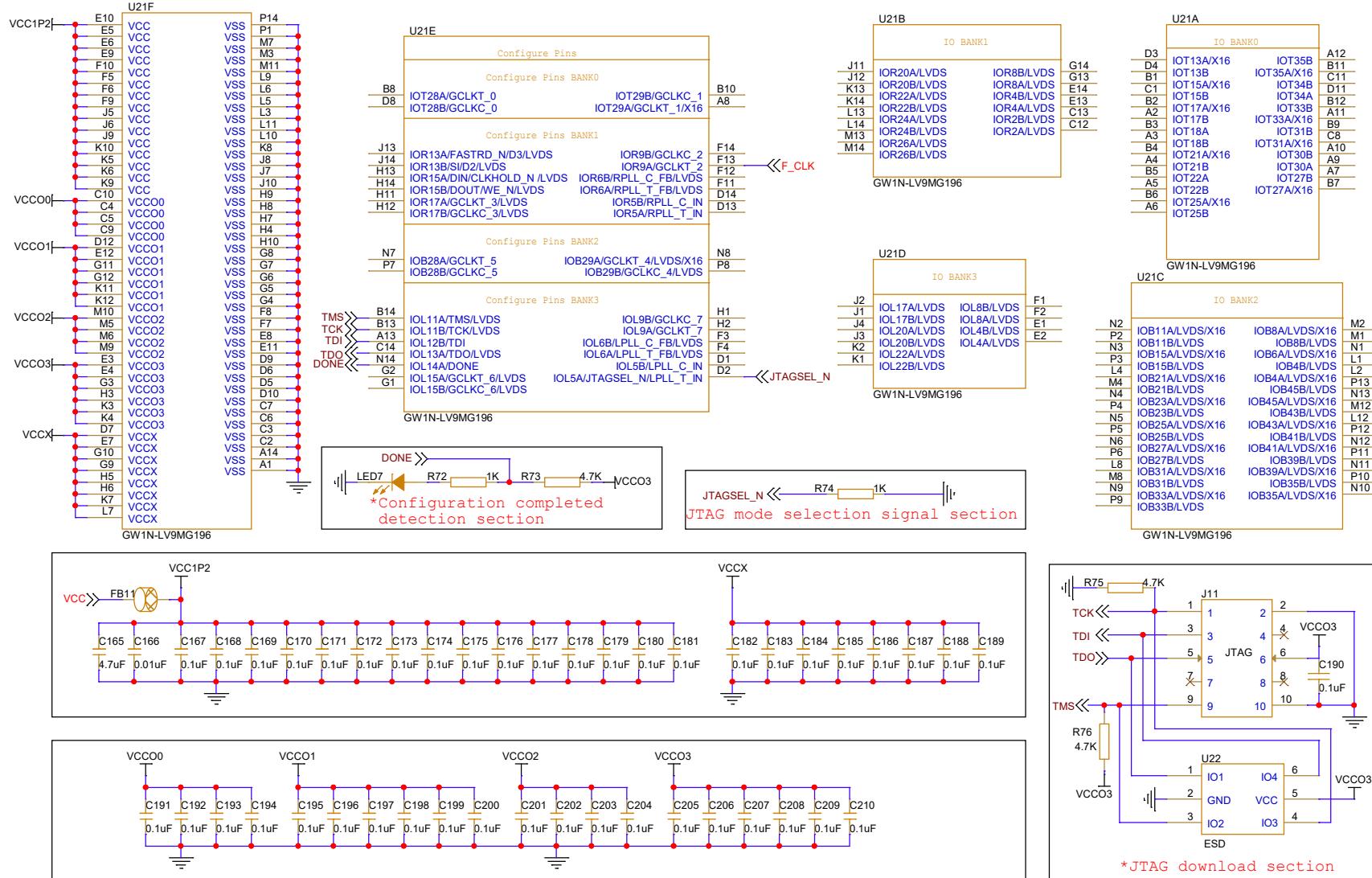
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Size	Document Number	Rev
B	GW1N-LV9MG100T	2.1

Date: Tuesday, April 09, 2024 Sheet 9 of 32

**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 GW1N-LV9MG160
	Rev 2.1

**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.

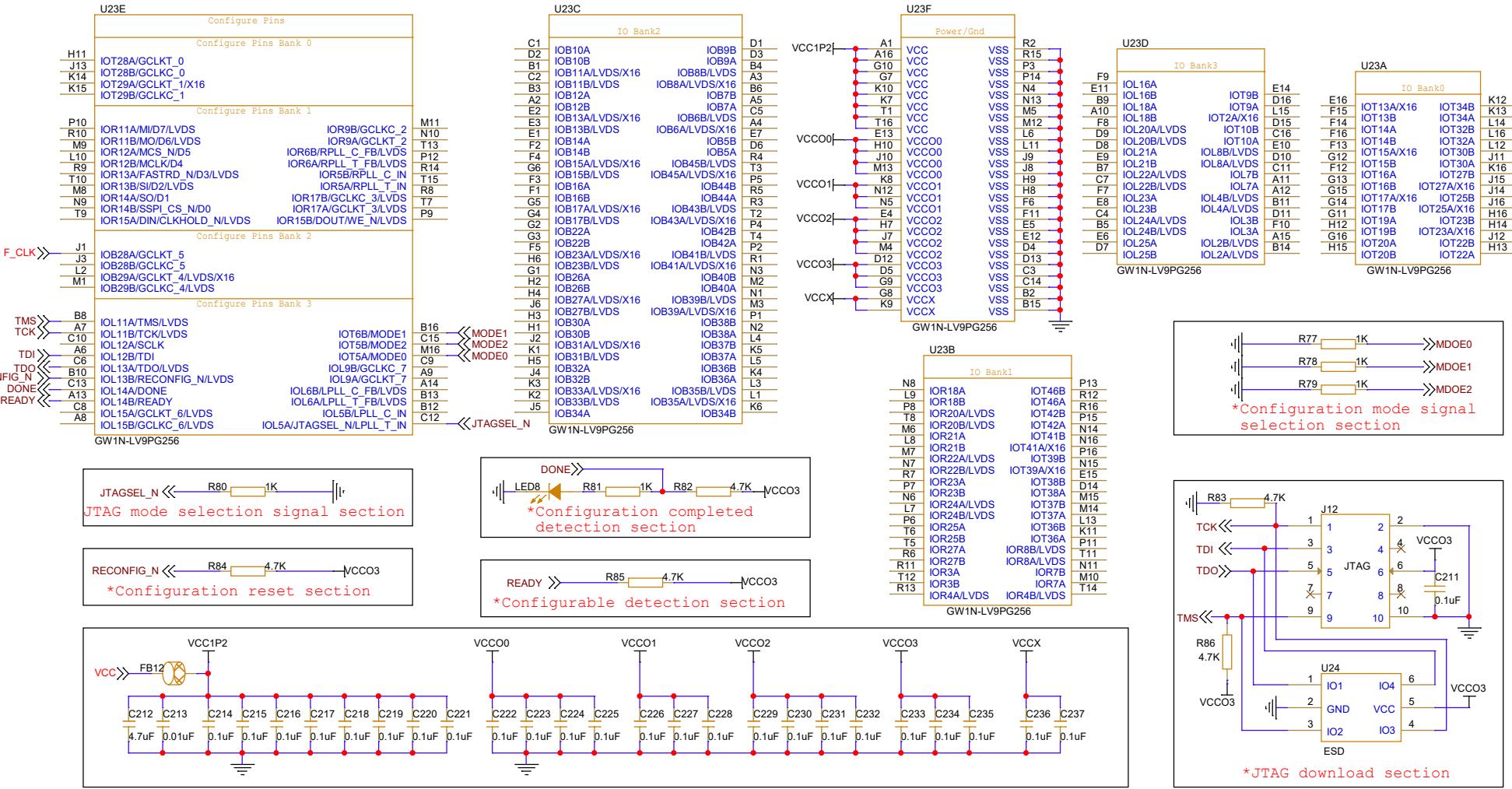
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Size: B Document Number: GW1N-LV9MG196

Rev: 2.1

Date: Tuesday, April 09, 2024

Sheet 11 of 32



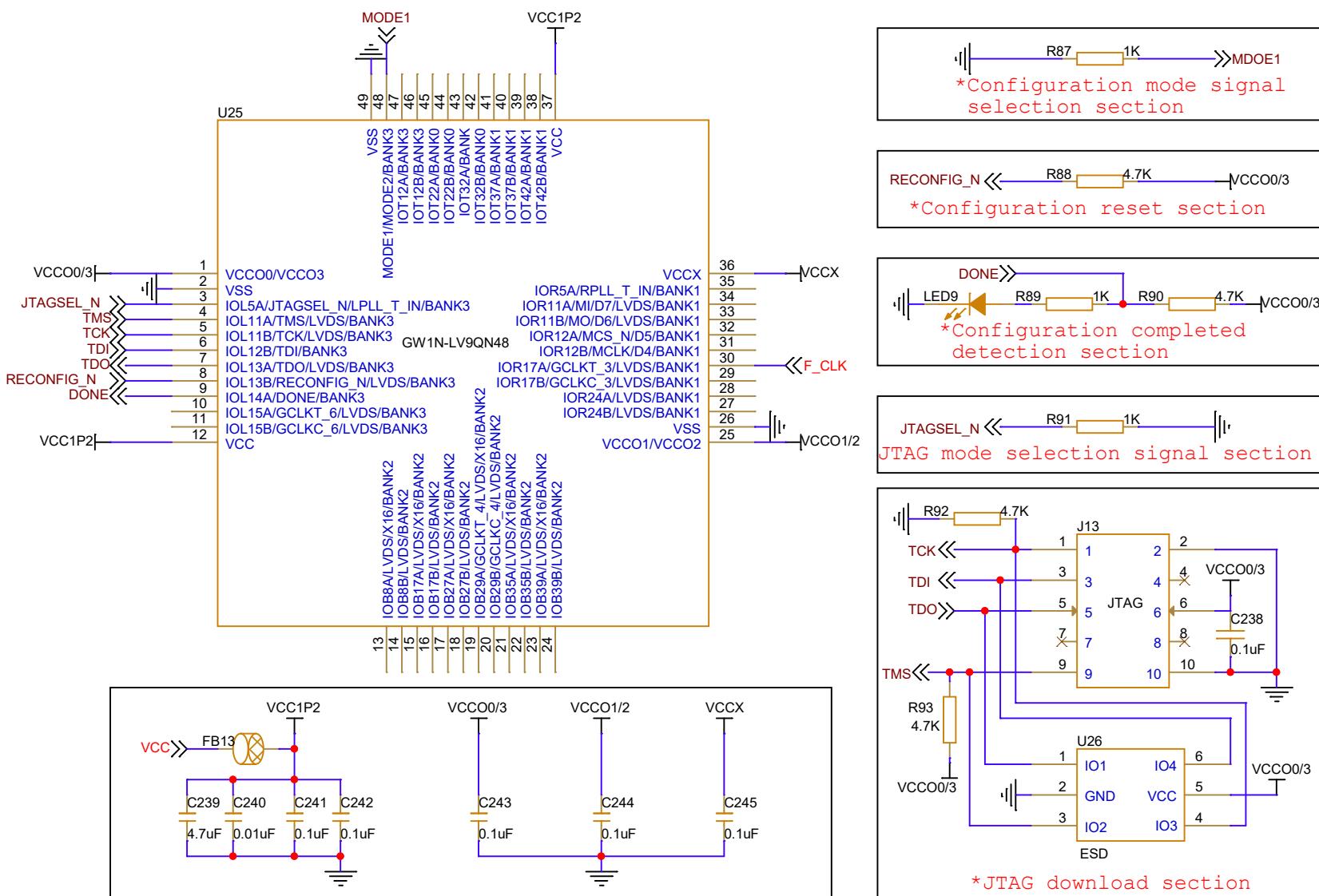
## Notes:

