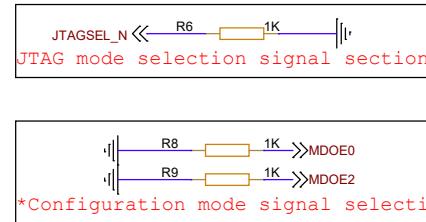
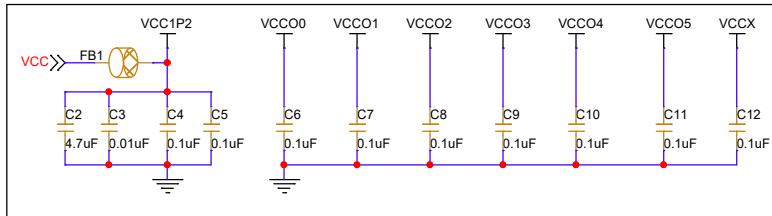
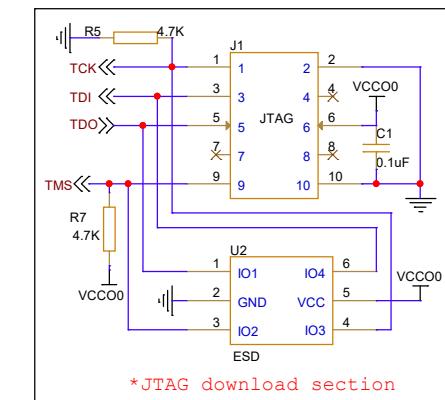
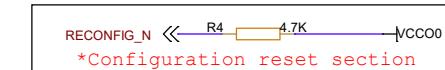
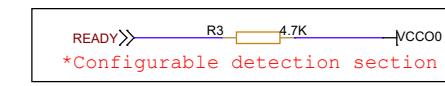
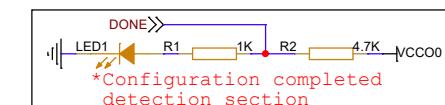
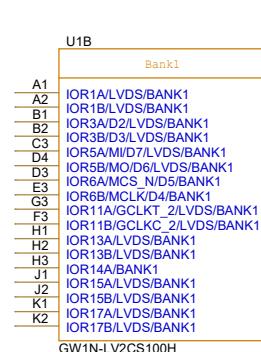
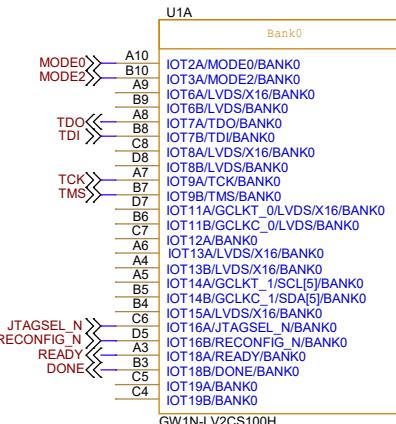
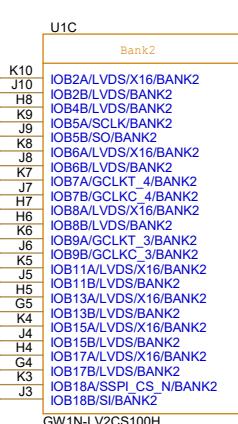
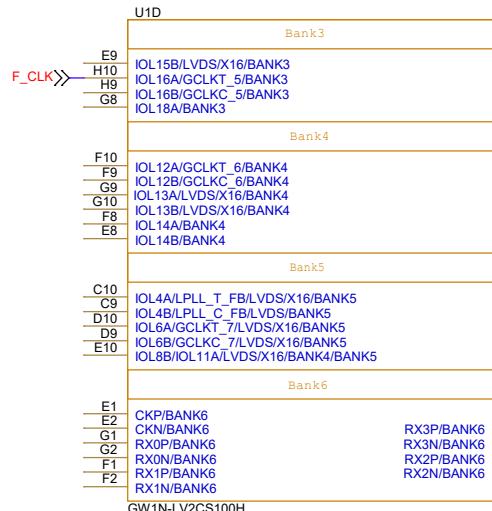


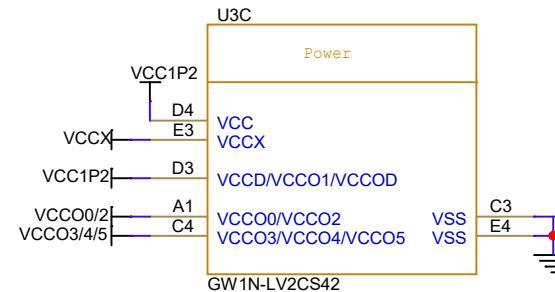
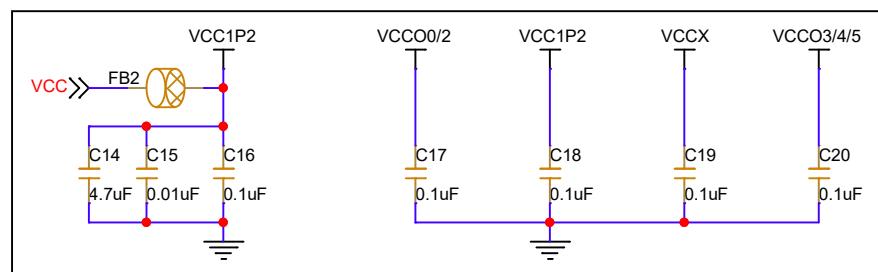
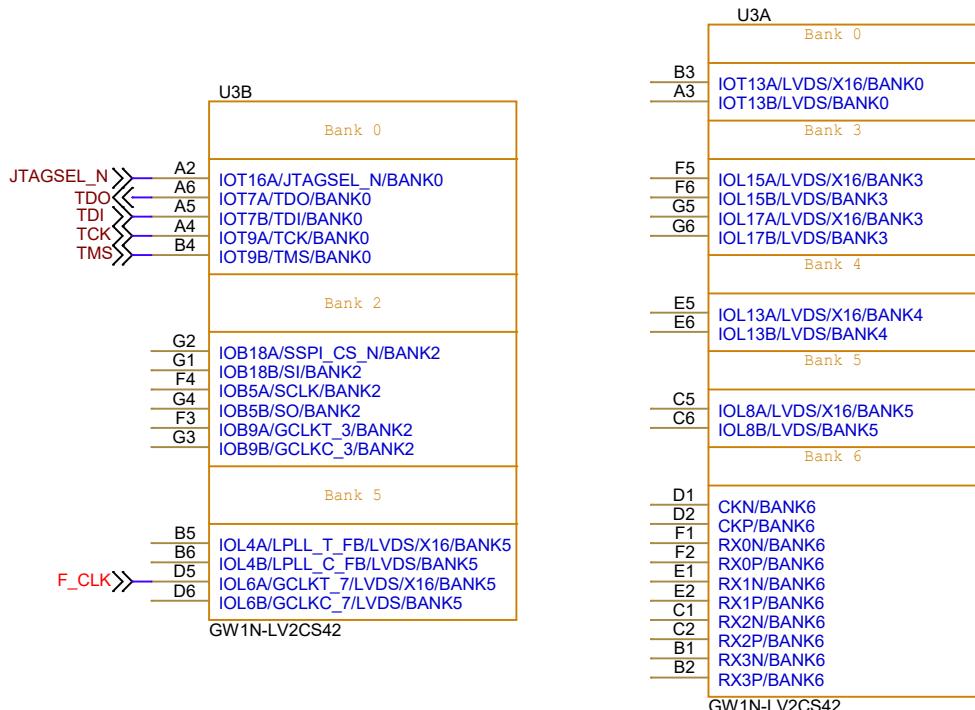
GW1N-LV2CS100H



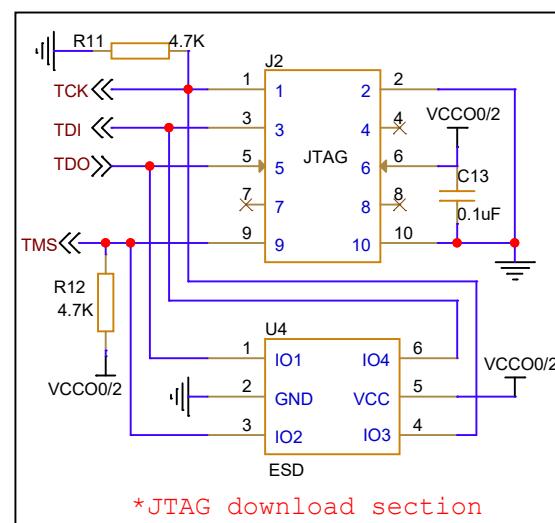
- Notes:
- F_CLK signal is an external input clock signal.
 - It is recommended that F_CLK signal be provided through an active oscillator crystal.
 - It is recommended that add an ESD protection chip to the JTAG download circuit.

Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
B	GW1N-LV2CS100H	2.2
Date:	Friday, July 05, 2024	Sheet 1 of 33

GW1N-LV2CS42



JTAGSEL_N << R10 1K ||| JTAG mode selection signal section

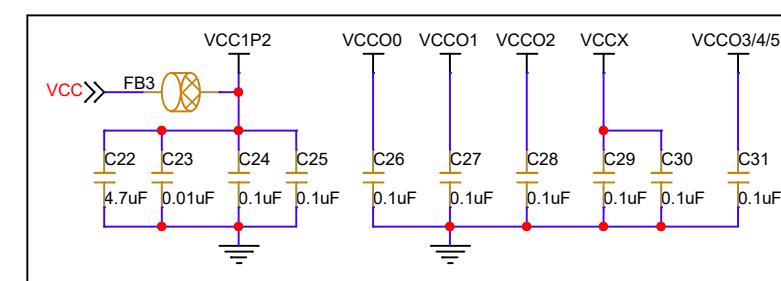
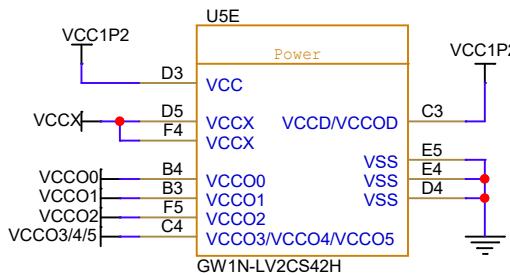
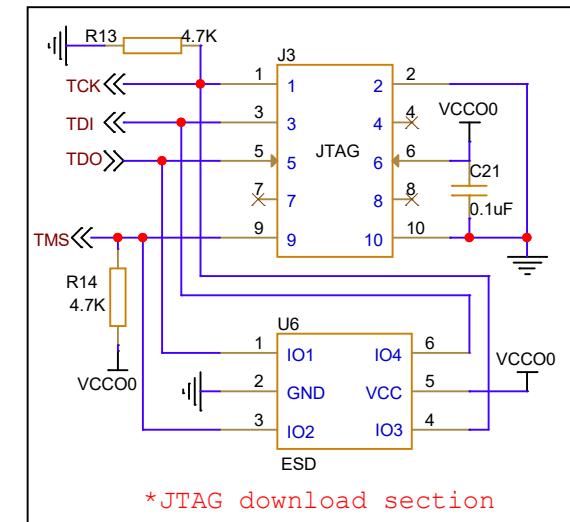
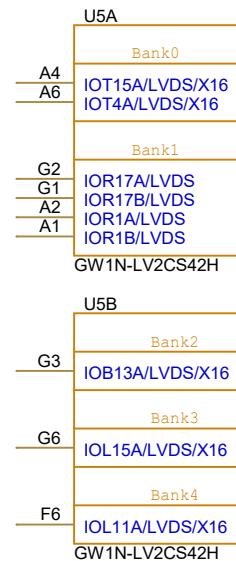
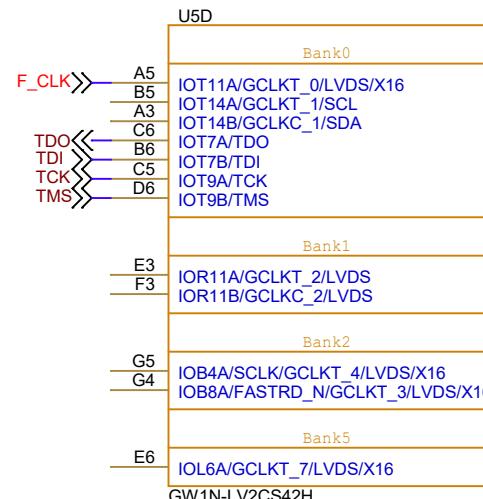


Notes:

- 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-LV2CS42

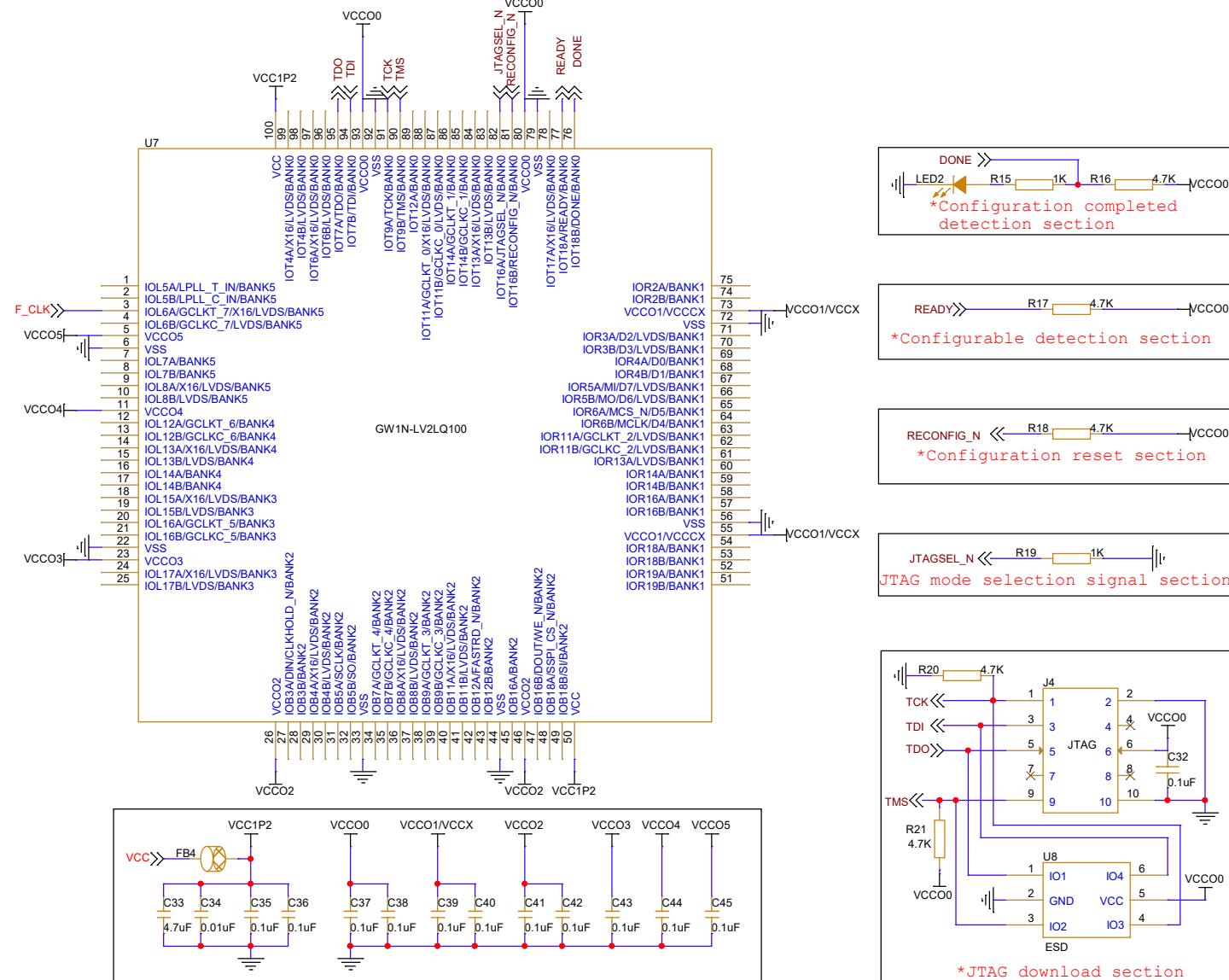
GW1N-LV2CS42H



Notes:

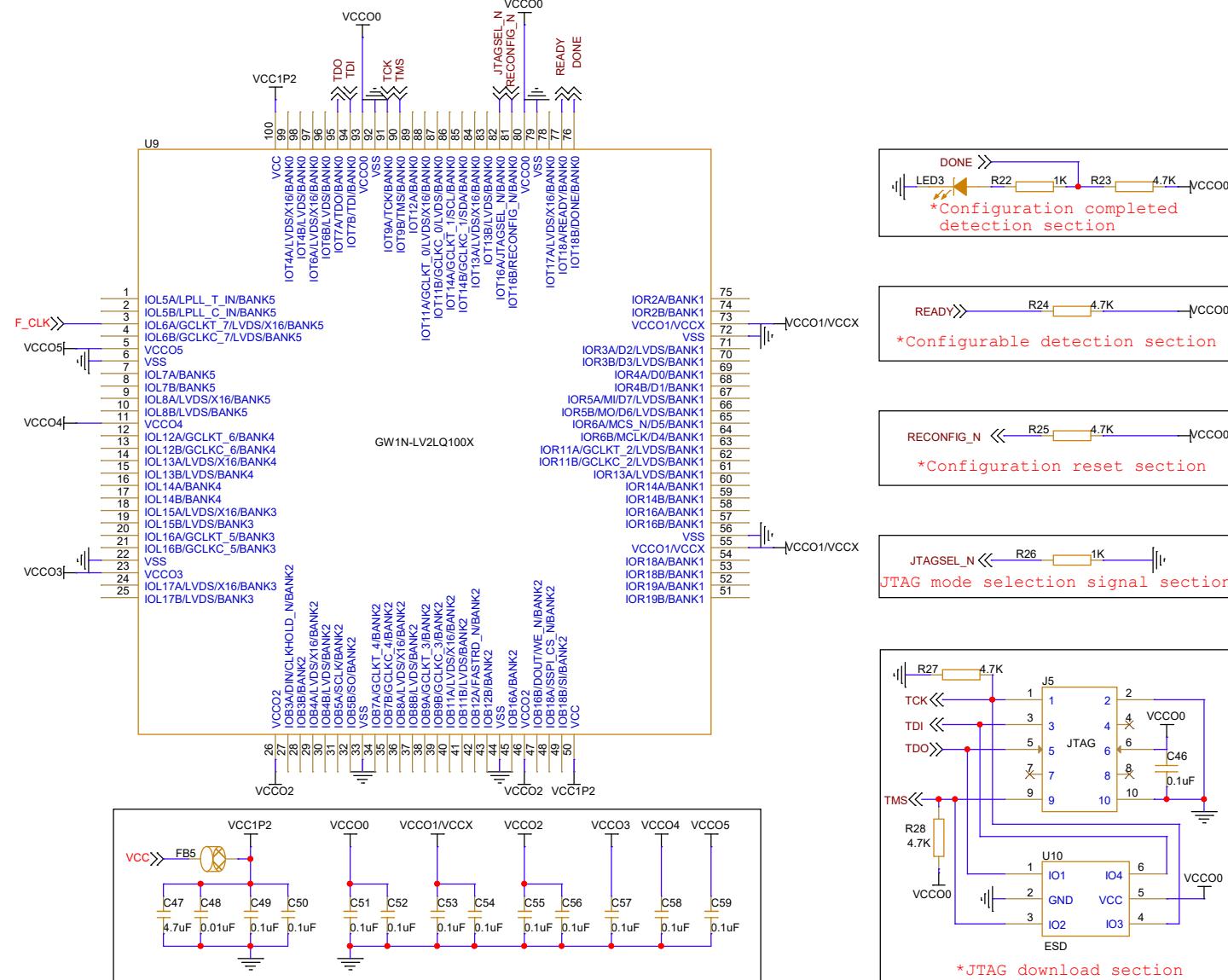
1. F_CLK signal is an external input clock signal.
It is recommended that F_CLK signal be provided through an active oscillator crystal.
2. It is recommended that add an ESD protection chip to the JTAG download circuit.

D

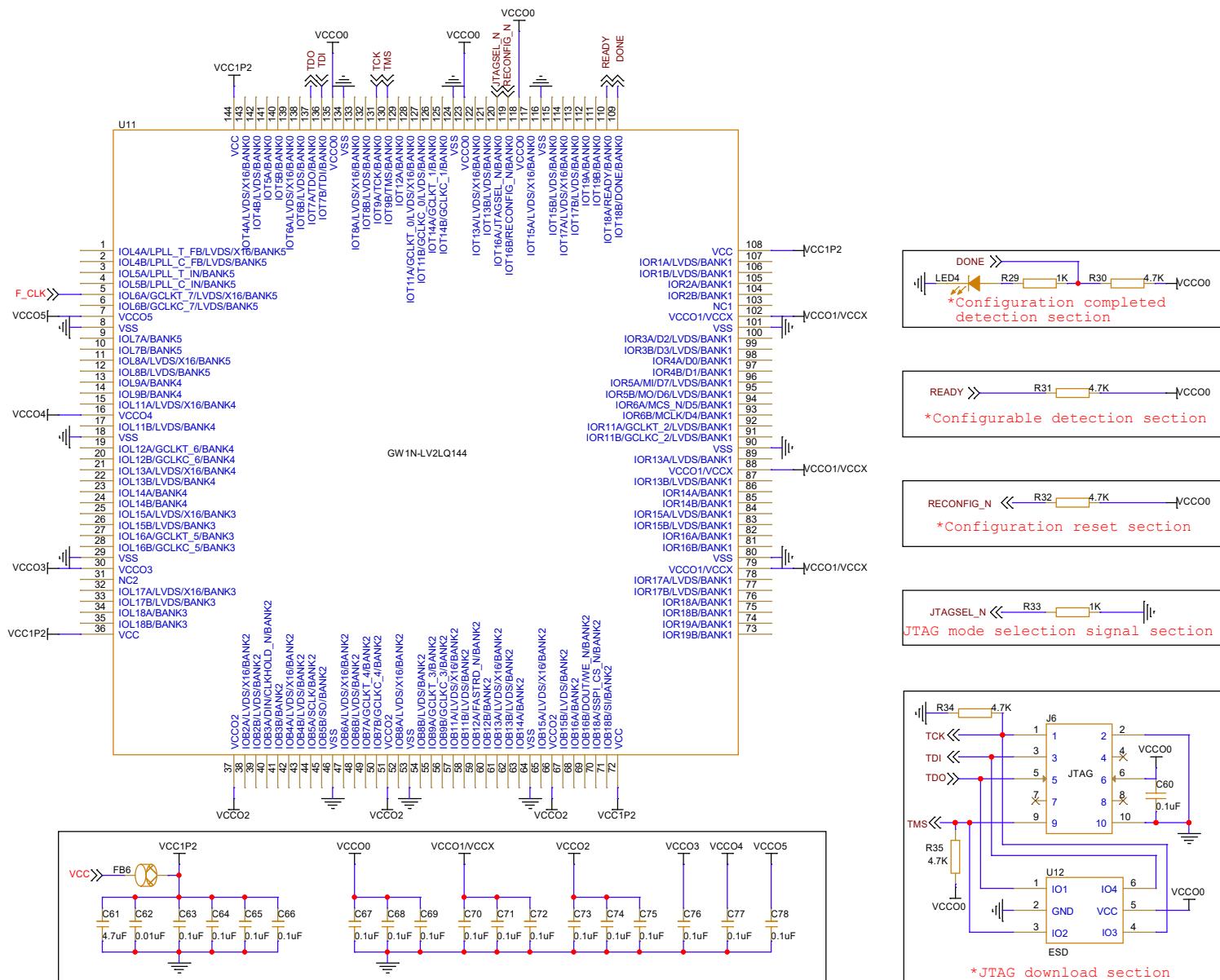
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Title	
GOWIN Minimum System Diagram	
Size B	Document Number GW1N-LV2LQ100
Rev 2.2	Date: Thursday, July 04, 2024

D



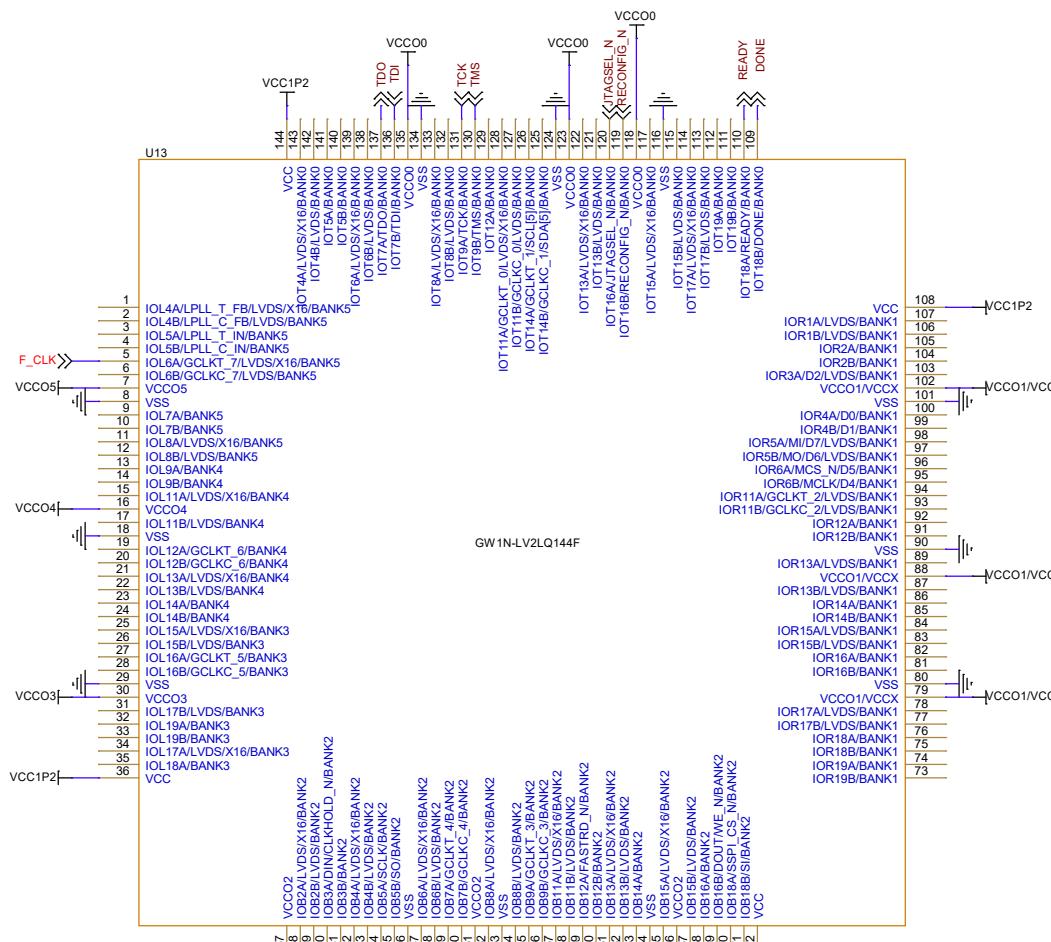
Title	
GOWIN Minimum System Diagram	
Size B	Document Number GW1N-LV2LQ100X
Rev 2.2	Date: Thursday, July 04, 2024



Title	
GOWIN Minimum System Diagram	
Size	Document Number
A3	GW1N-LV2LQ144
Date:	Rev
Thursday, July 04, 2024	2.2
Sheet	6 of 33

D

D

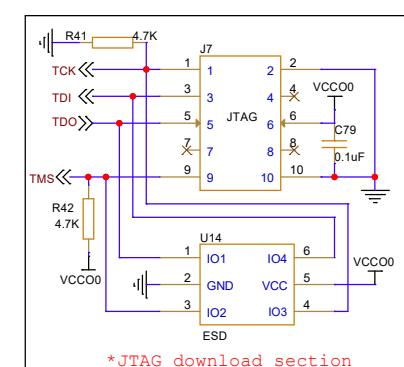
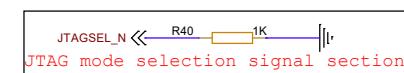
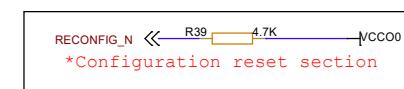
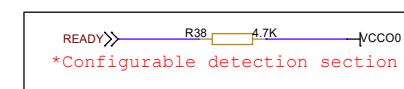
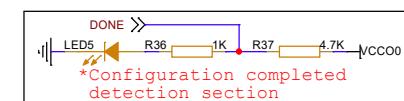


Notes:

1.F CLK signal is an external input clock signal.

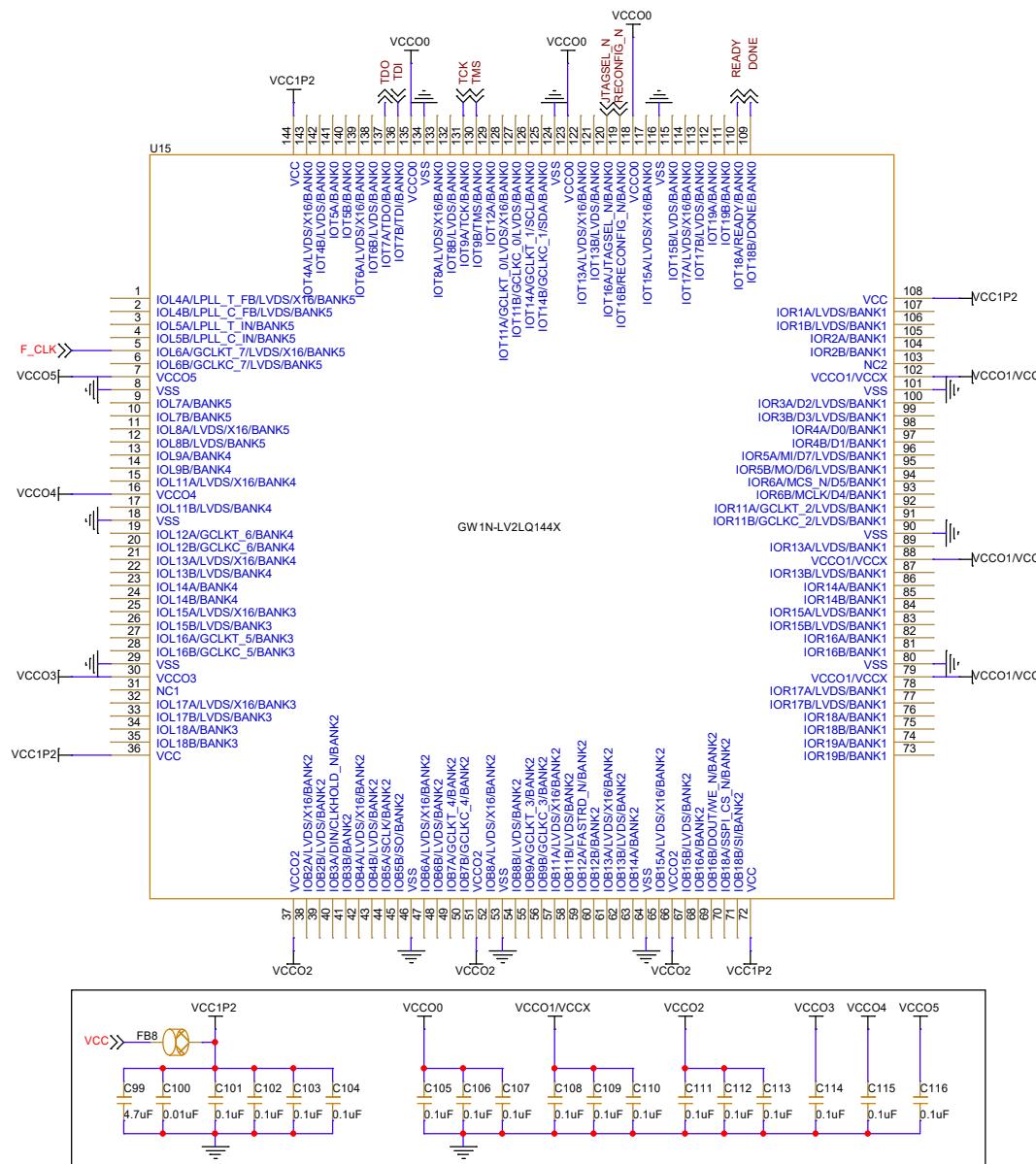
It is recommended that F CLK signal be provided through an active oscillator crystal.