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 GW1N-LV9PG256
	Rev 2.1

Date: Tuesday, April 09, 2024 Sheet 12 of 32

# GW1N-LV9QN48



## 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

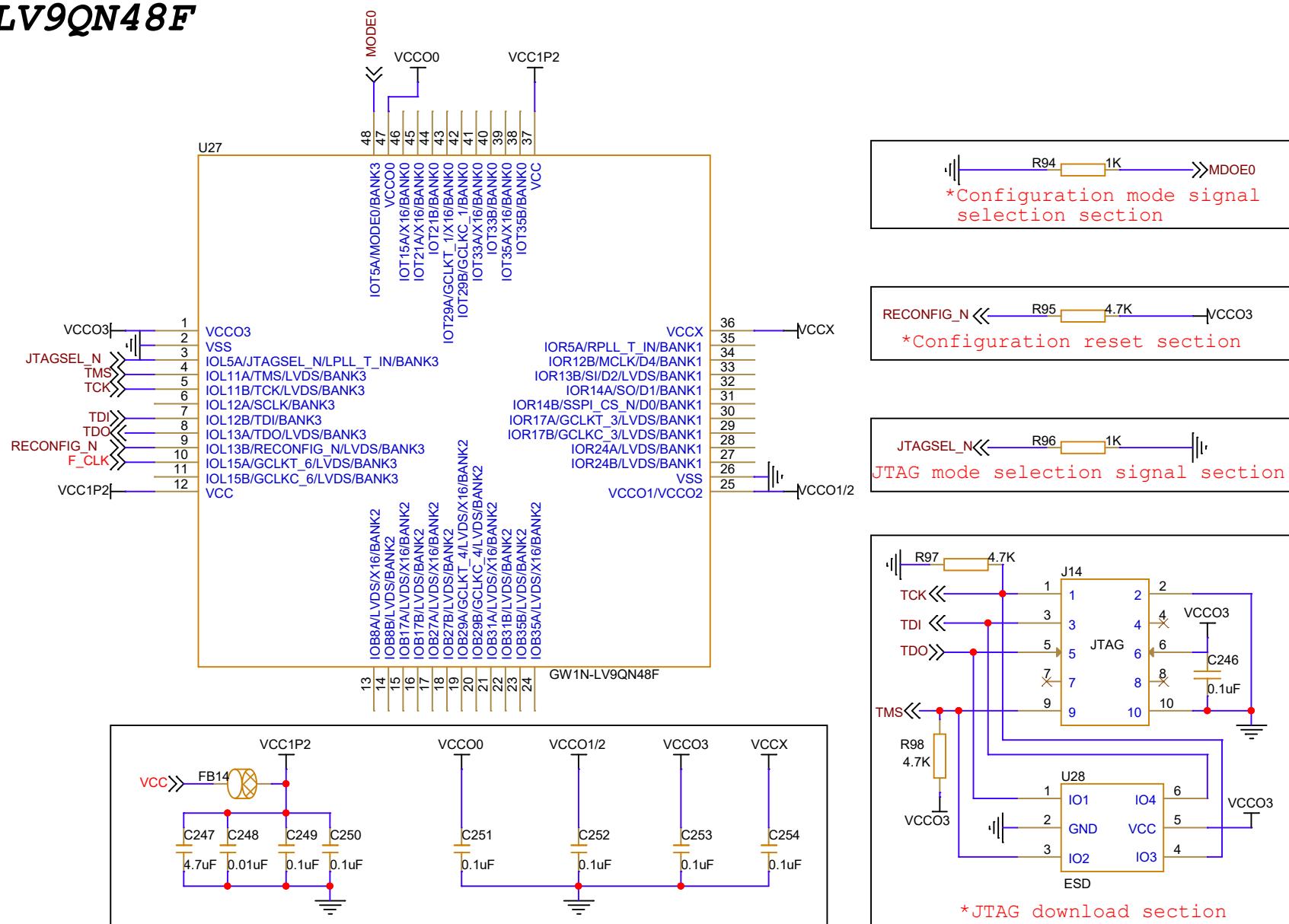
Size: A4 Document Number: GW1N-LV9QN48

Rev: 2.1

Date: Wednesday, April 10, 2024

Sheet 13 of 32

# GW1N-LV9QN48F



## Notes:

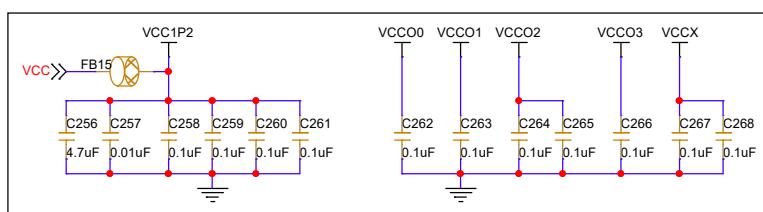
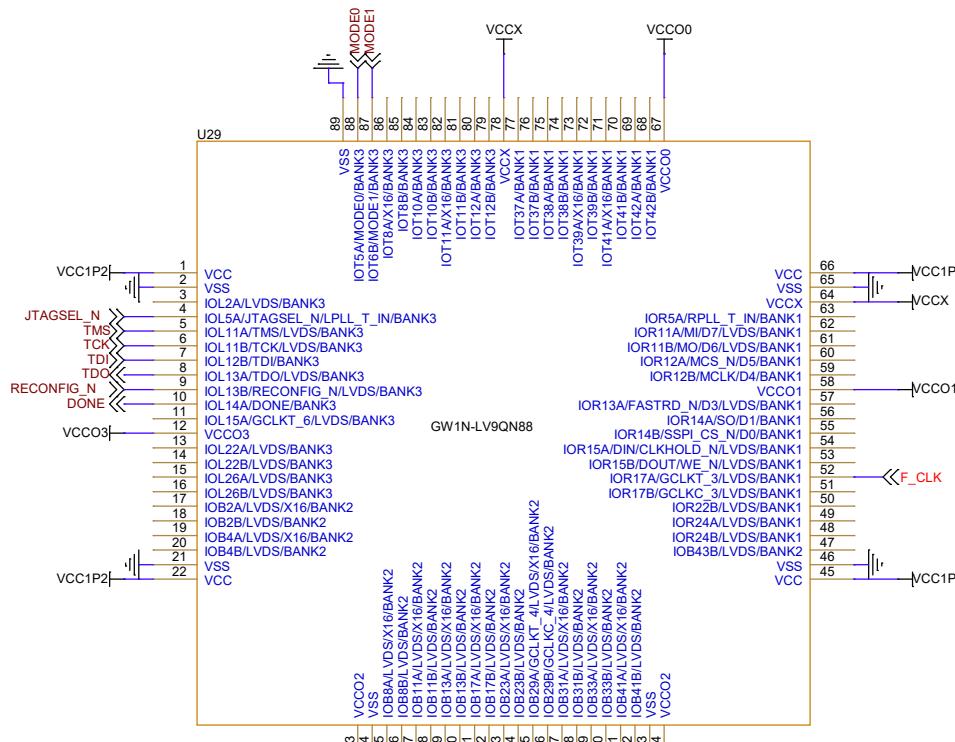
1. F\_CLK signal is an external input clock signal.  
It is recommended that F\_CLK signal be provided through an active oscillator crystal.
2. It is recommended that add an ESD protection chip to the JTAG download circuit.

Title GOWIN Minimum System Diagram

Size A4 Document Number  
Rev. 2.1  
GW1N-LV9QN48F

Date: Tuesday, April 09, 2024

Sheet 14 of 32

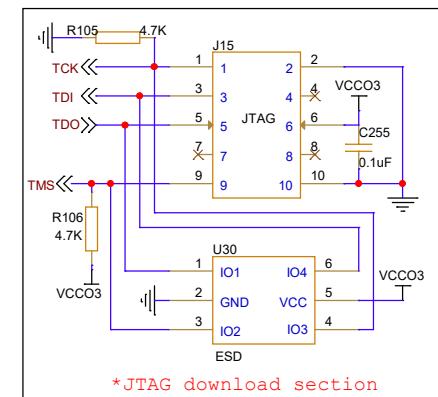
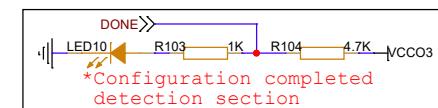
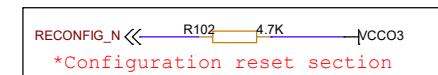
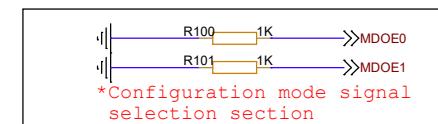
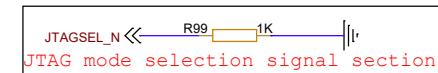


## Notes:

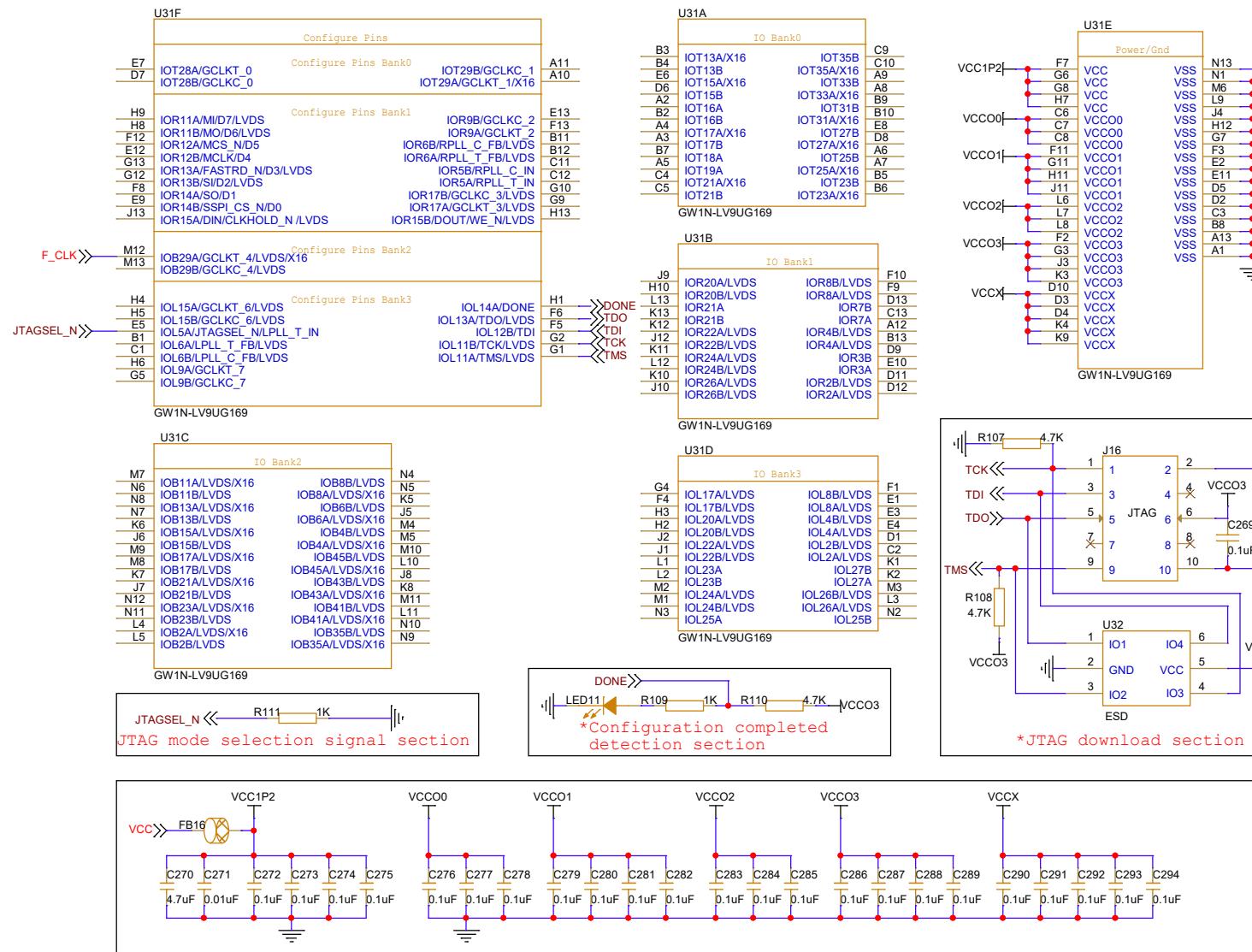
1. F\_CLK signal is an external input clock signal.

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.

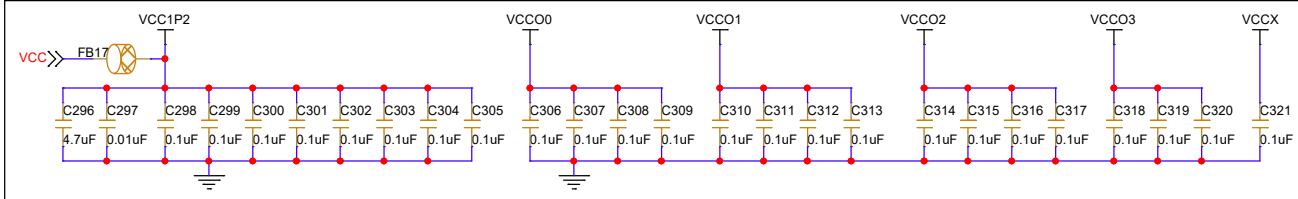
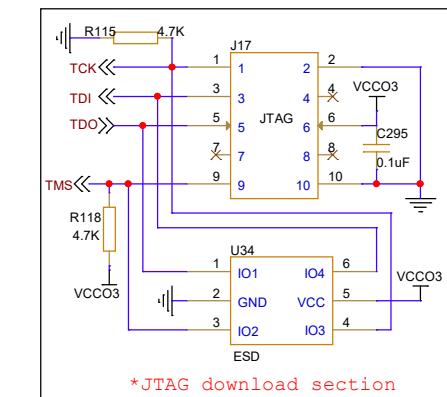
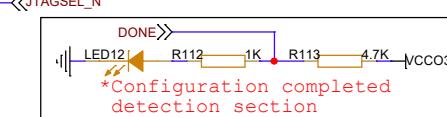
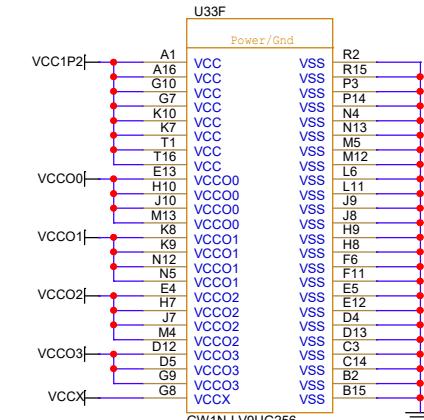
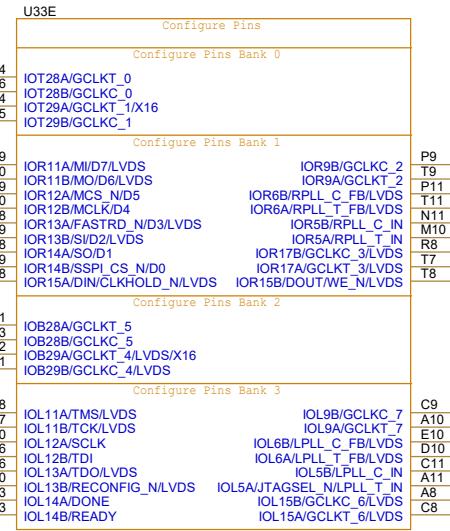
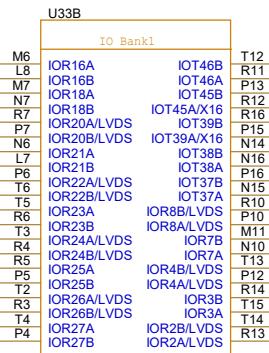
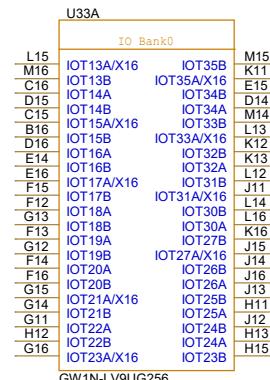


Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
B	GW1N-LV9QN88	2.1
Date: Tuesday, April 09, 2024	Sheet 15 of 32	

**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 GW1N-LV9UG169
B	Rev 2.1



## 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.

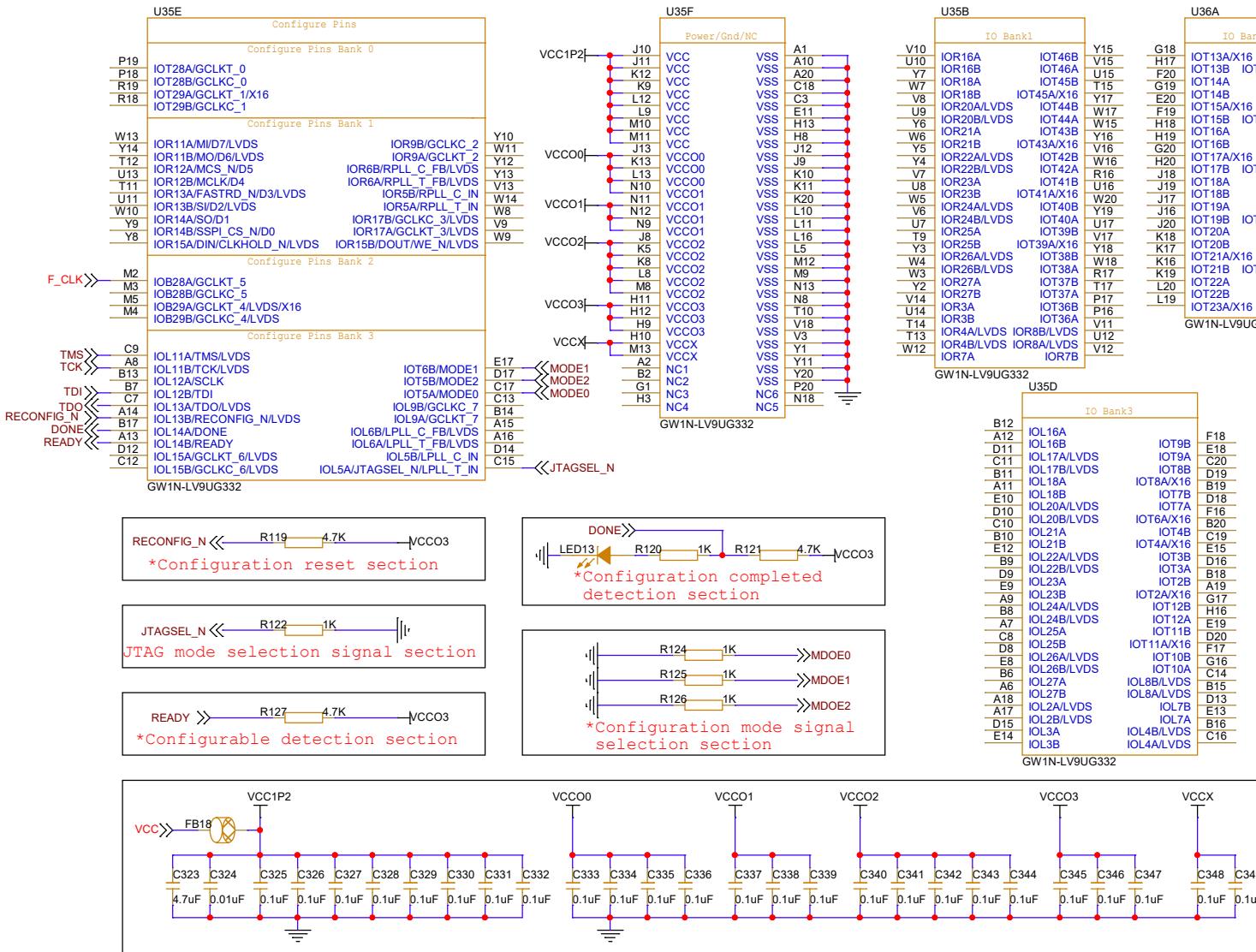
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Size: B Document Number: GW1N-LV9UG256

Rev: 2.1

Date: Tuesday, April 16, 2024

Sheet 17 of 32



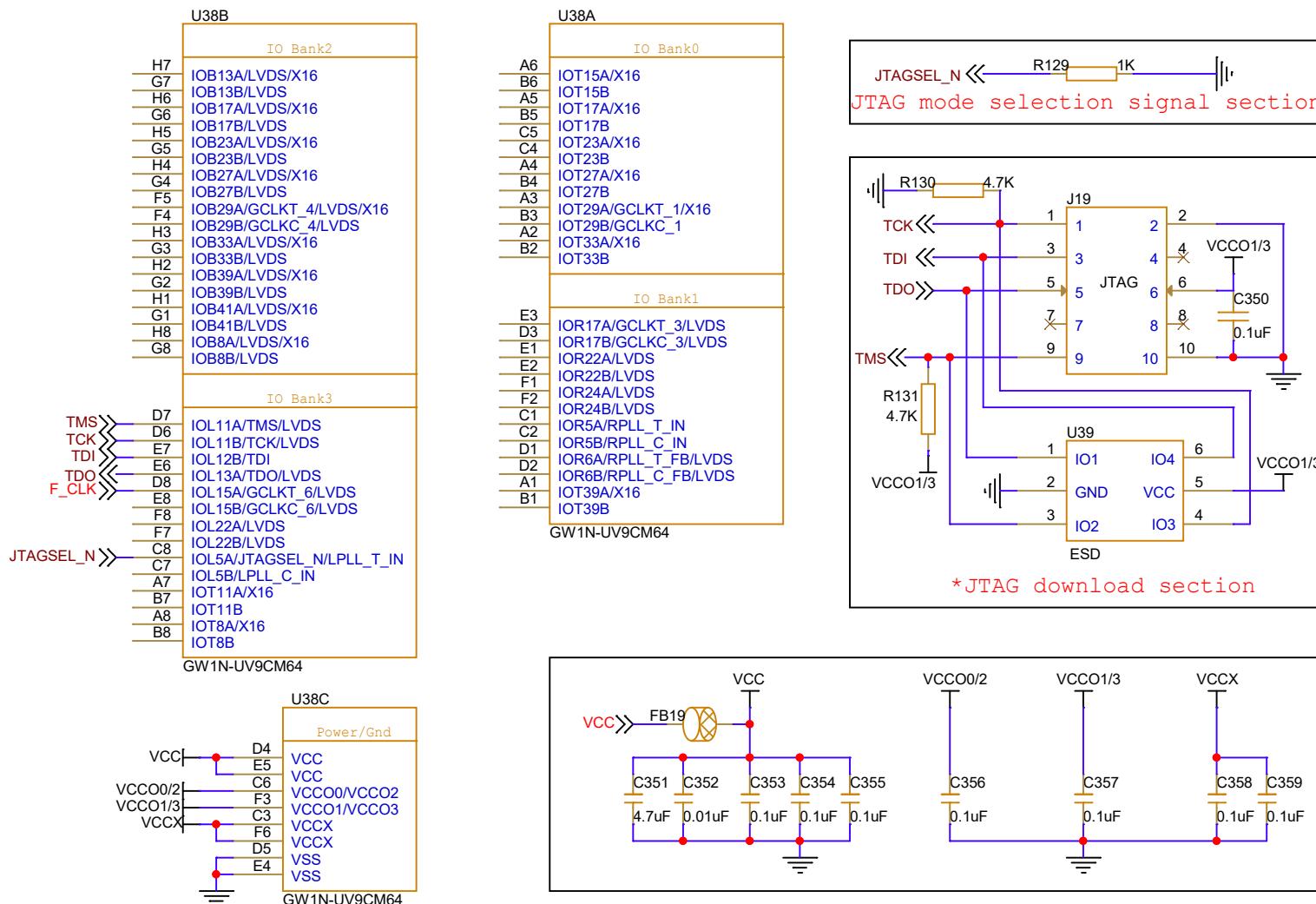
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Size	Document Number GW1N-LV9UG332
B	Rev 2.1