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



Title	
GOWIN Minimum System Diagram	
Size A3	Document Number GW1N-LV2LQ144F
Date: Thursday, July 04, 2024	Rev 2.2

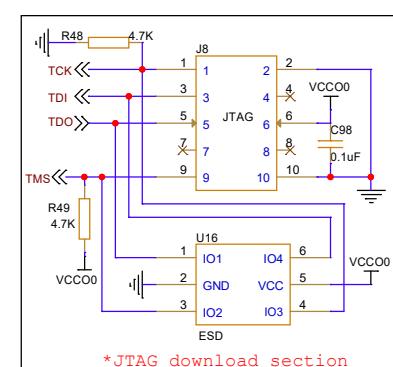
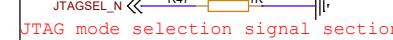
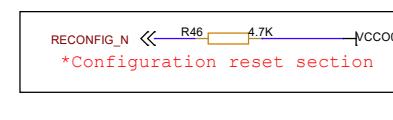
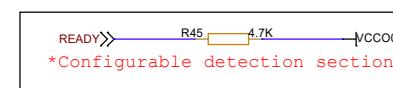
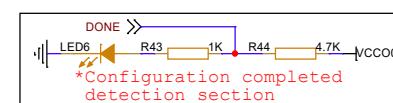
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**Notes:**

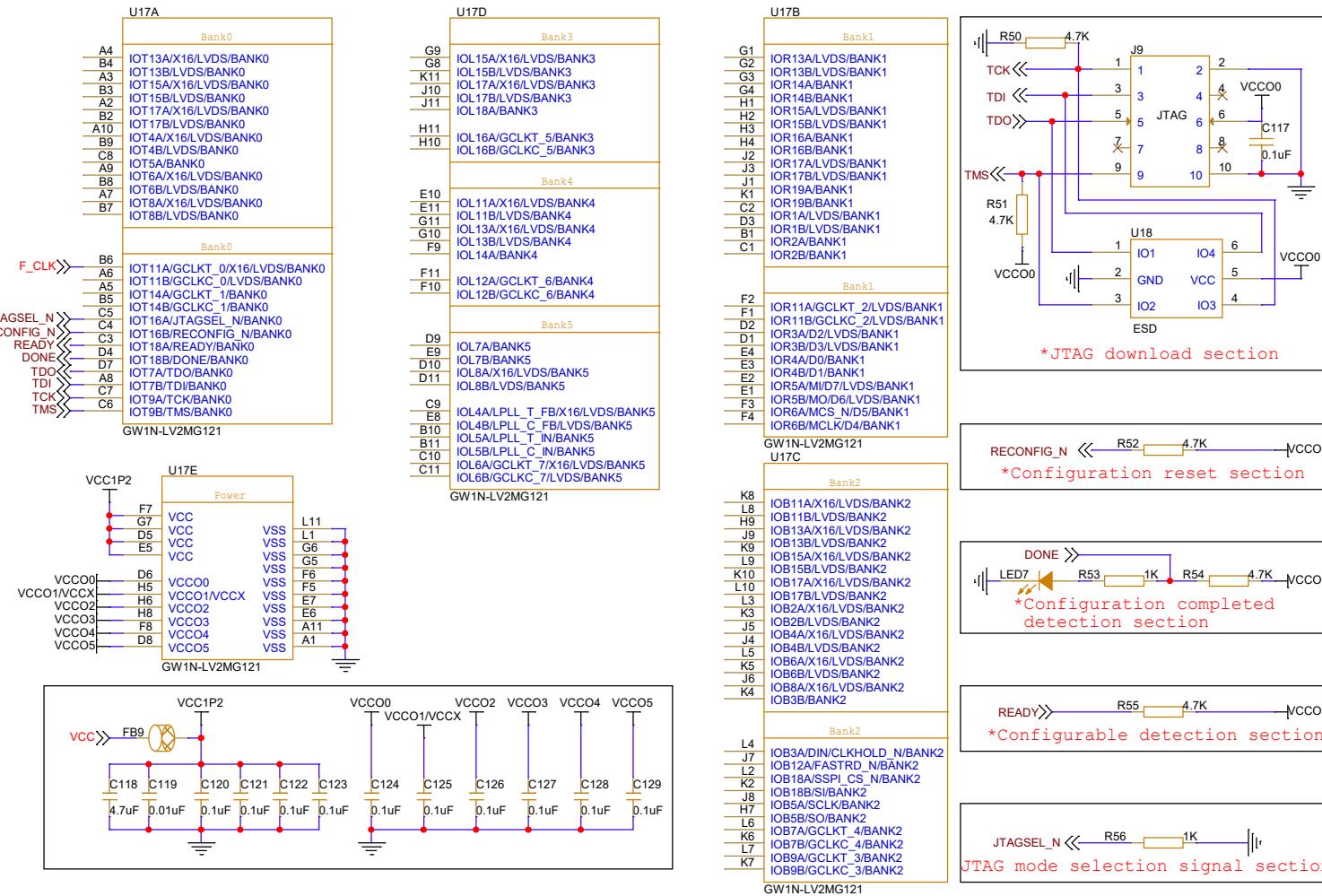
1.F CLK signal is an external input clock signal.

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

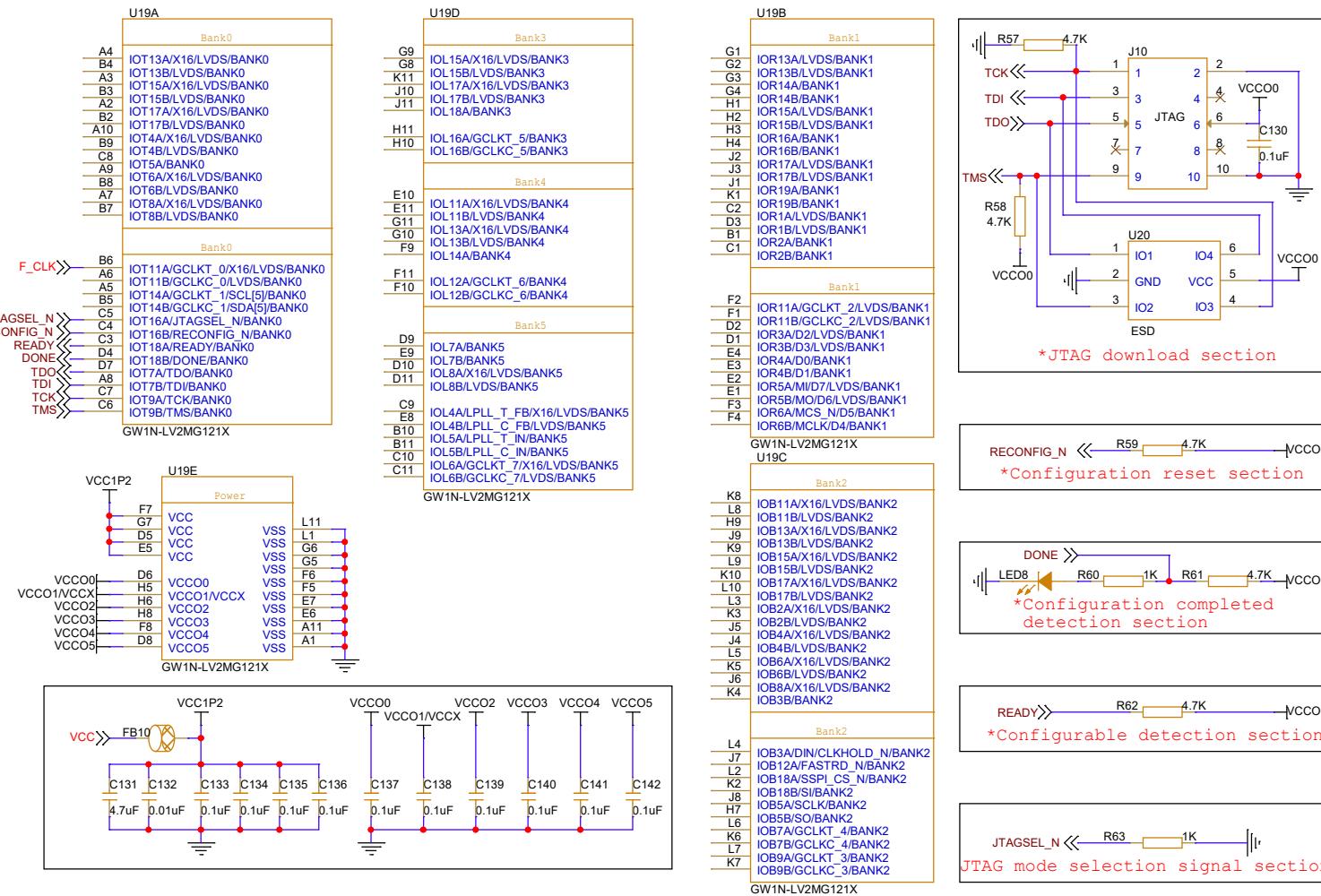
2.It is recommended that add an ESD protection chip to the JTAG download circuit.



Title		GOWIN Minimum System Diagram	
Size	Document Number	Rev 2.2	
A3	GW1N-LV2LQ144X		
Date:	Thursday, July 04, 2024	Sheet	8 of 33

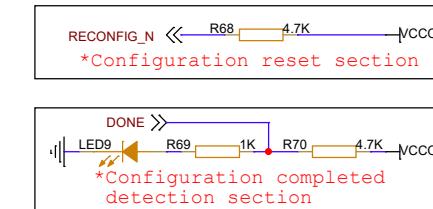
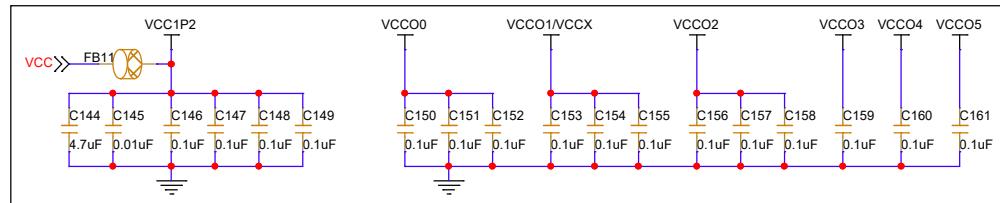
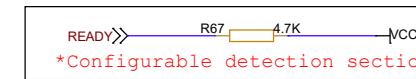
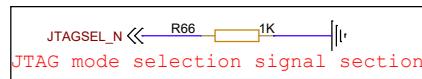
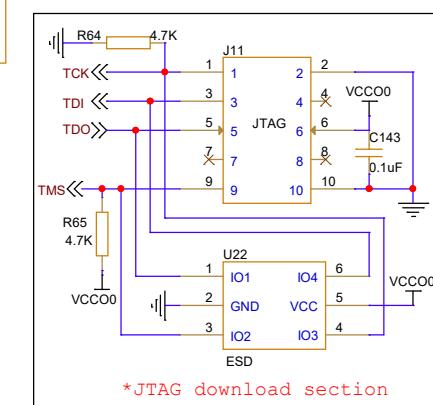
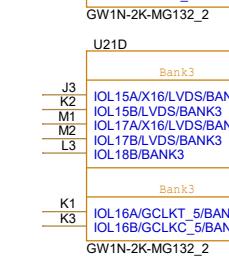
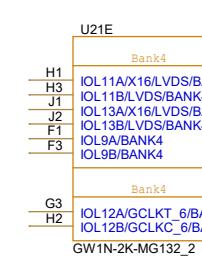
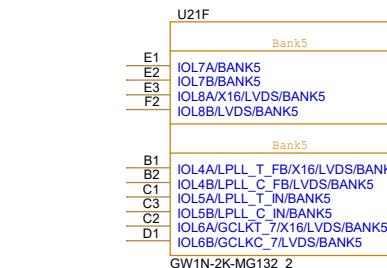
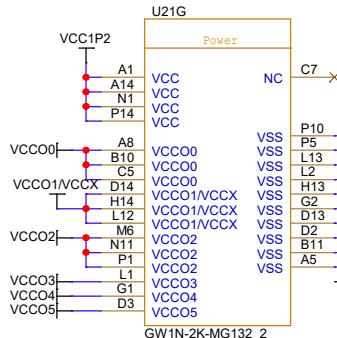
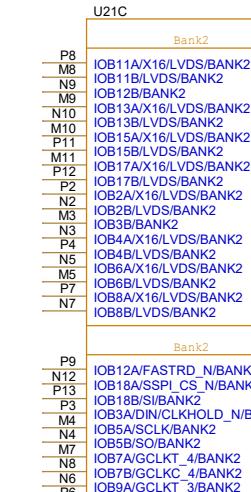
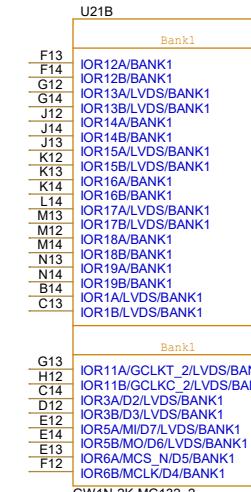
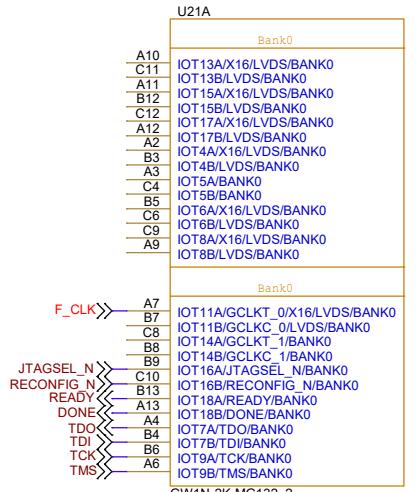


Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
B	GW1N-LV2MG121	2.2

**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.

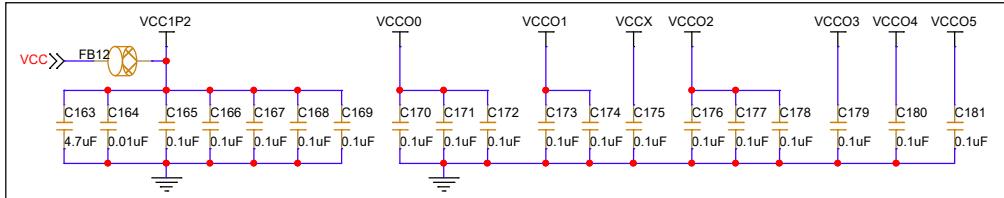
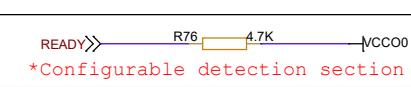
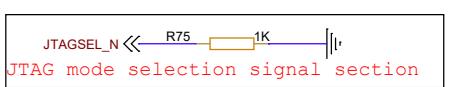
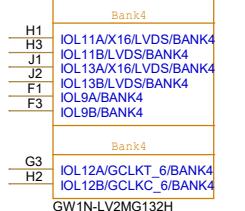
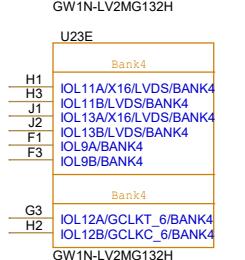
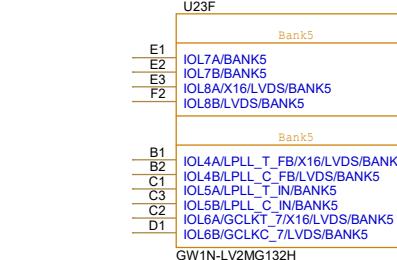
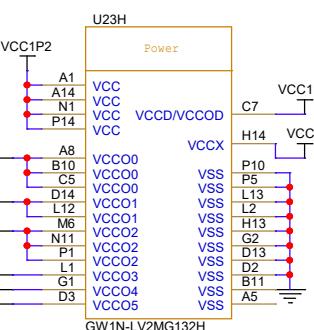
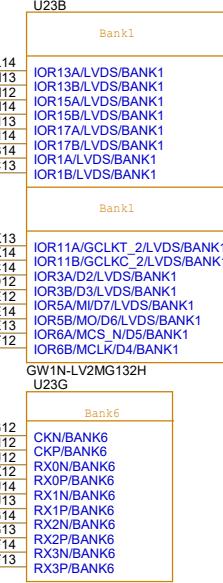
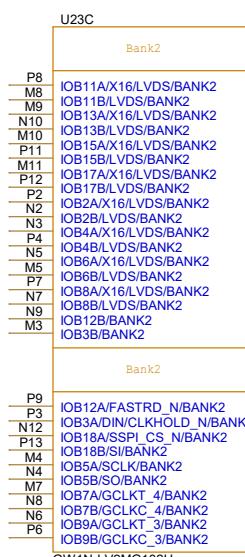
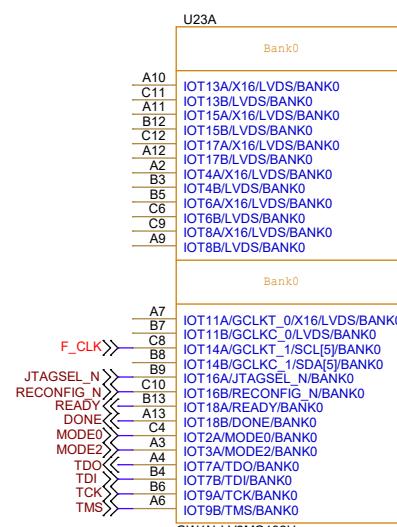
Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
B	GW1N-LV2MG121X	2.2



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.

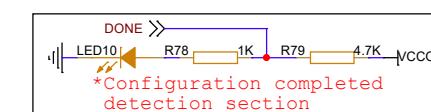
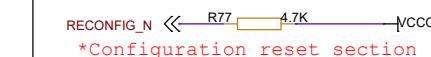
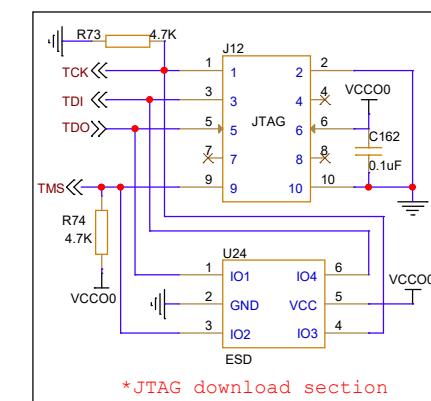
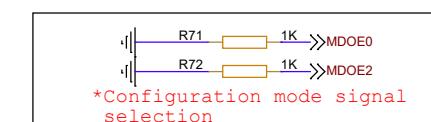
Title		
GOWIN Minimum System Diagram		
Size B	Document Number GWIN-LV2MG132	Rev 2.2

**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.

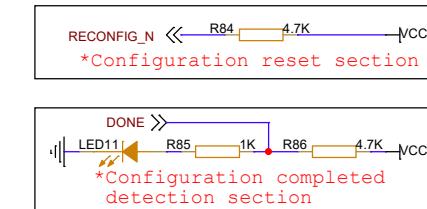
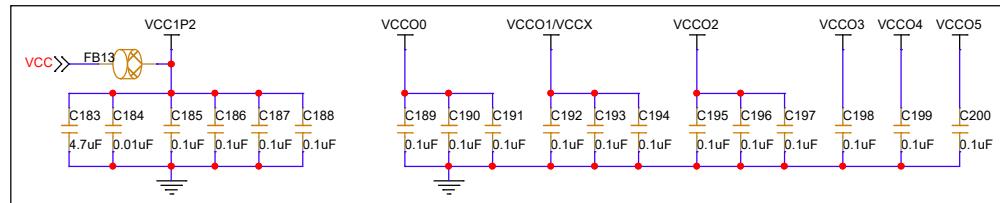
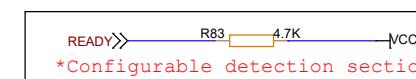
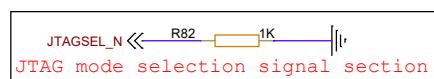
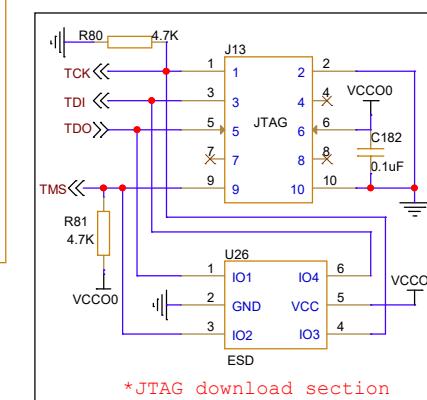
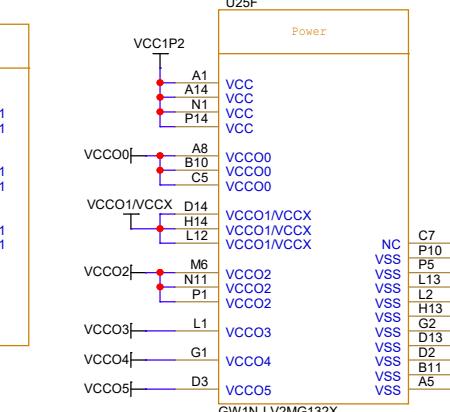
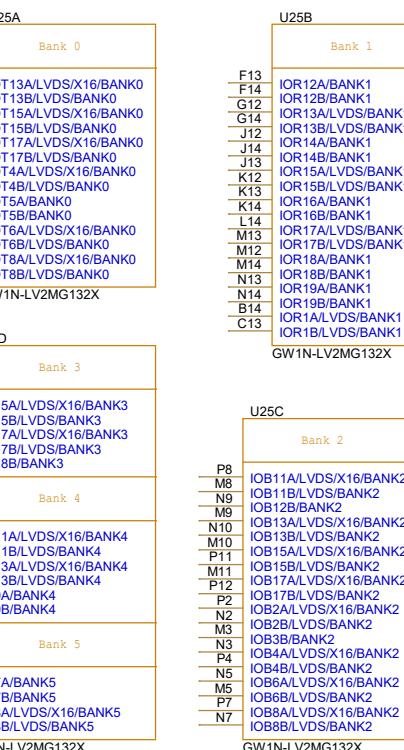
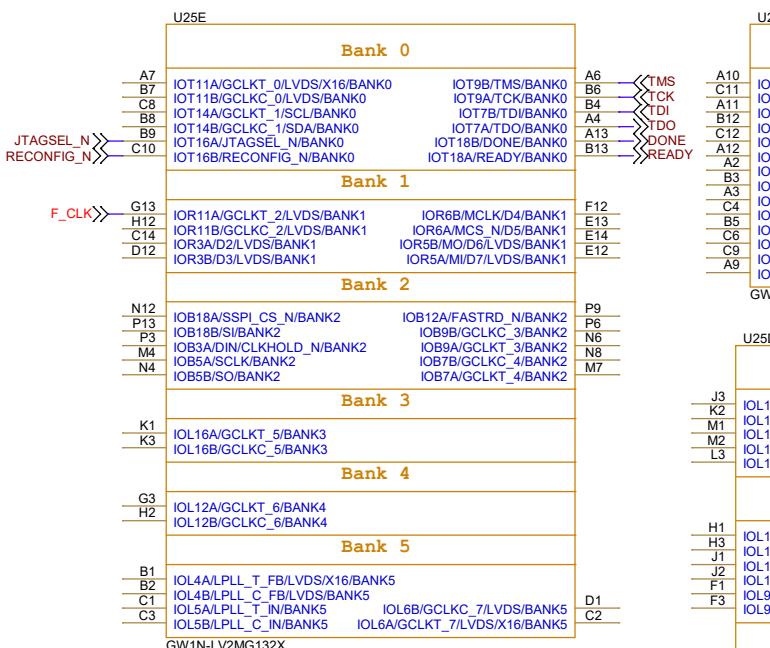
2. It is recommended that add an ESD protection chip to the JTAG download circuit.



Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
B	GW1N-LV2MG132H	2.2

Date: Thursday, July 04, 2024 Sheet 12 of 33

GW1N-LV2MG132X

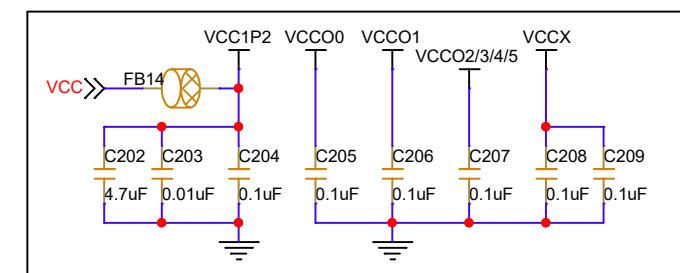
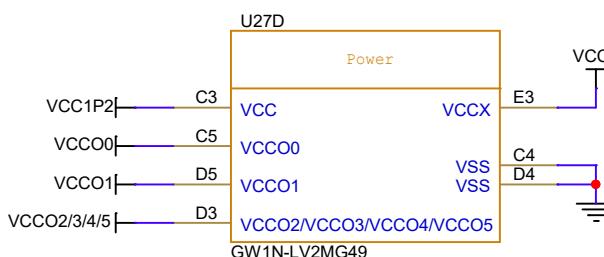
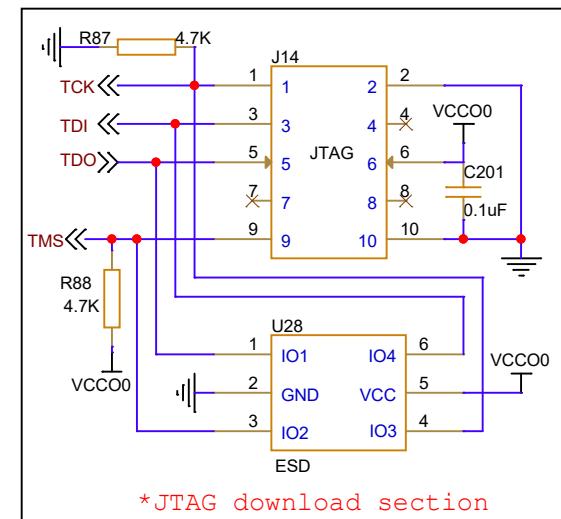
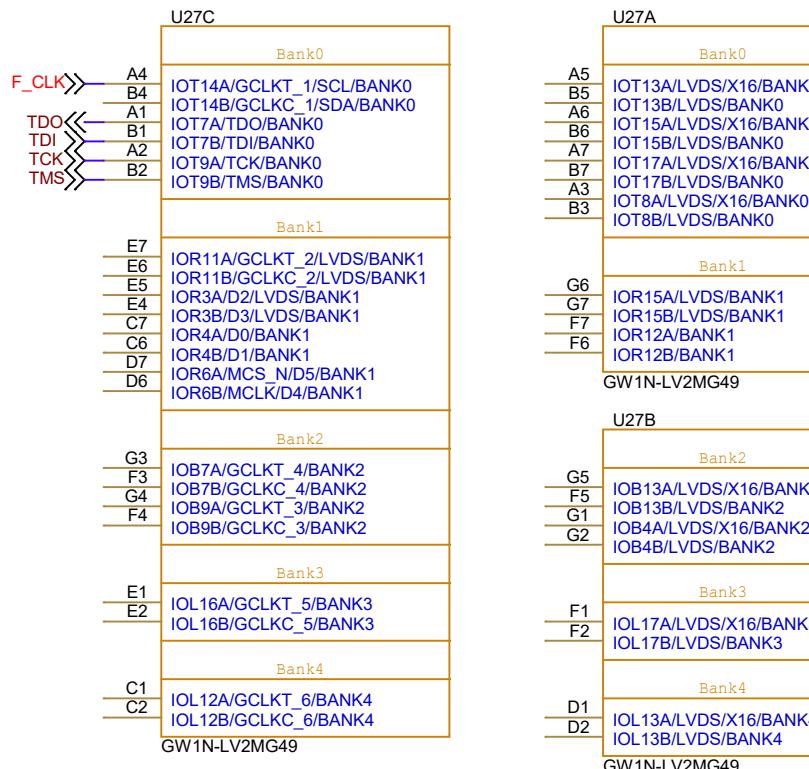


Notes:

- 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-LV2MG132X		Rev 2.2
Date:	Thursday, July 04, 2024	Sheet	13	of 33

GW1N-LV2MG49



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
A4	GW1N-LV2MG49	2.2
Date:	Thursday, July 04, 2024	Sheet 14 of 33