Date: Tuesday, April 09, 2024 Sheet 18 of 32

**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.

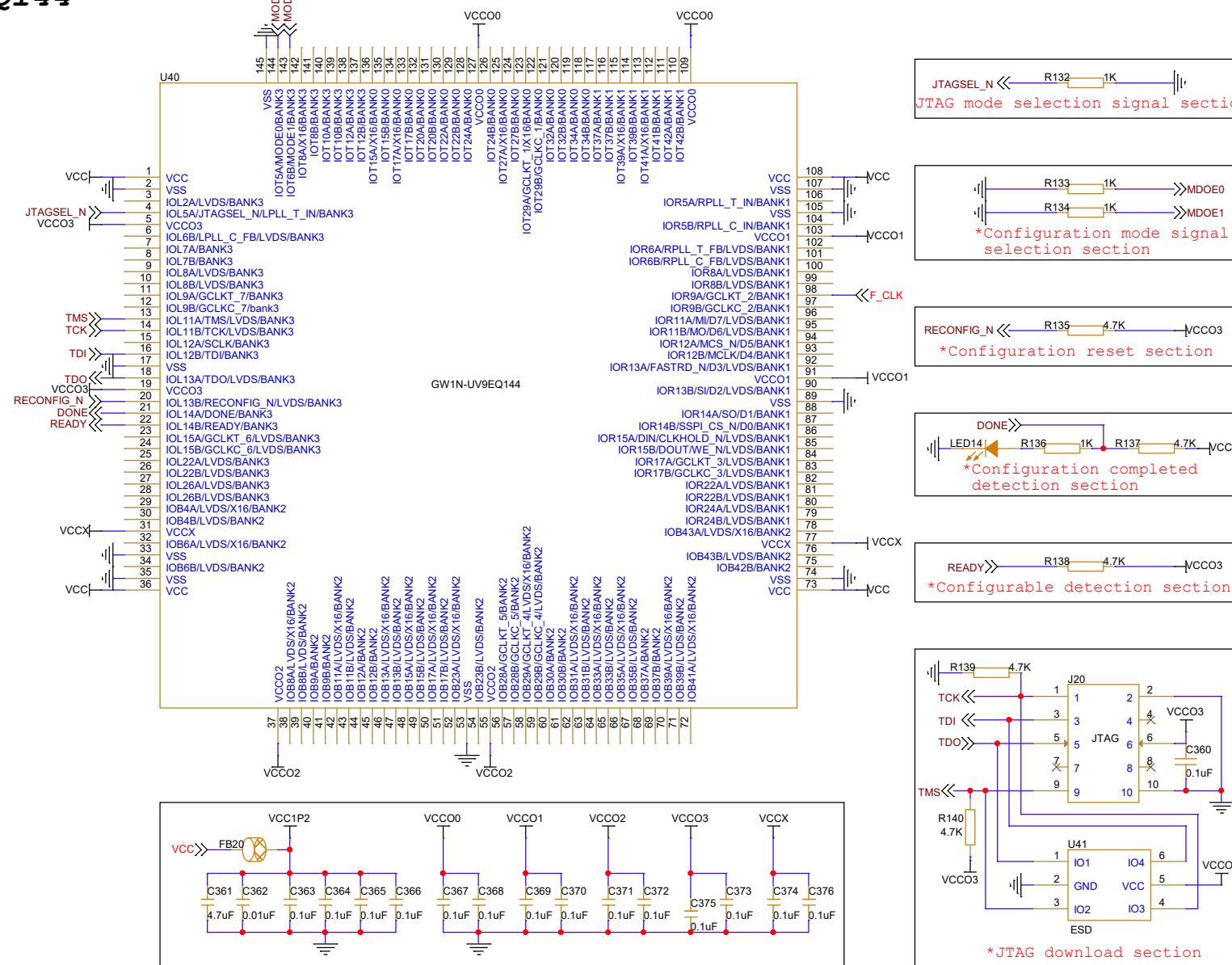
# GW1N-UV9CM64



## 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	GW1N-UV9CM64
Rev 2.1	

**Notes:**

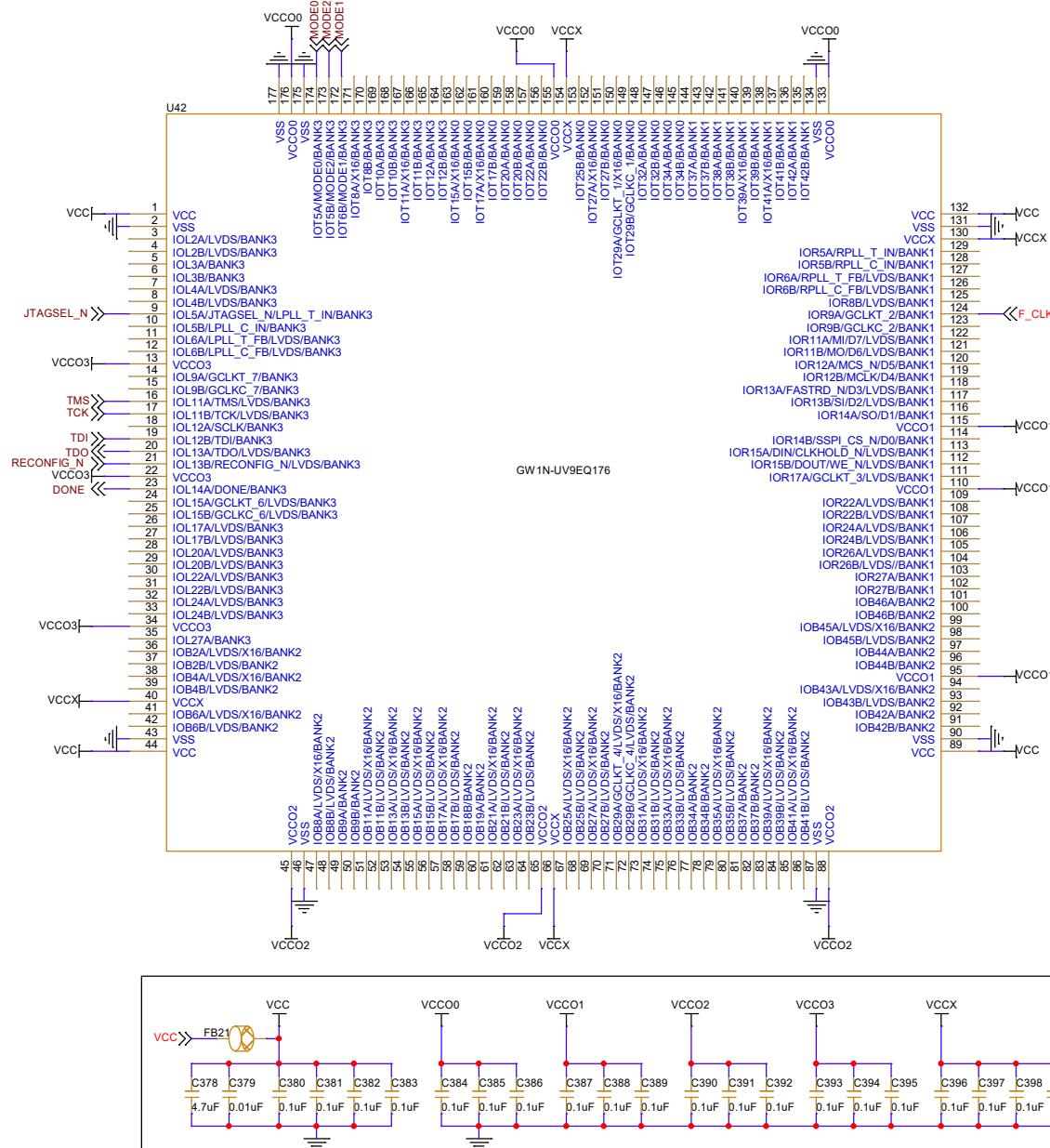
1. F\_CLK signal is an external input clock signal.

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.

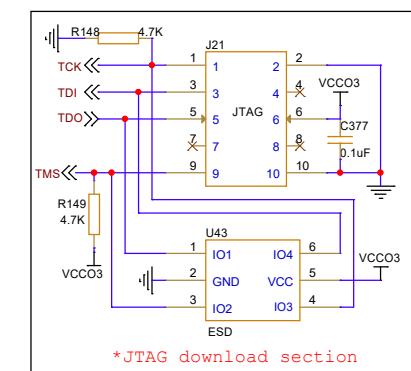
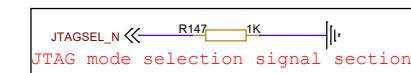
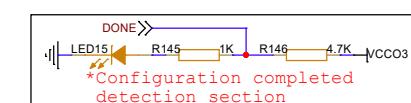
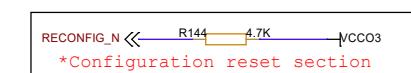
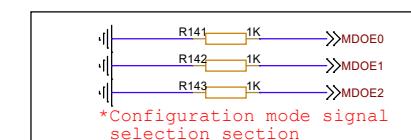
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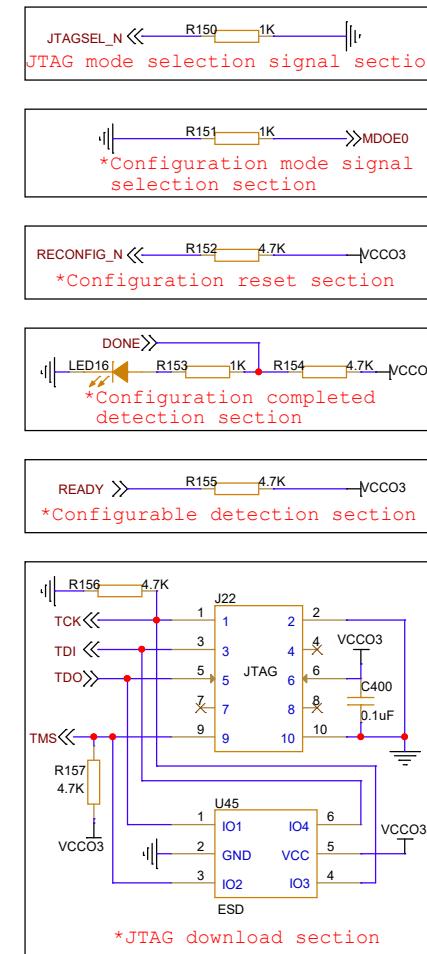
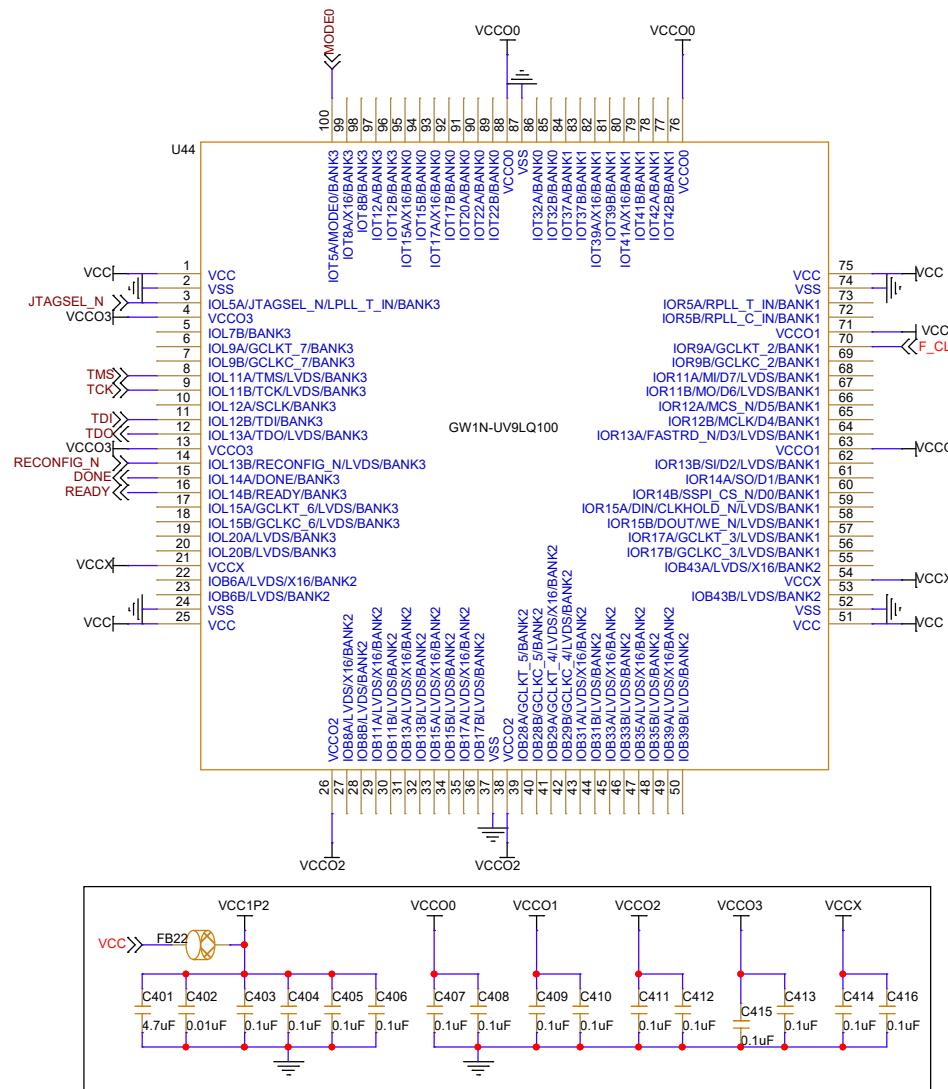
Rev 2.1