D

D

C

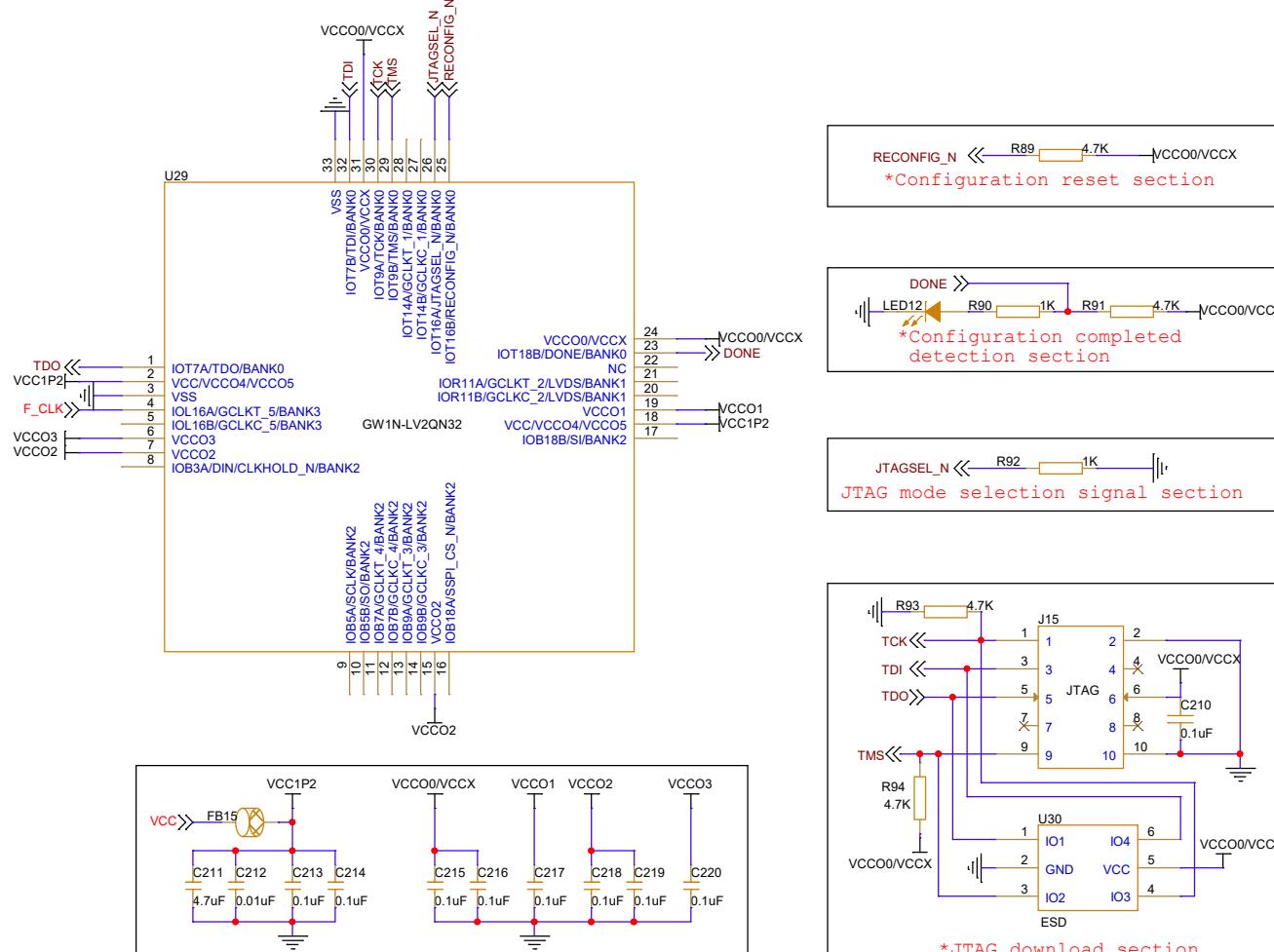
C

B

B

A

A

**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-LV2QN32	2.2

D

D

C

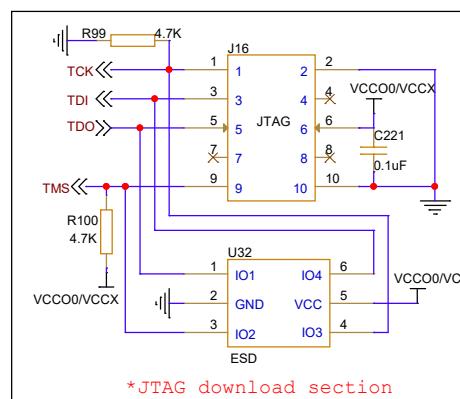
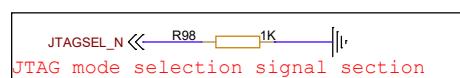
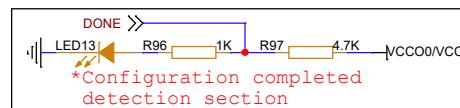
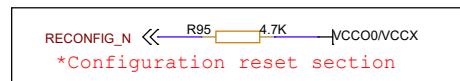
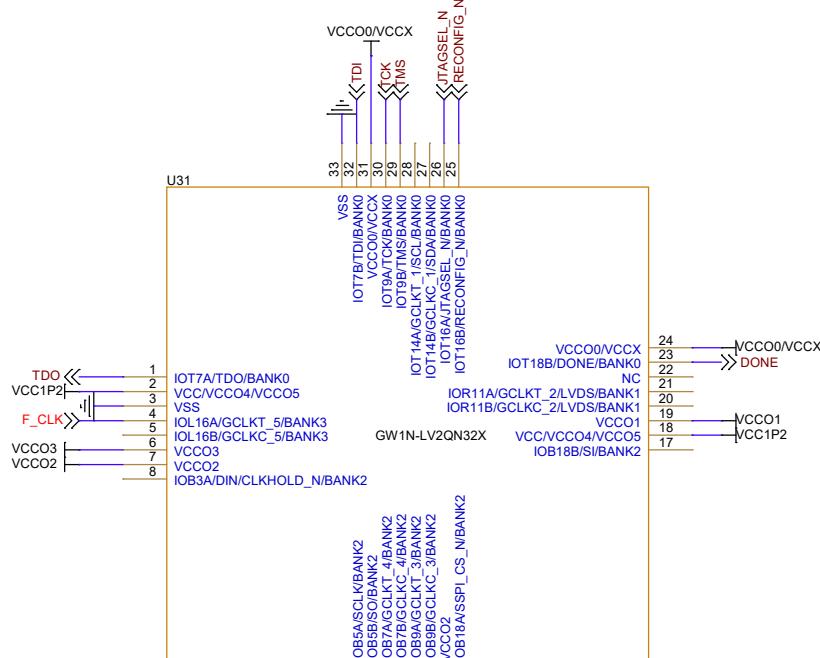
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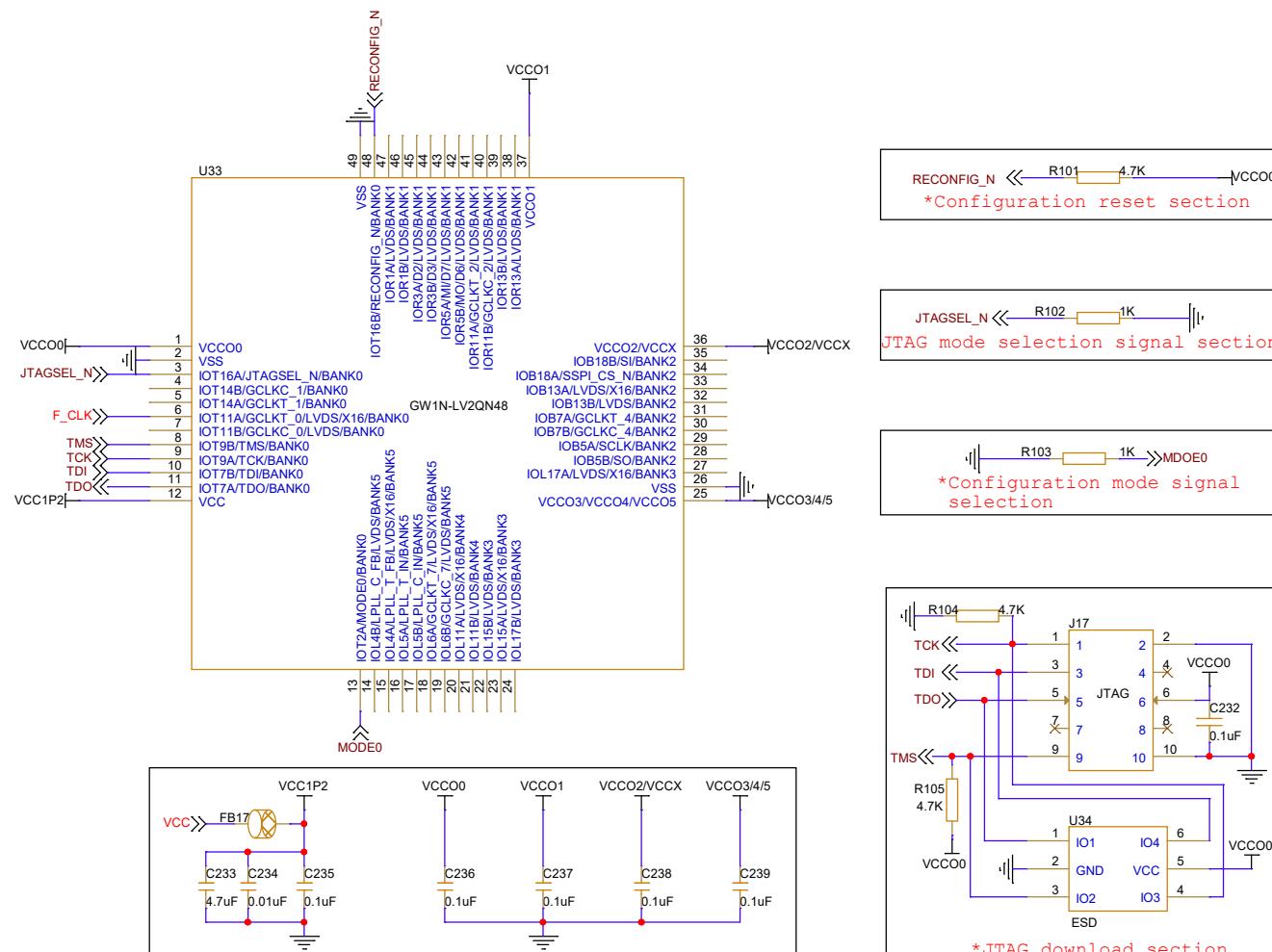
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**Notes:**

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.

Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
B	GW1N-LV2QN32X	2.2

Date: Thursday, July 04, 2024 Sheet 16 of 33

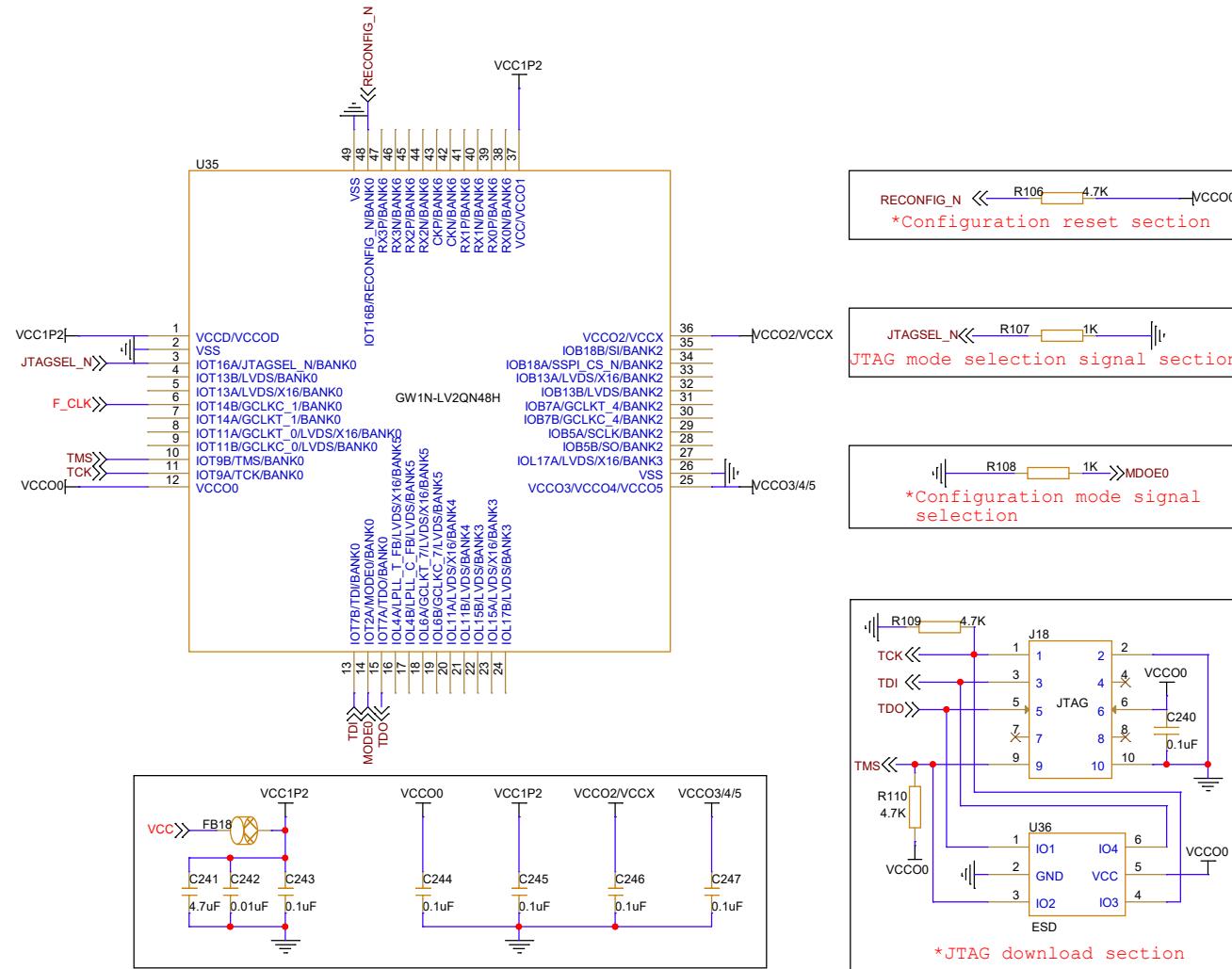
**Notes:**

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-LV2QN48	Rev 2.2
Date: Thursday, July 04, 2024	Sheet 17 of 33	



Notes:

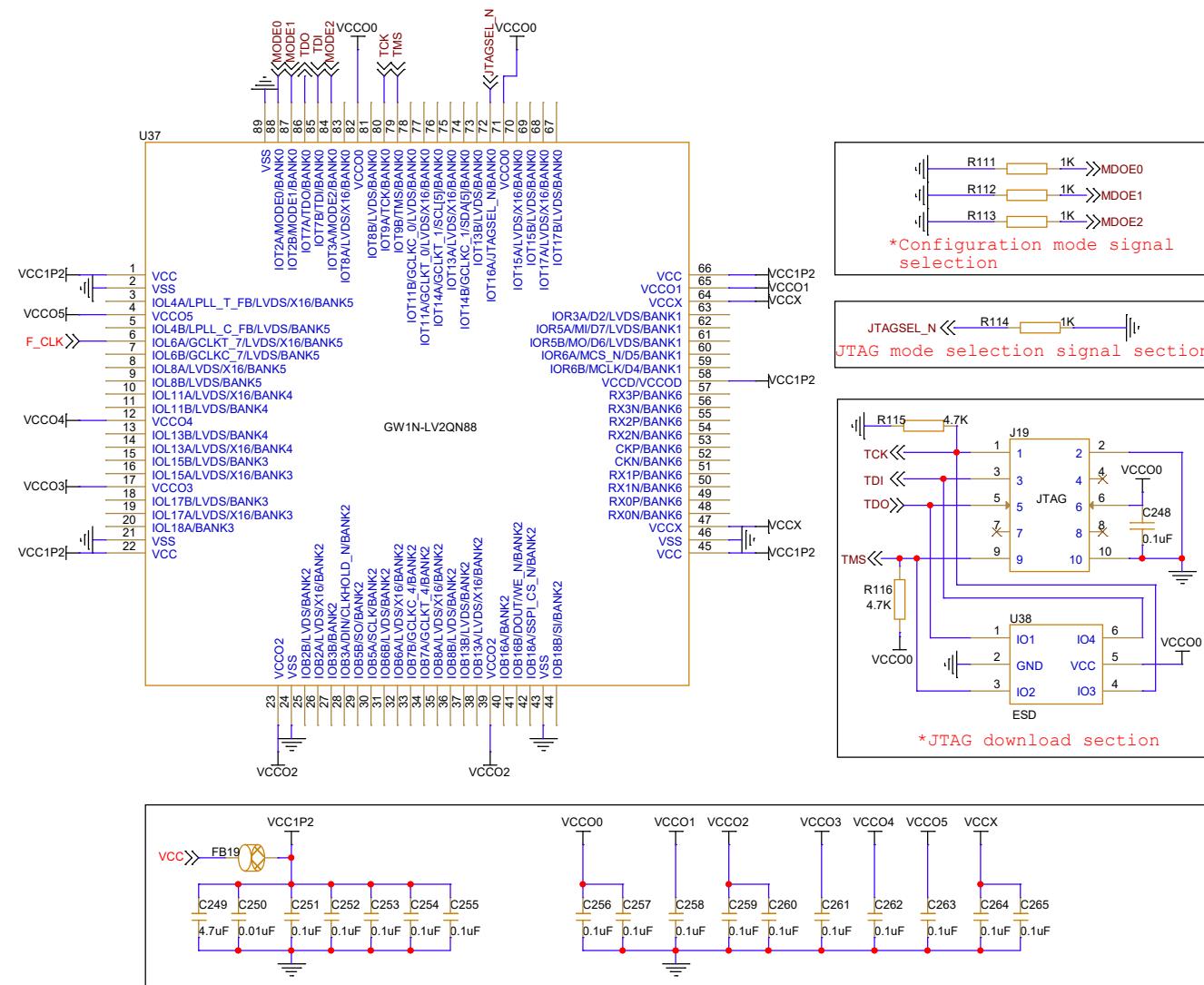
1.F CLK signal is an external input clock signal.