## Notes:

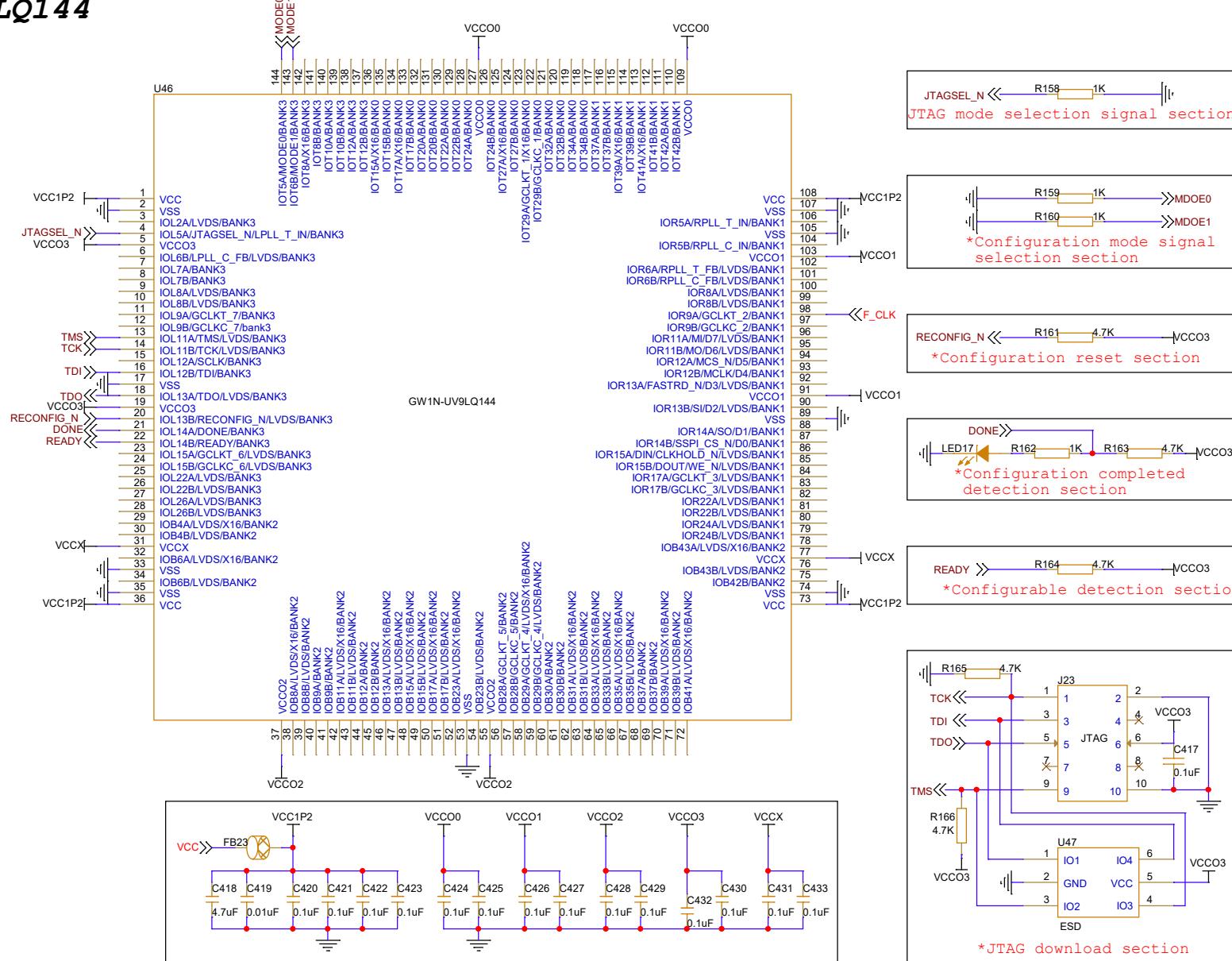
- F CLK signal is an external input clock signal.  
It is recommended that F CLK signal be provided through an active oscillator crystal.
- It is recommended that add an ESD protection chip to the JTAG download circuit.



**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.

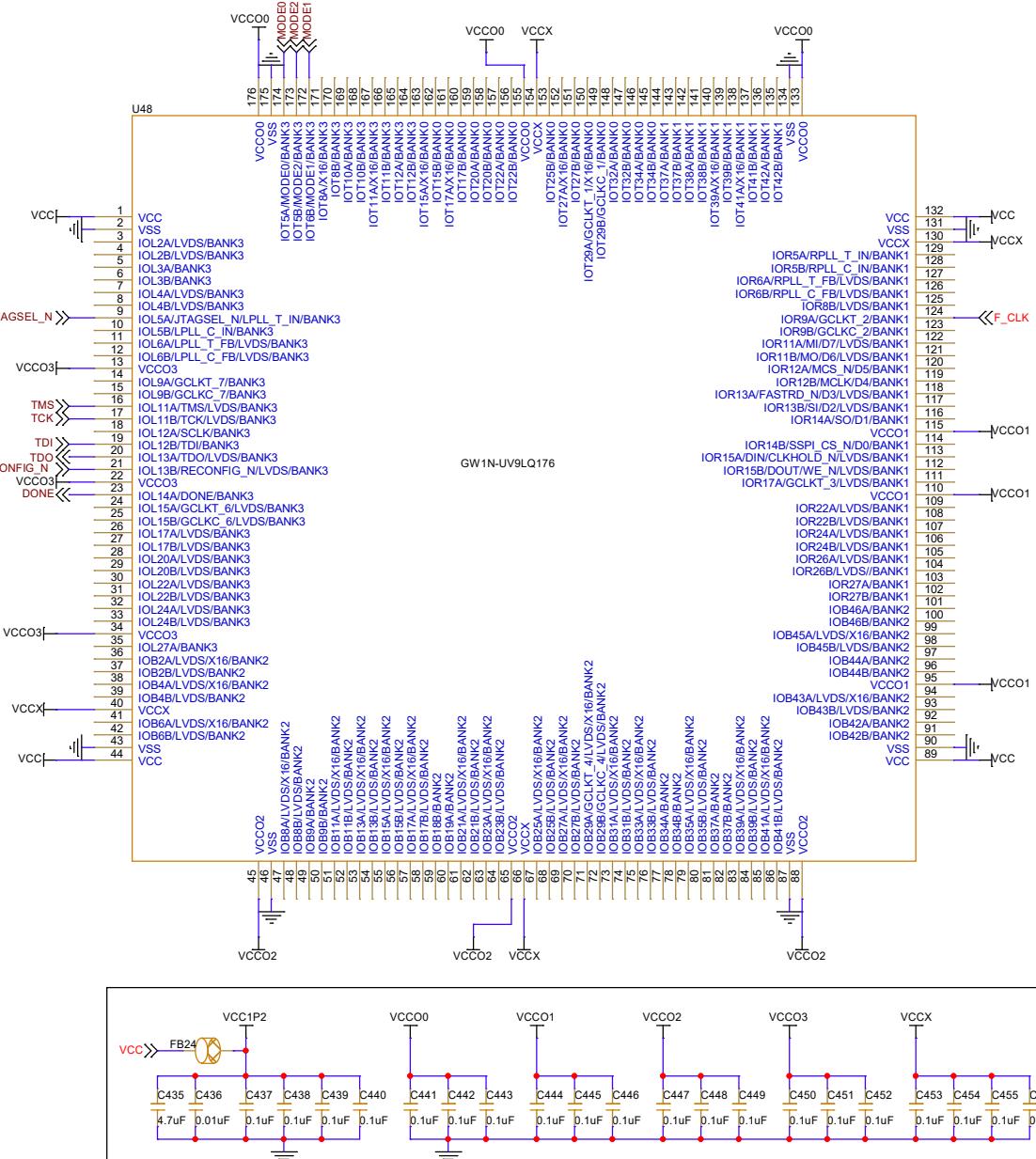
Title	
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Size	Document Number GW1N-UV9LQ100
B	Rev 2.1



## 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.

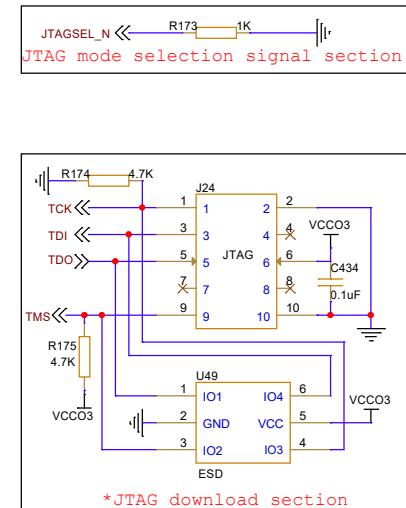
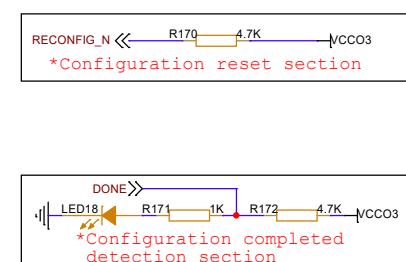
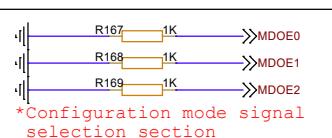
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Size	Document Number	GW1N-UV9LQ144
B	Rev	2.1
Date: Tuesday, April 09, 2024	Sheet	23 of 32