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
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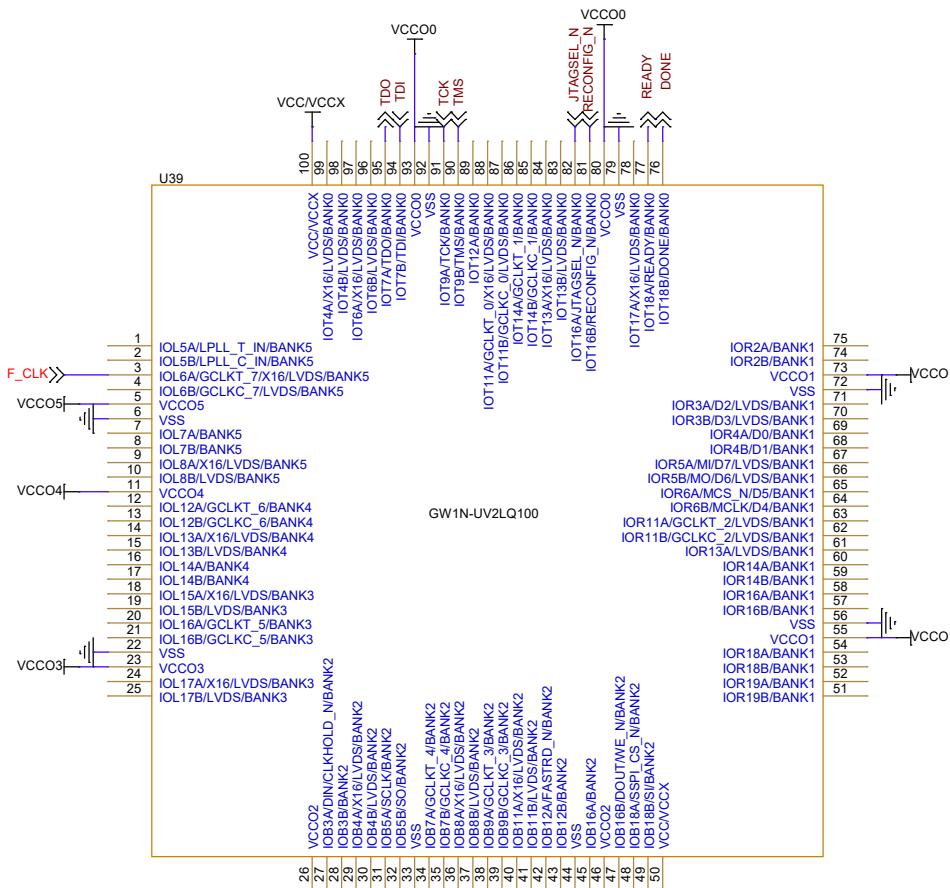
Date: Thursday, July 04, 2024 Sheet 18 of 33

**Notes:**

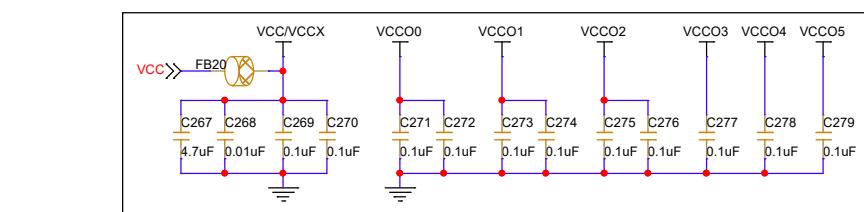
- F CLK signal is an external input clock signal.
It is recommended that F CLK signal be provided through an active oscillator crystal.
- It is recommended that add an ESD protection chip to the JTAG download circuit.

Title		
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Size	Document Number	Rev
B	GW1N-LV2QN88	2.2
	Date: Thursday, July 04, 2024	Sheet 19 of 33

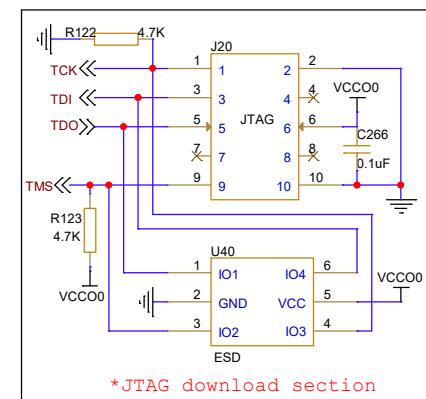
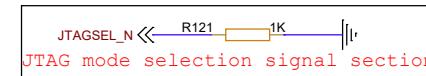
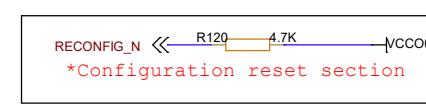
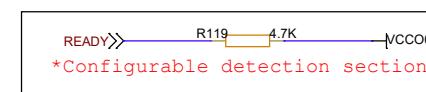
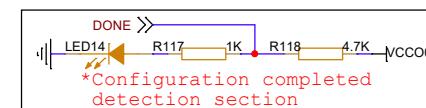
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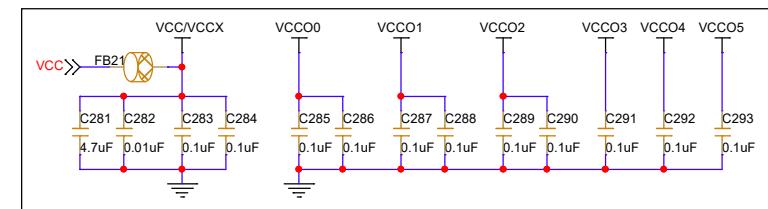
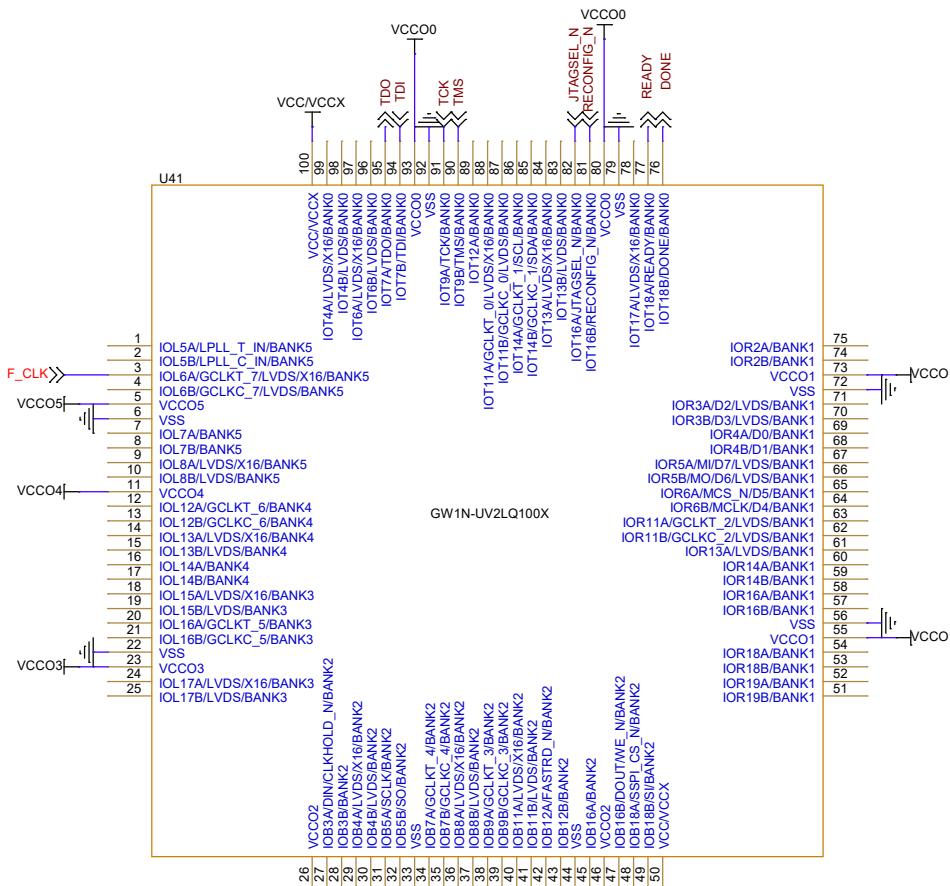
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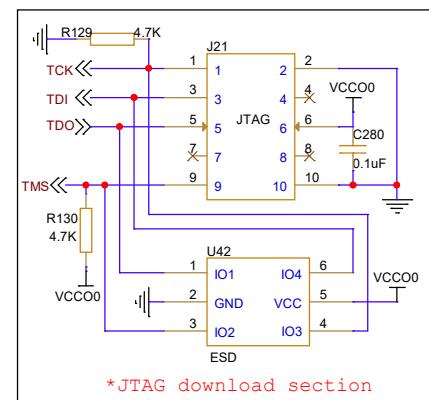
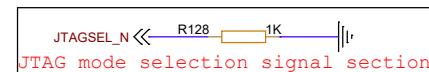
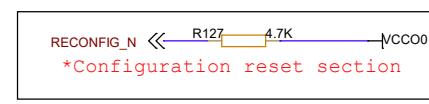
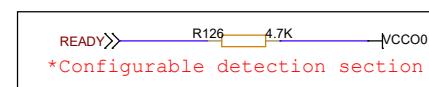
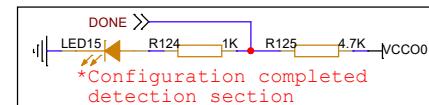
1. F_CLK signal is an external input clock signal.
It is recommended that F_CLK signal be provided through an active oscillator crystal.
2. It is recommended that add an ESD protection chip to the JTAG download circuit.

Title	
GOWIN Minimum System Diagram	
Size	Document Number
B	GW1N-UV2LQ100
Rev	2.2
Date:	Thursday, July 04, 2024
Sheet	20 of 33

D

**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.

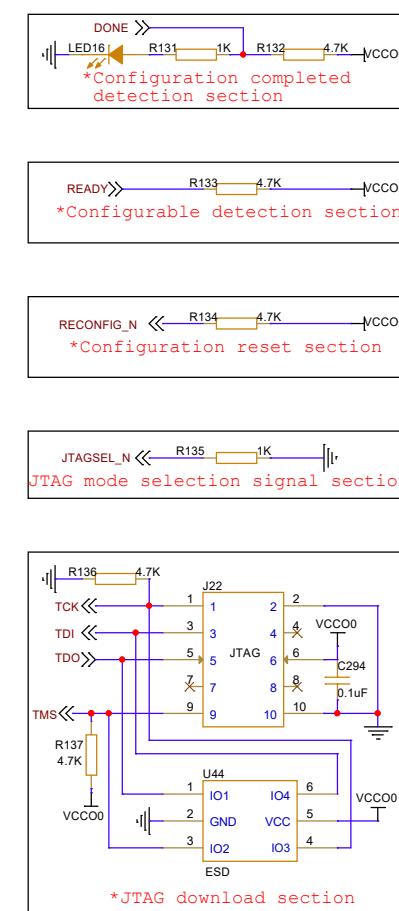
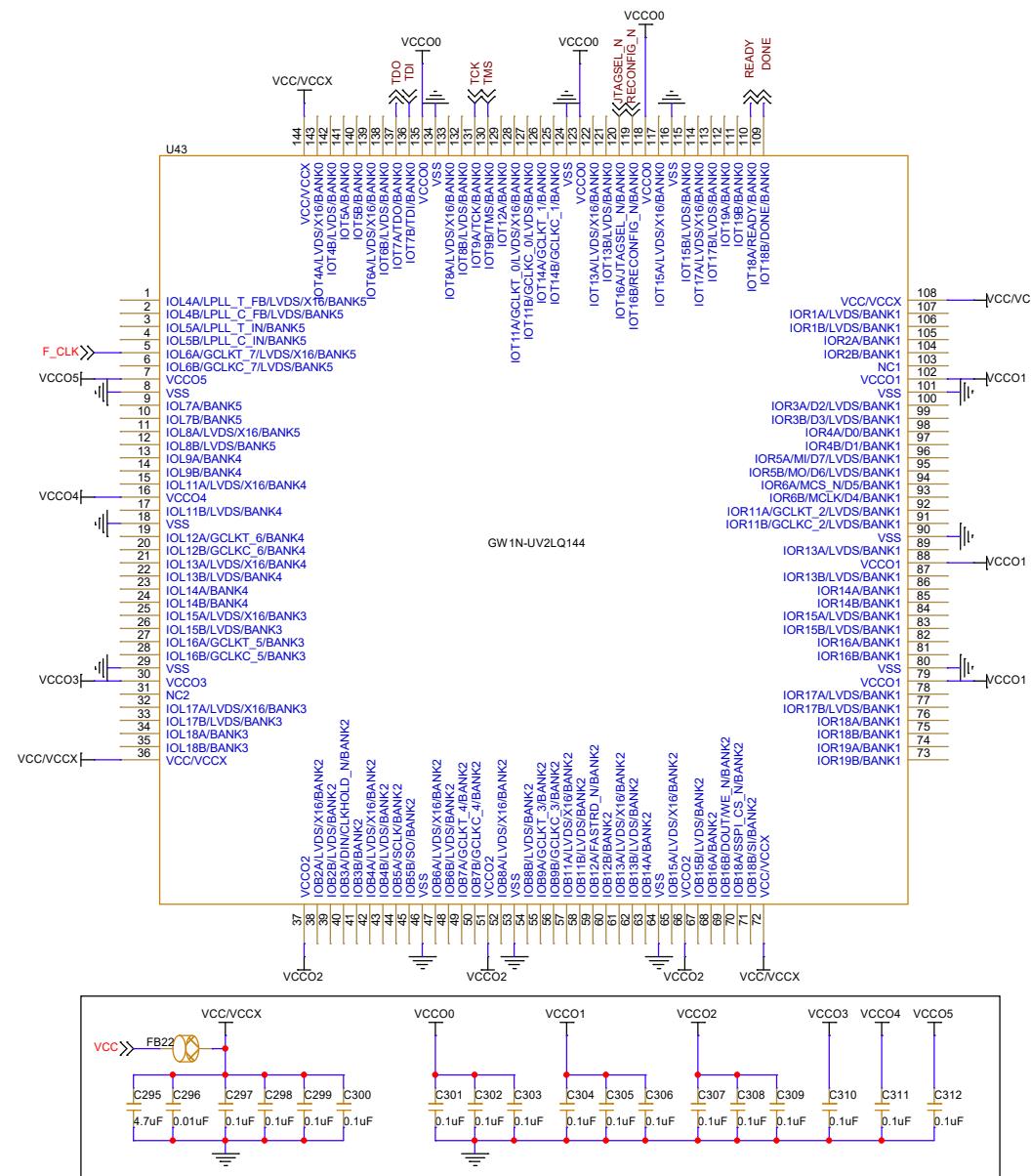