**Notes:**

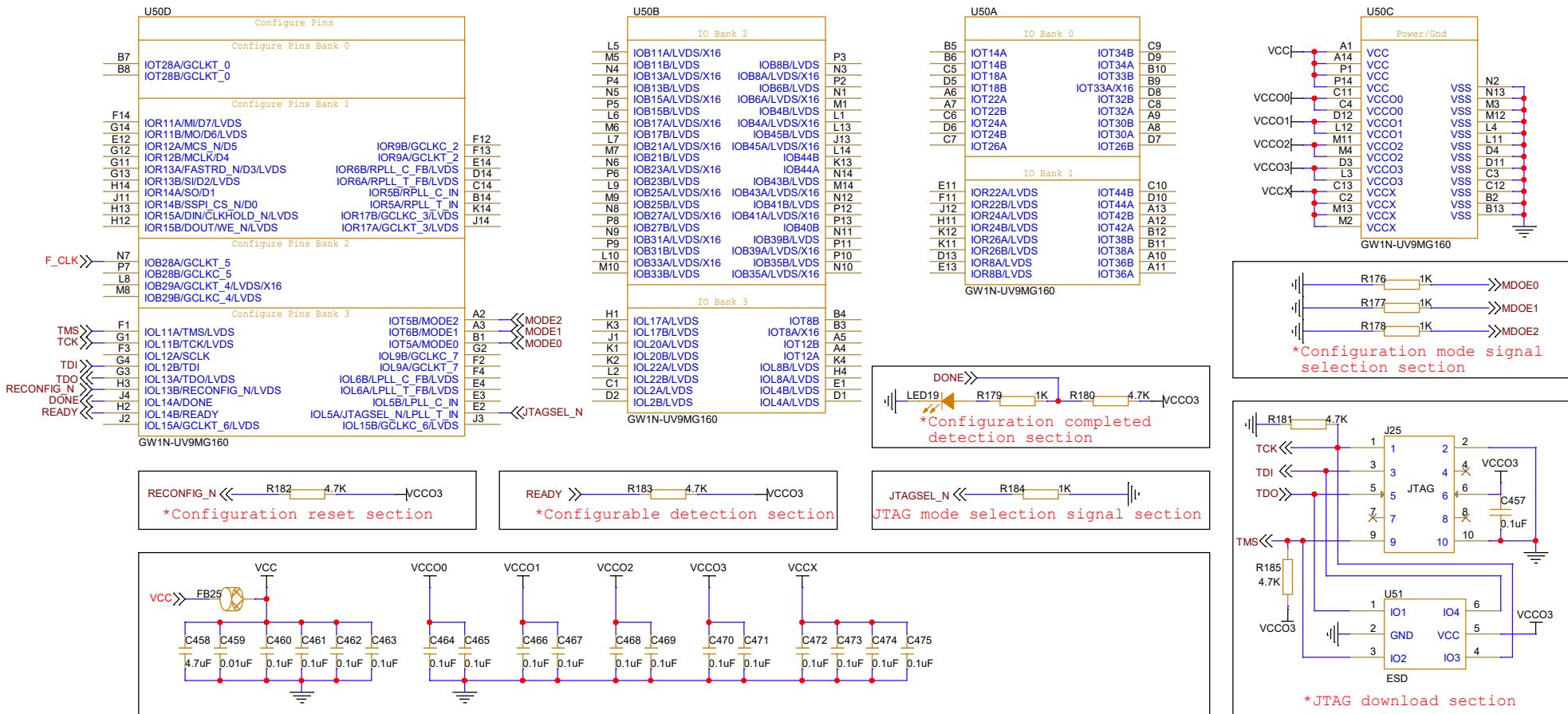
1. F\_CLK signal is an external input clock signal.

It is recommended that F\_CLK signal be provided through an active oscillator crystal.

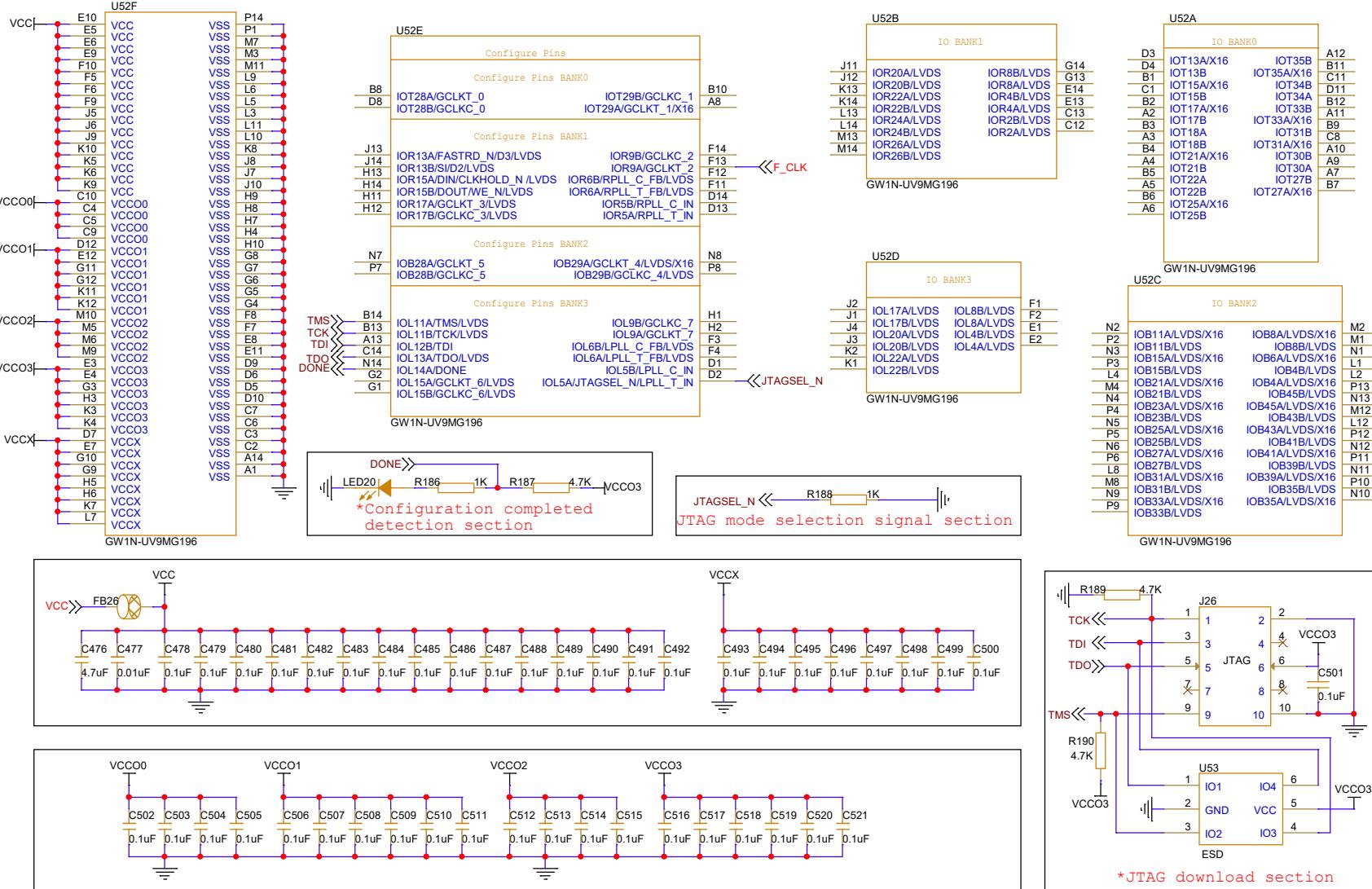
2. It is recommended that add an ESD protection chip to the JTAG download circuit.



Title		GOWIN Minimum System Diagram	
Size	Document Number	Rev. 2.1	
A3	GW1N-UV9LQ176		
Date:	Tuesday, April 09, 2024	Sheet	24 of 32



Title	
GOWIN Minimum System Diagram	
Size B	Document Number GW1N-UV9MG160
	Rev 2.1

**Notes:**

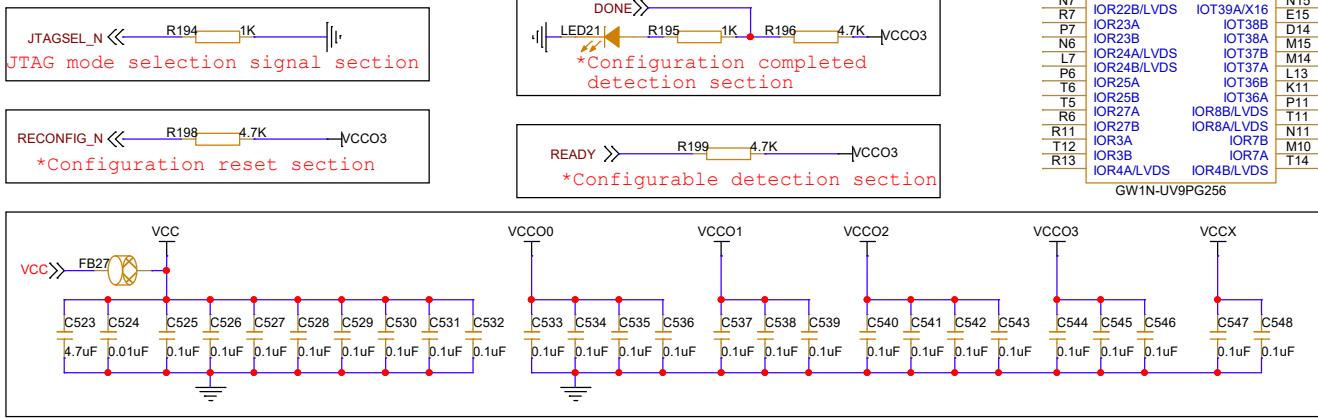
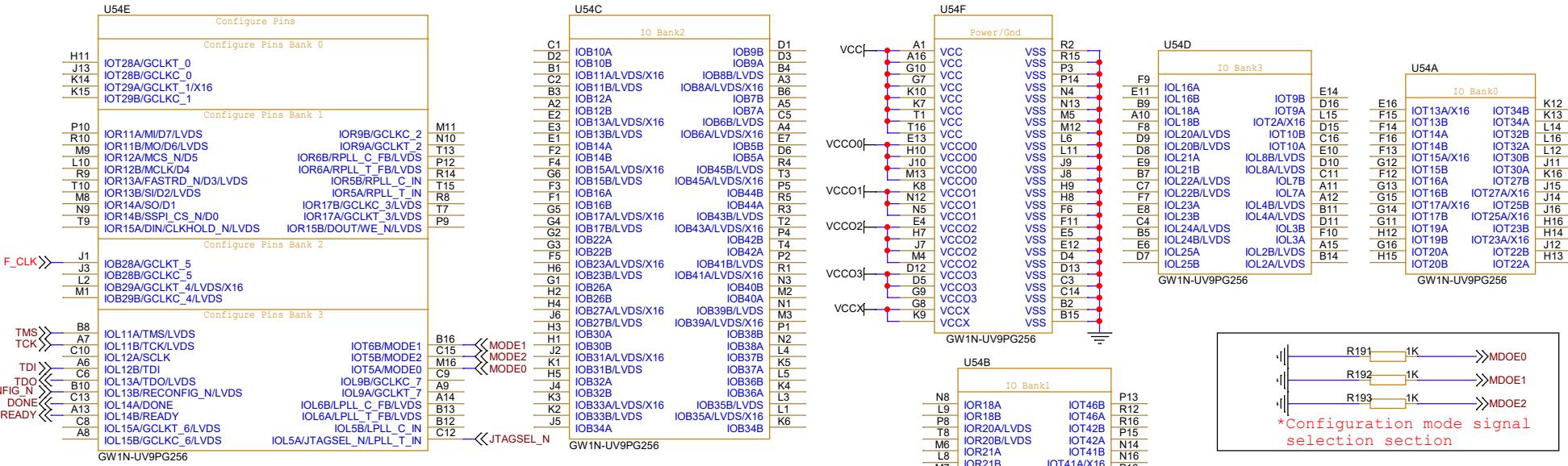
1. F\_CLK signal is an external input clock signal.

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.

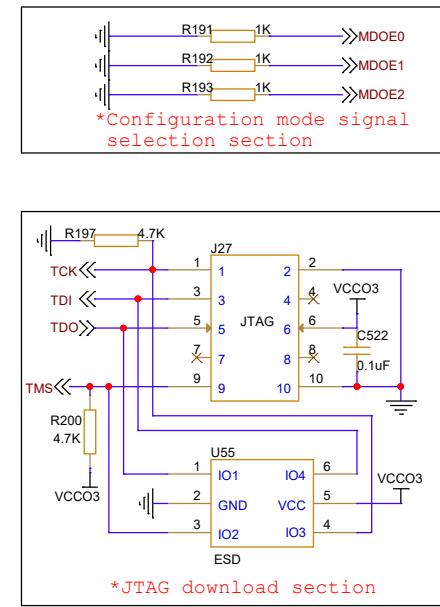
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Size: B	Document Number: GW1N-UV9MG196

Date: Tuesday, April 09, 2024	Sheet: 26	of: 32	Rev: 2.1
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## Notes:

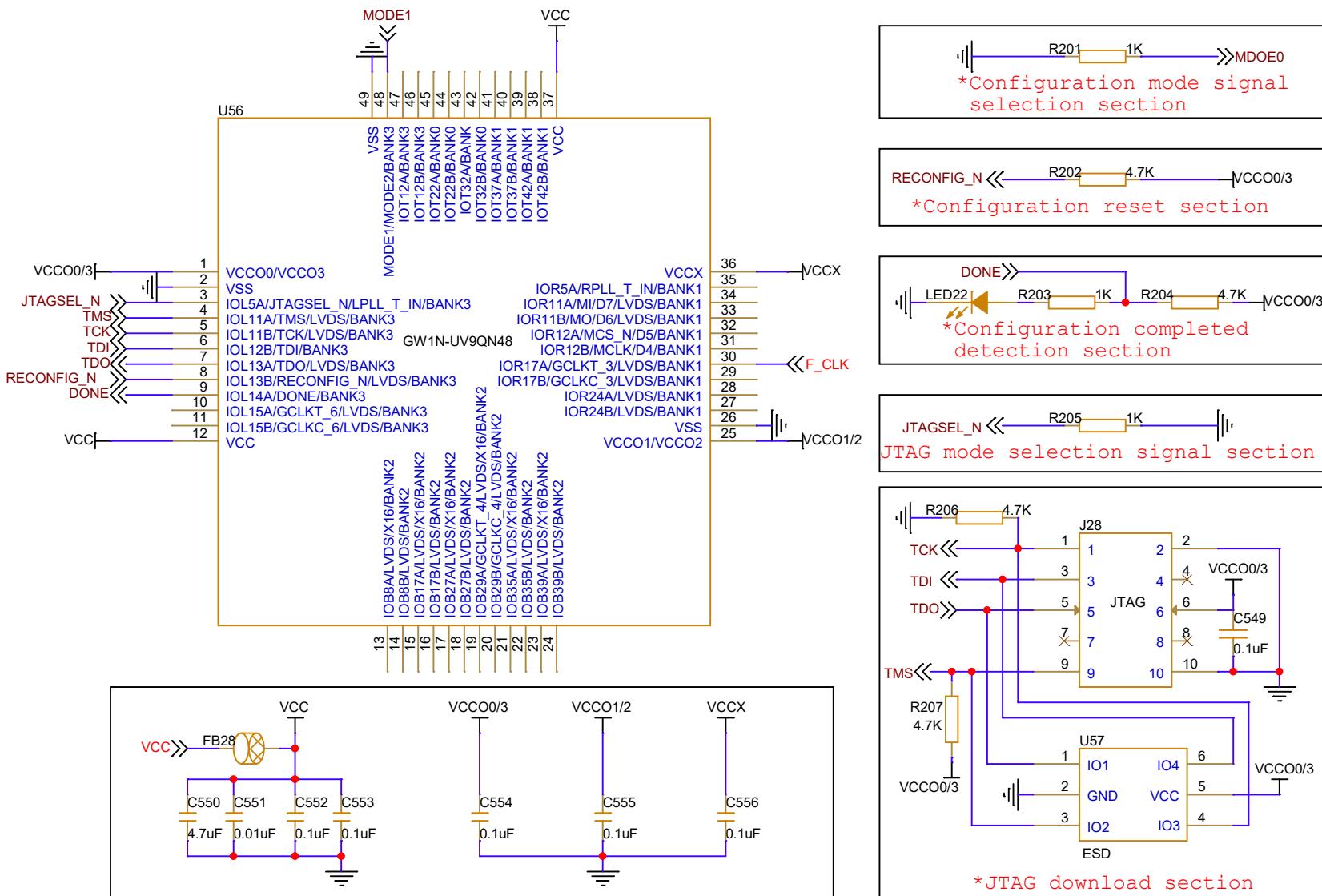
1. F CLK signal is an external input clock signal.  
It is recommended that F CLK signal be provided through an active oscillator crystal.
2. It is recommended that add an ESD protection chip to the JTAG download circuit.



Title		GOWIN Minimum System Diagram	
Size	Document Number	Rev	
B	GW1N-UV9PG256		2.1

Date: Tuesday, April 09, 2024 Sheet 27 of 32

# GW1N-UV9QN48



## 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.

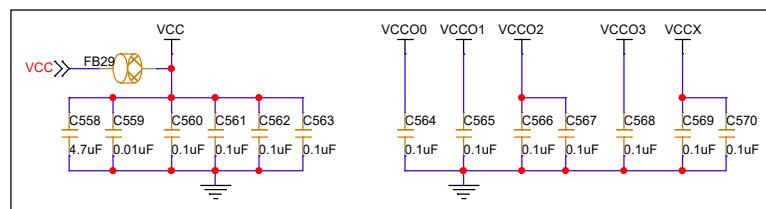
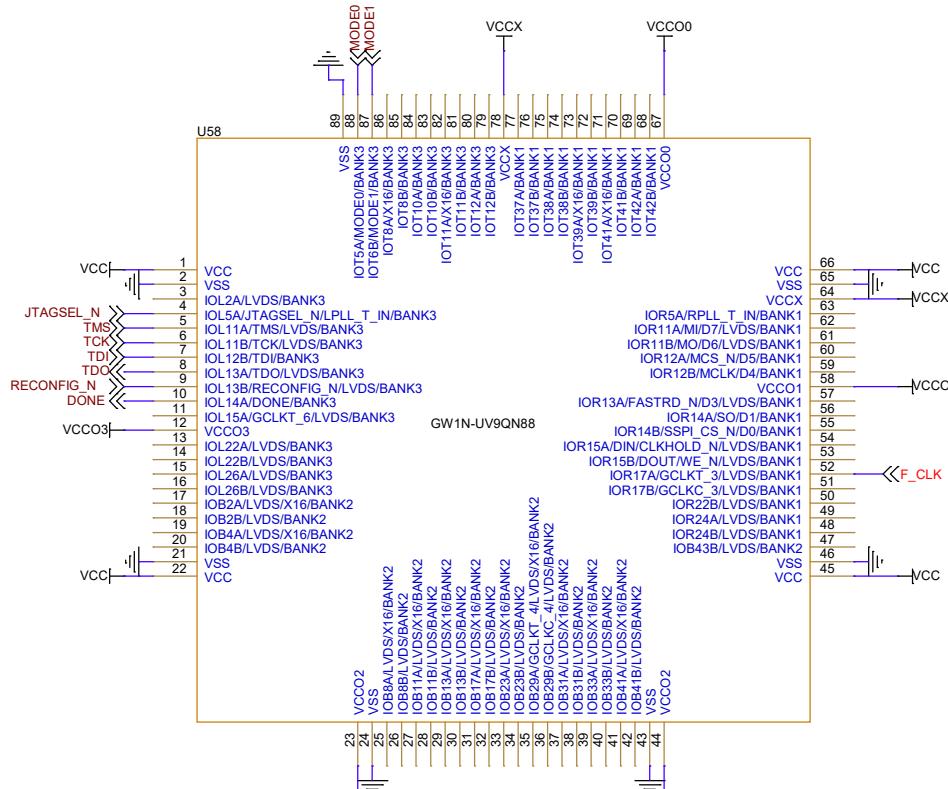
Title: GOWIN Minimum System Diagram

Size: A4 Document Number: GW1N-UV9QN48

Rev: 2.1

Date: Wednesday, April 10, 2024

Sheet 28 of 32

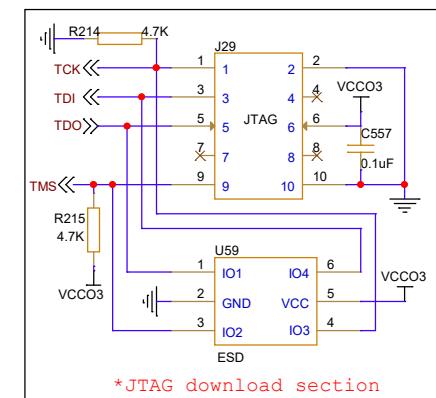
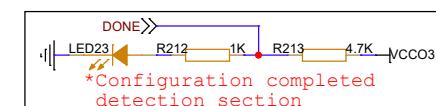
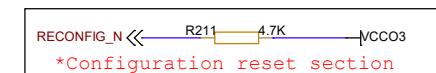
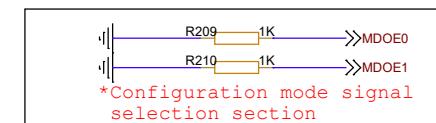
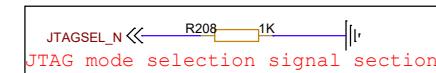