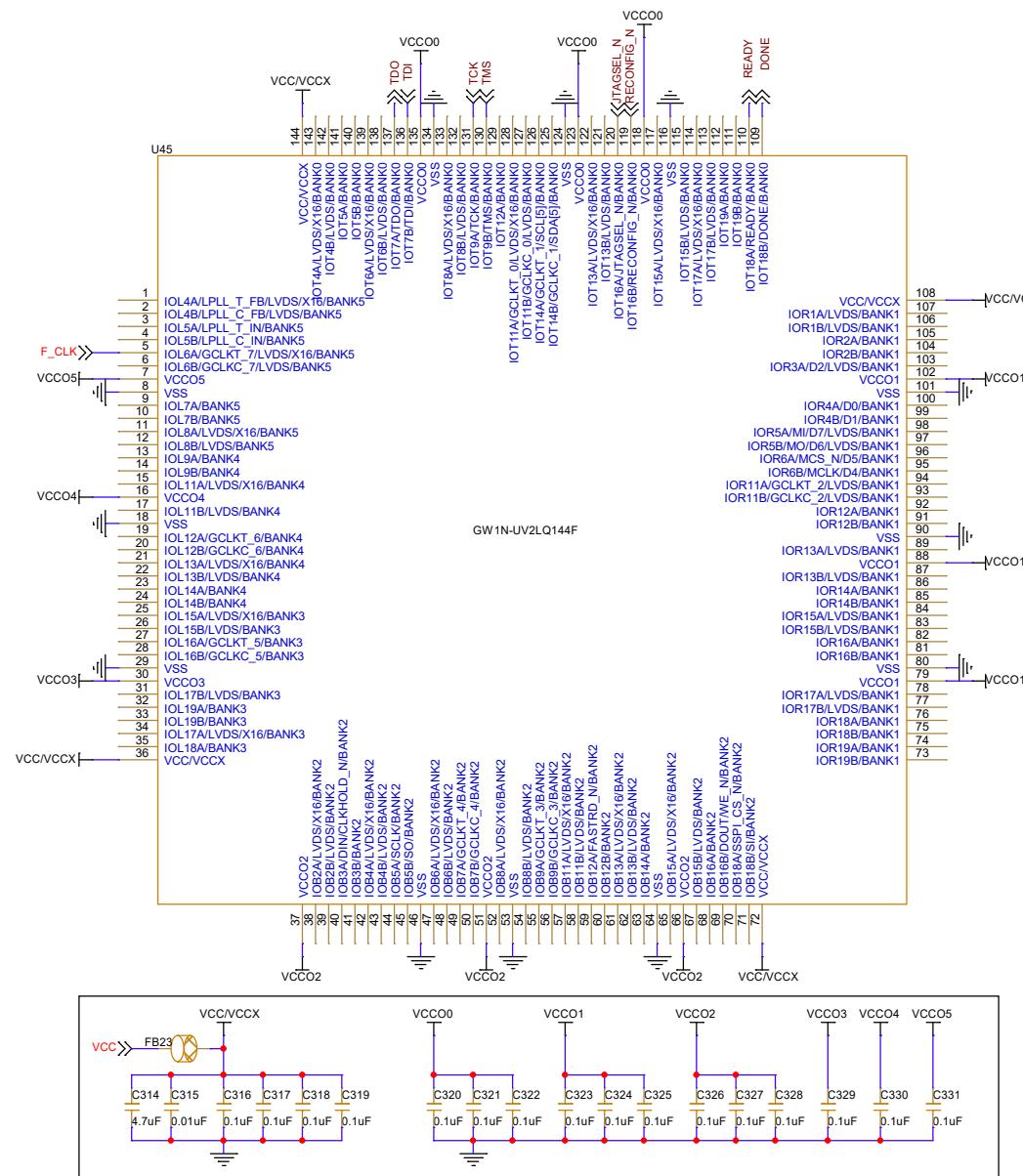
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Document Number: GW1N-UV2LQ100X

Size: B Document Number: GW1N-UV2LQ100X Rev: 2.2

Date: Thursday, July 04, 2024 Sheet: 21 of 33

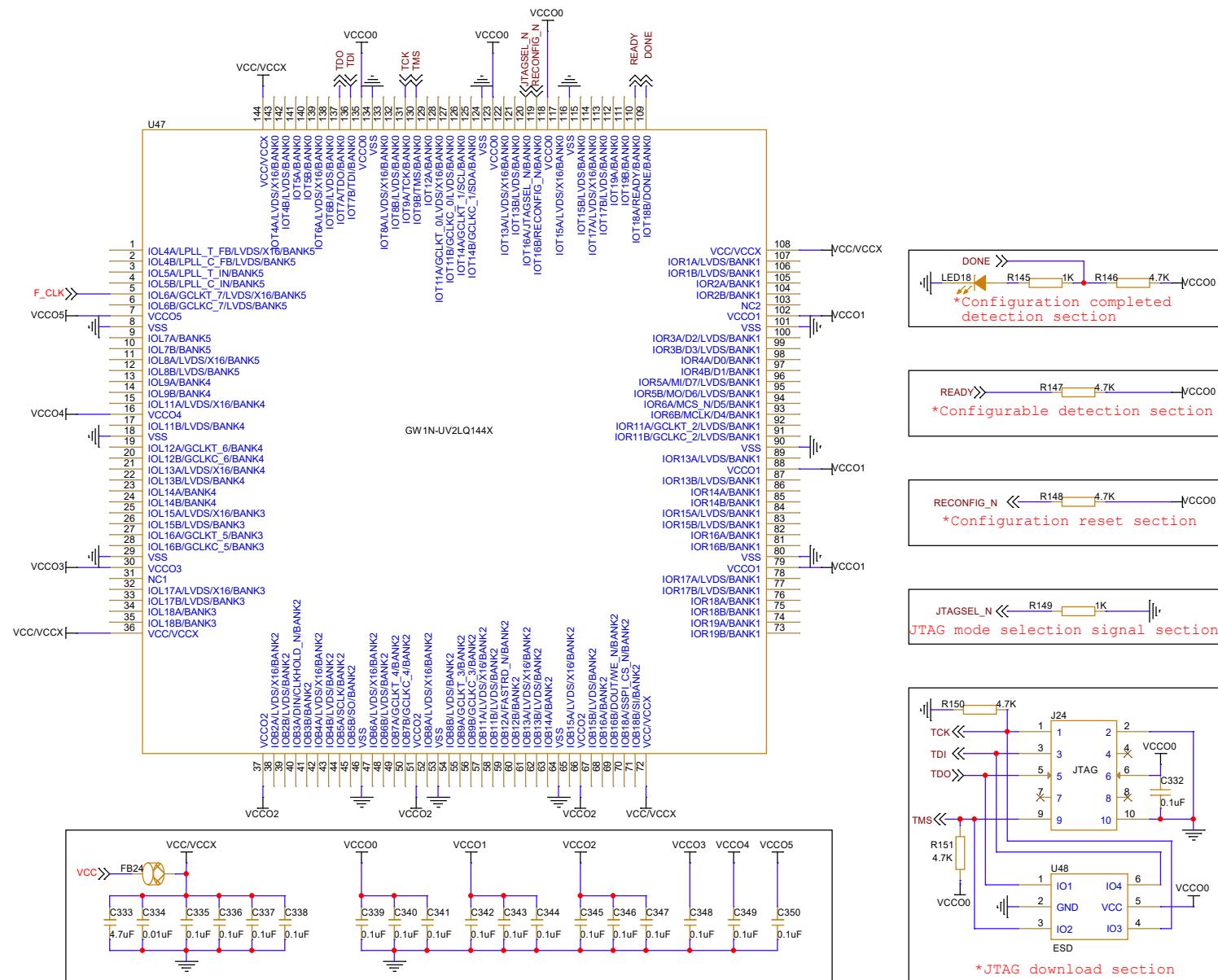
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**Notes:**

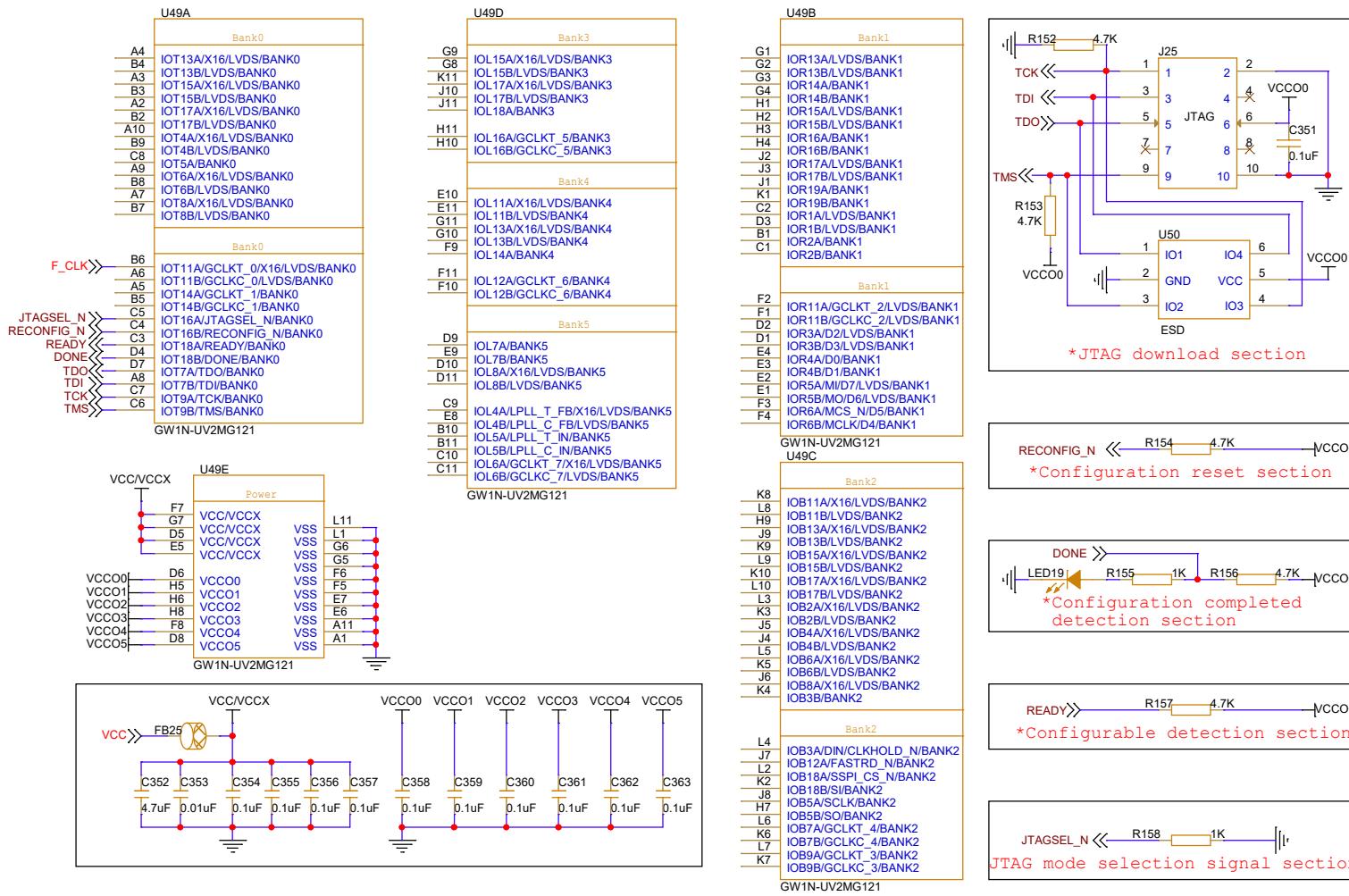
1. F CLK signal is an external input clock signal.
It is recommended that F CLK signal be provided through an active oscillator crystal.
2. It is recommended that add an ESD protection chip to the JTAG download circuit.

Title	
Size A3 Document Number Rev 2.2	
Date: Thursday, July 04, 2024	Sheet 23 of 33
GW1N-UV2LQ144F	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.

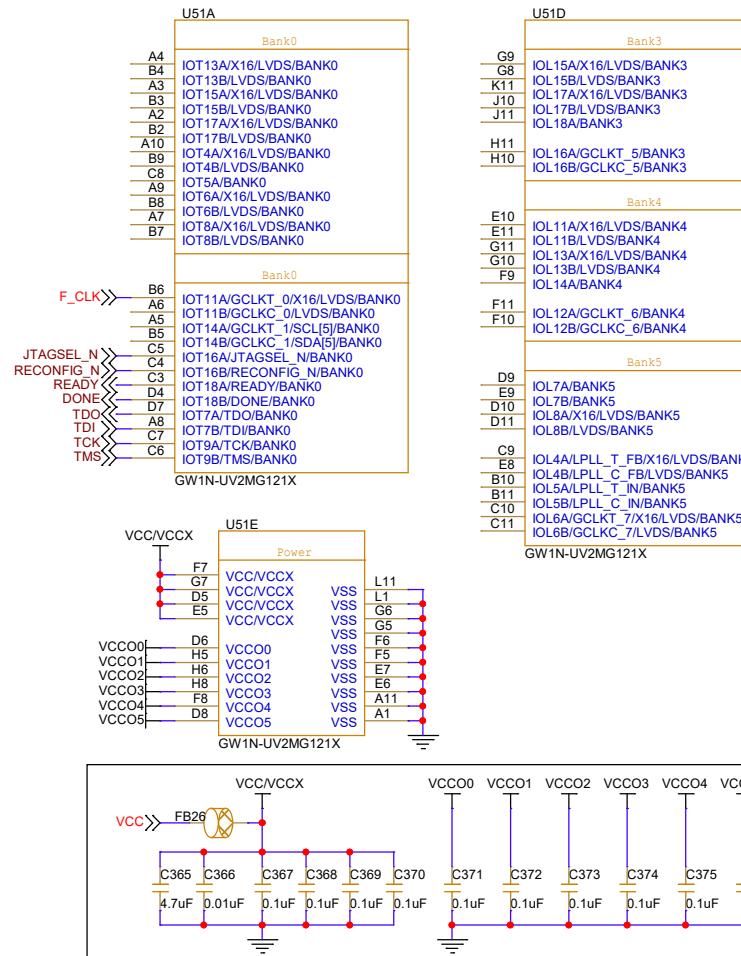
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Size	Document Number
A3	GW1N-UV2LQ144X
Date:	Thursday, July 04, 2024
Rev	2.2