## Notes:

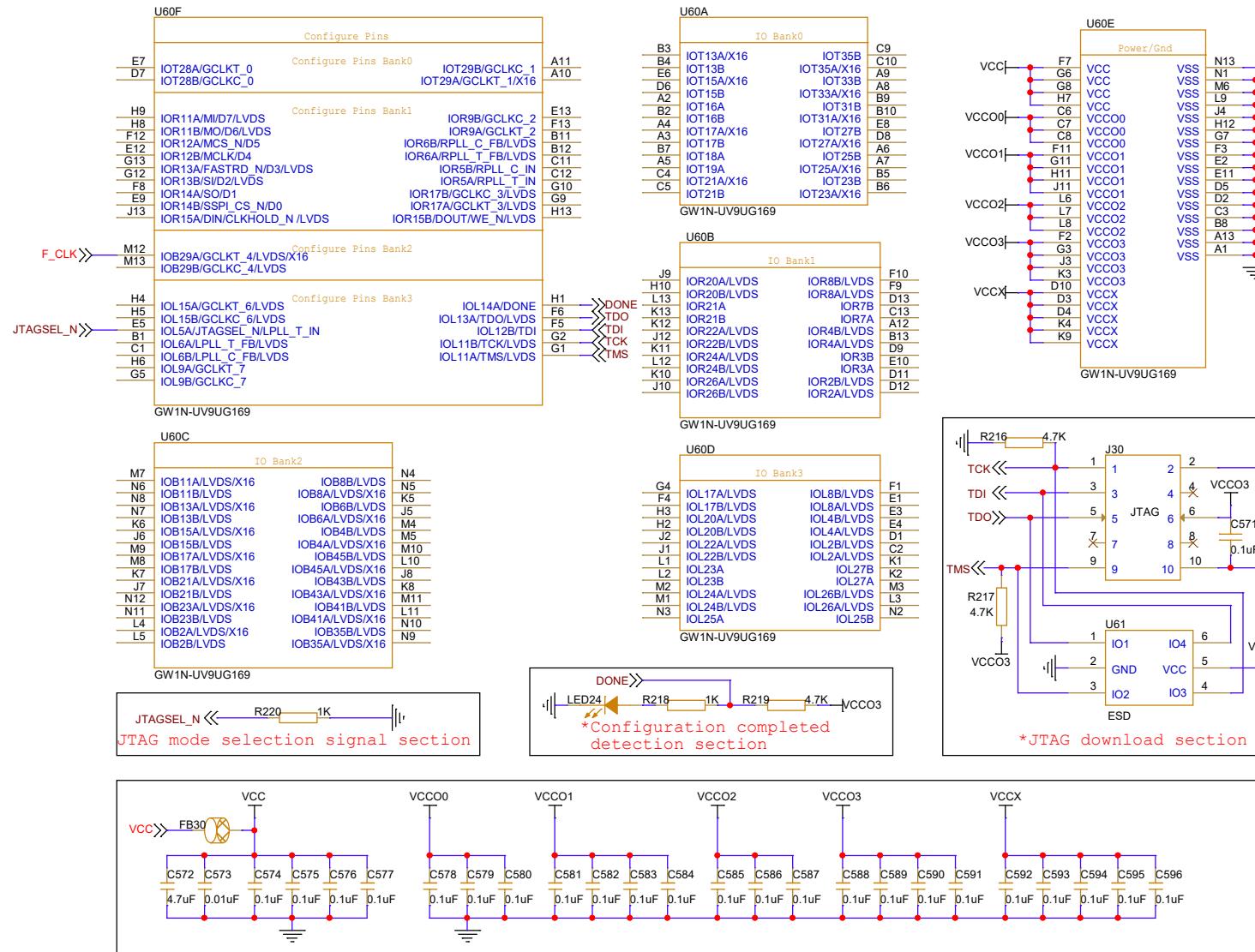
1. F\_CLK signal is an external input clock signal.

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.

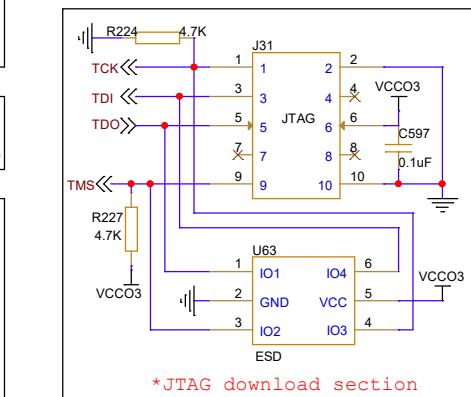
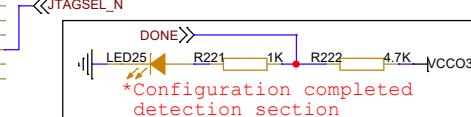
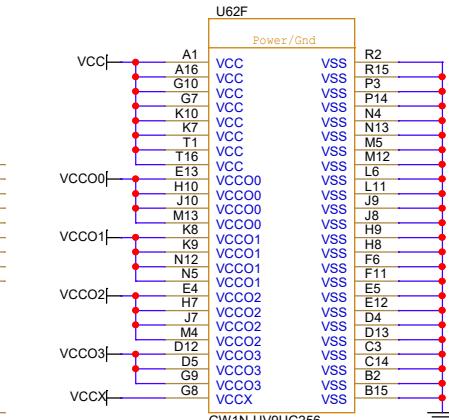
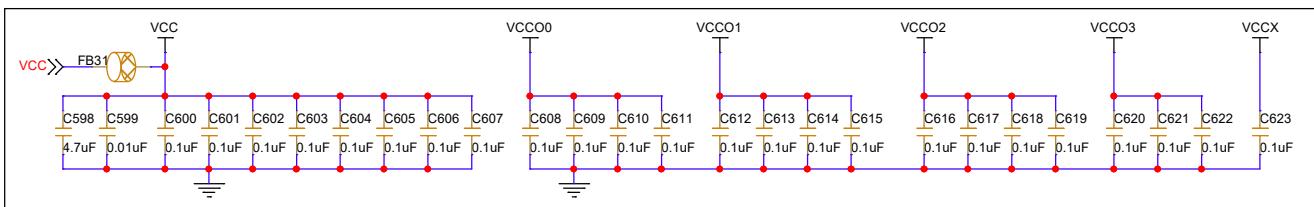
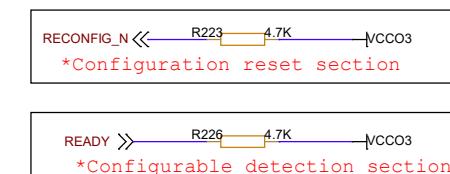
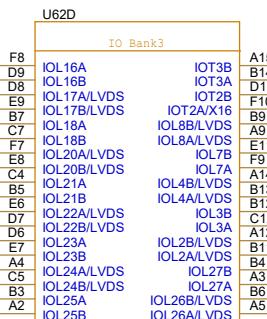
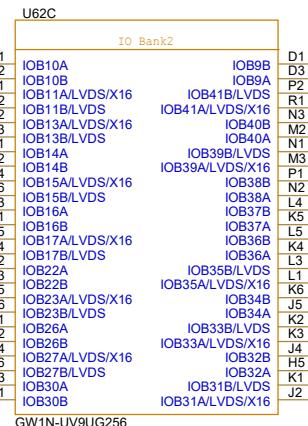
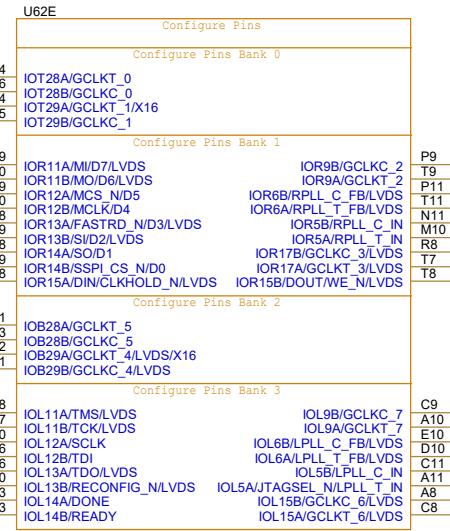
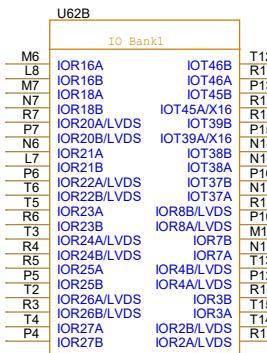
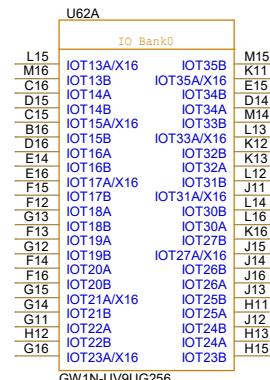


Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
B	GW1N-UV9QN88	2.1
Date: Tuesday, April 09, 2024	Sheet 29 of 32	

**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.

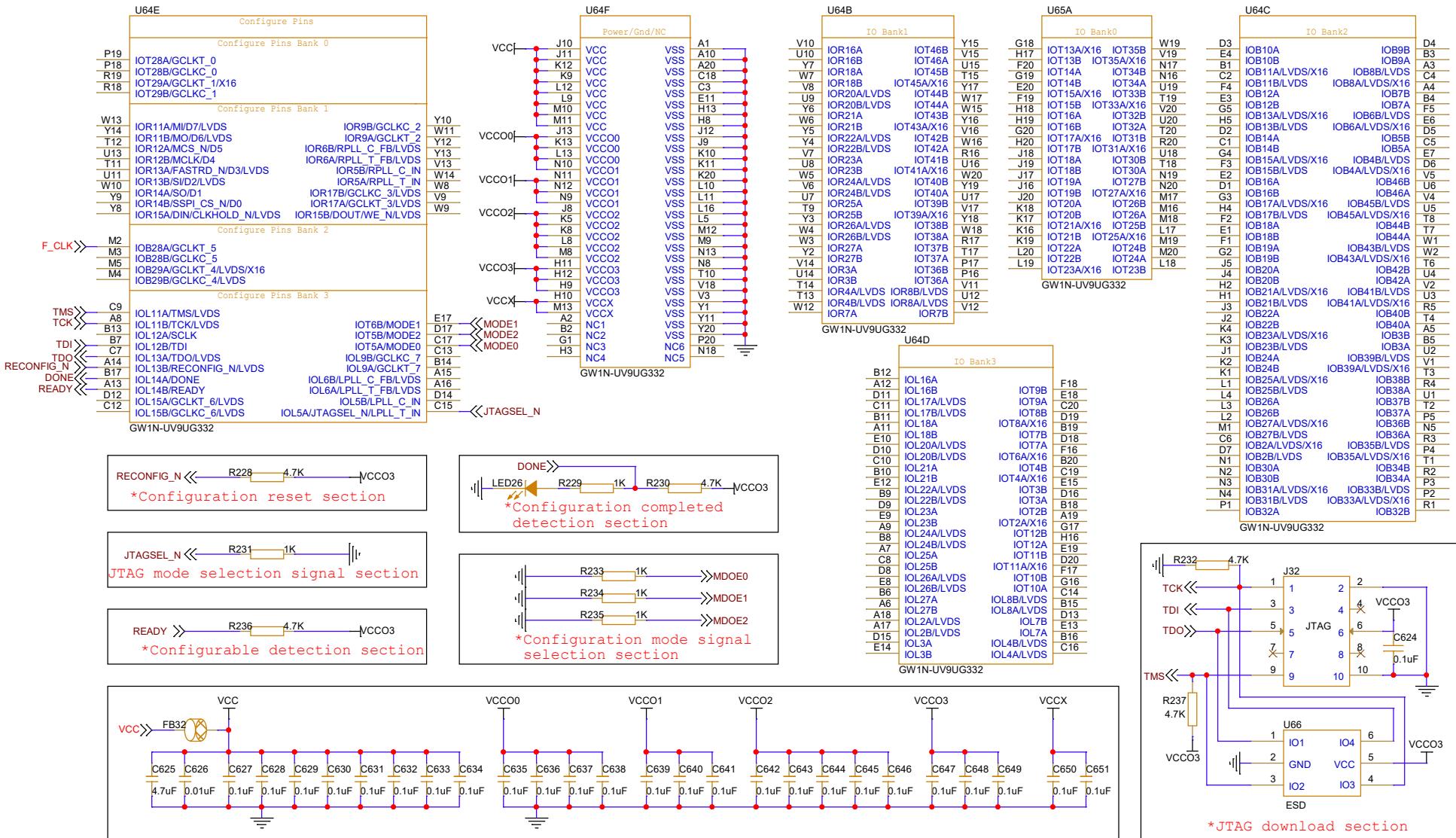
Title	
GOWIN Minimum System Diagram	
Size <b>B</b>	Document Number GW1N-UV9UG169
Rev 2.1	



## 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	GW1N-UV9UG256
B		Rev 2.1
Date: Tuesday, April 09, 2024	Sheet	31 of 32

**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 GW1N-UV9UG332
B	Rev 2.1

Date: Tuesday, April 09, 2024 Sheet 32 of 32