**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	GW1N-UV2MG121	2.2

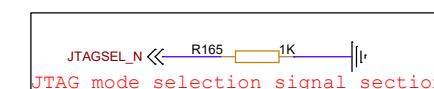
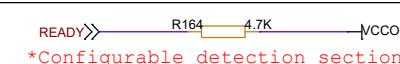
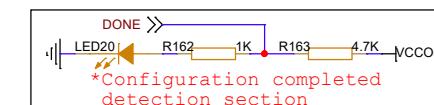
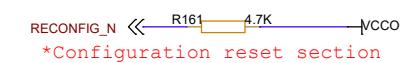
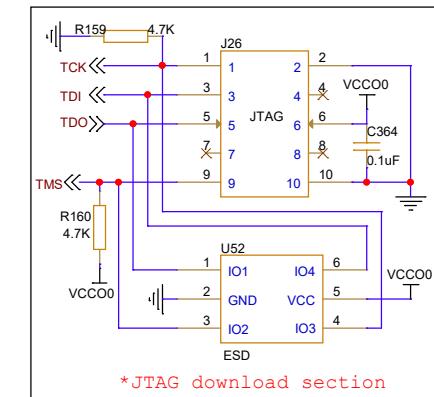
Date: Thursday, July 04, 2024 Sheet 25 of 33

**Notes:**

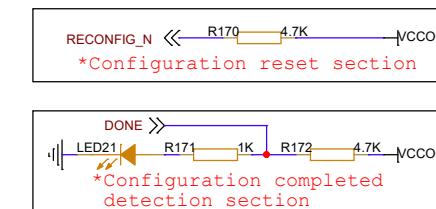
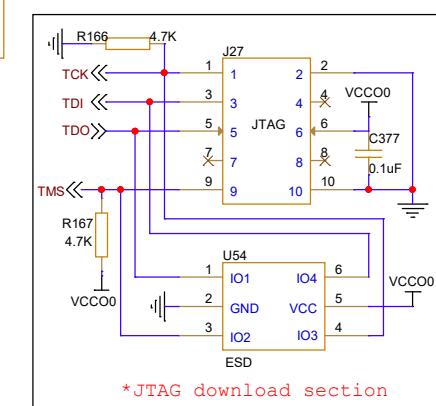
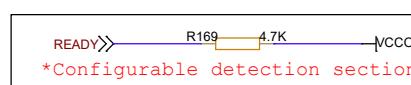
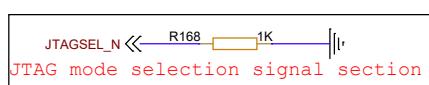
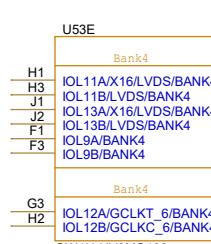
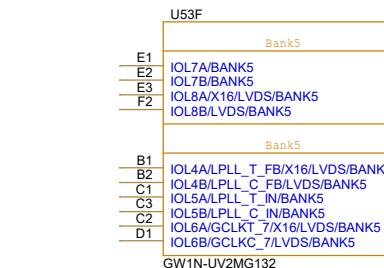
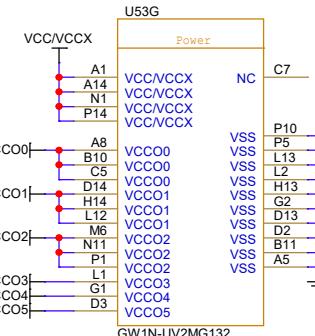
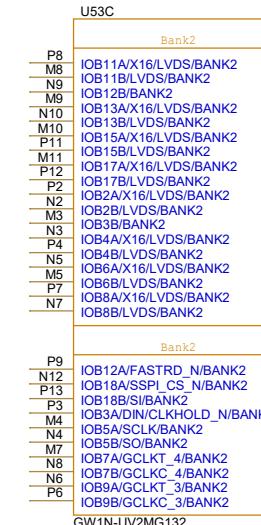
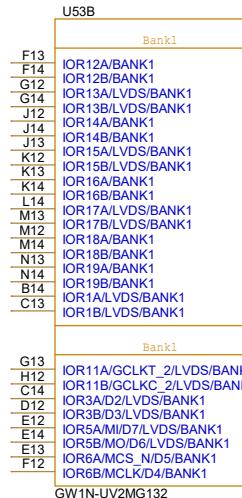
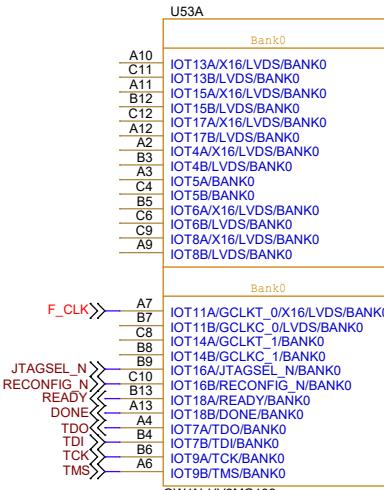
1. F_CLK signal is an external input clock signal.

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.



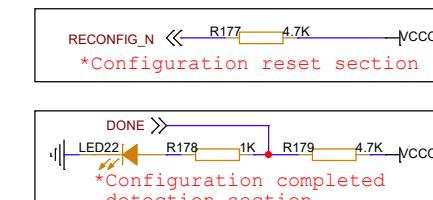
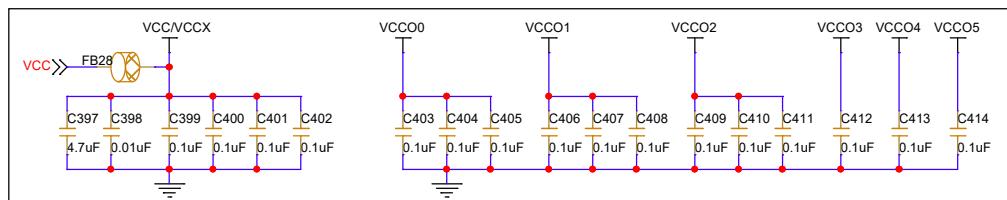
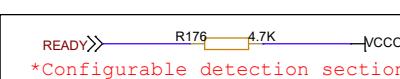
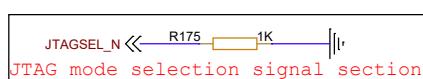
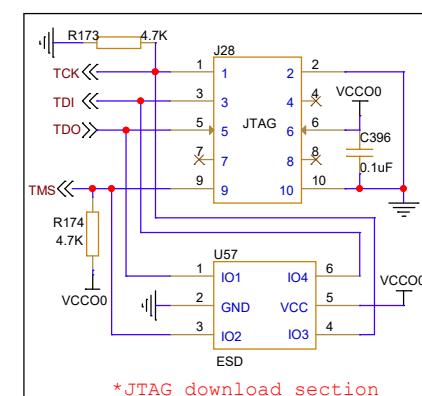
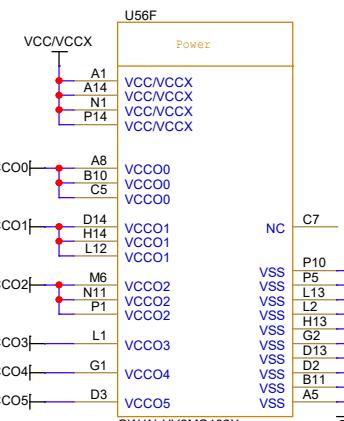
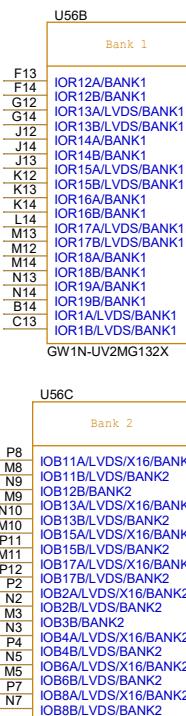
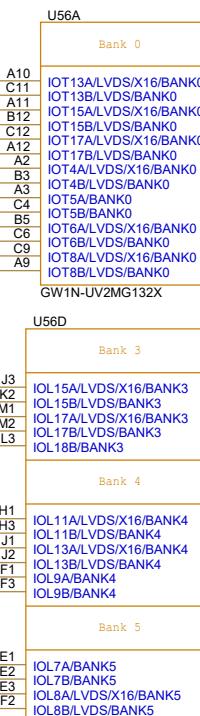
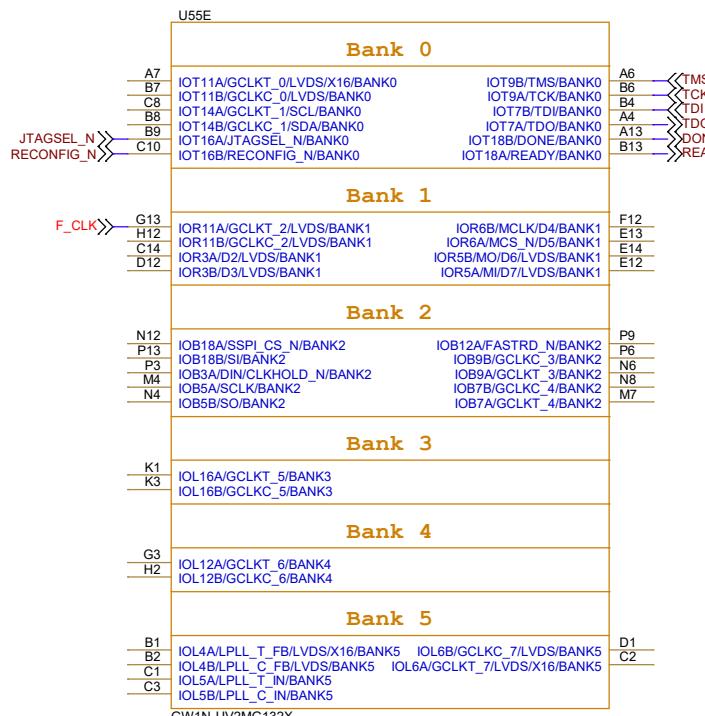
Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
B	GW1N-UV2MG121X	2.2



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	GW1N-UV2MG132	2.2
Date:	Thursday, July 04, 2024	Sheet 27 of 33

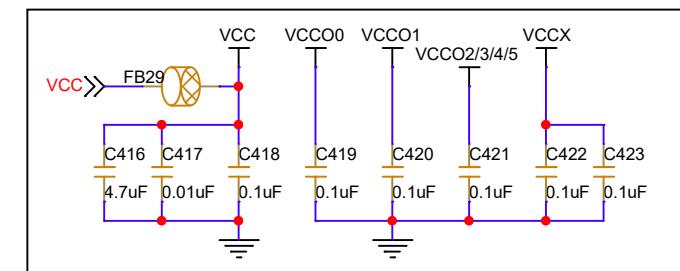
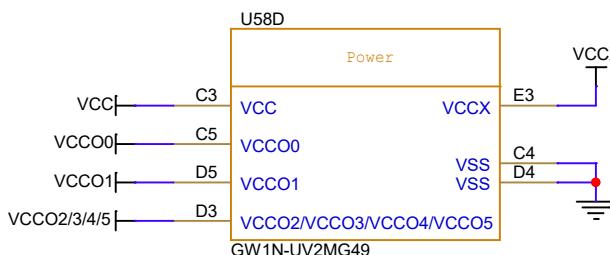
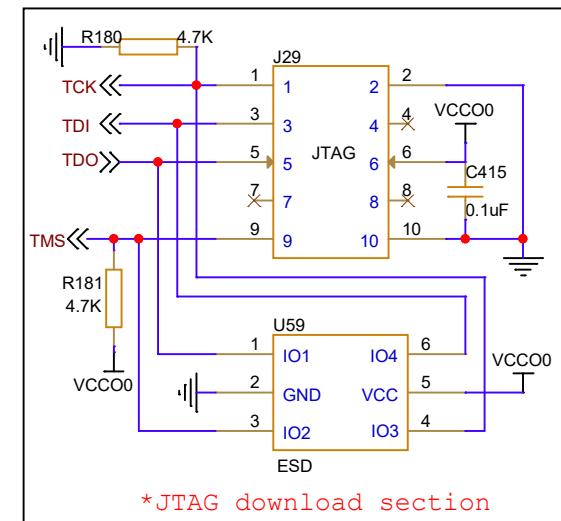
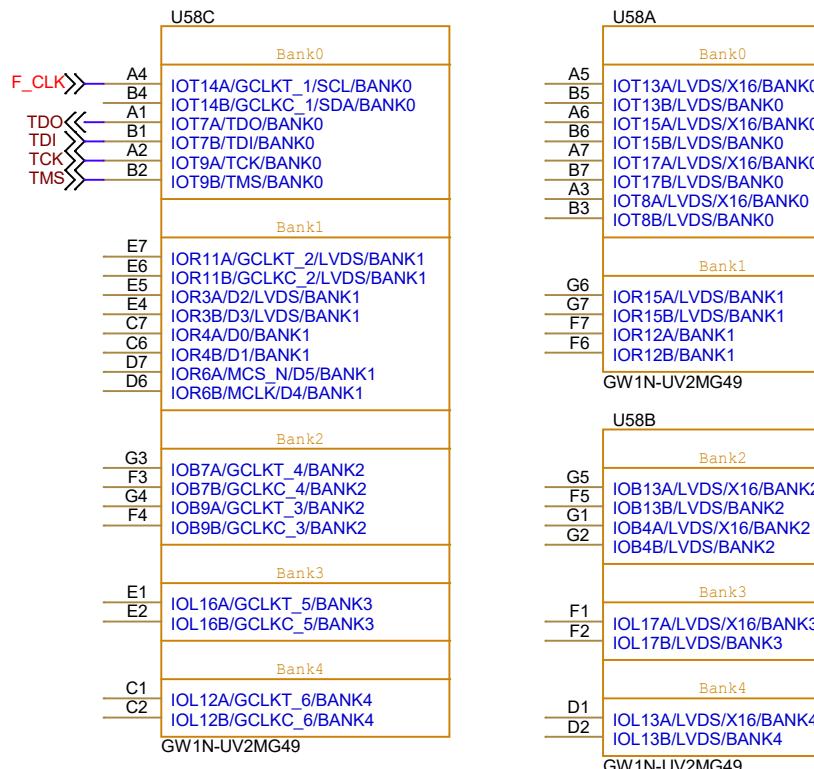
GW1N-UV2MG132X

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-UV2MG132X	2.2
Date:	Thursday, July 04, 2024	Sheet 28 of 33

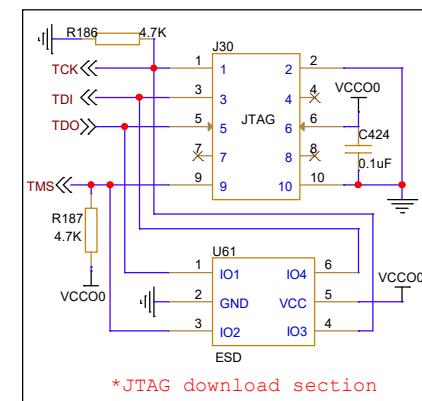
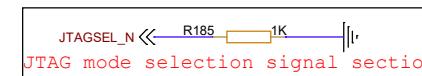
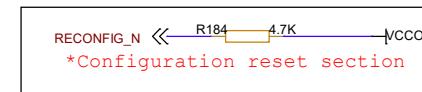
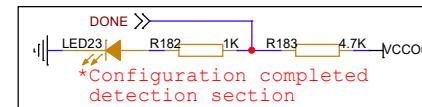
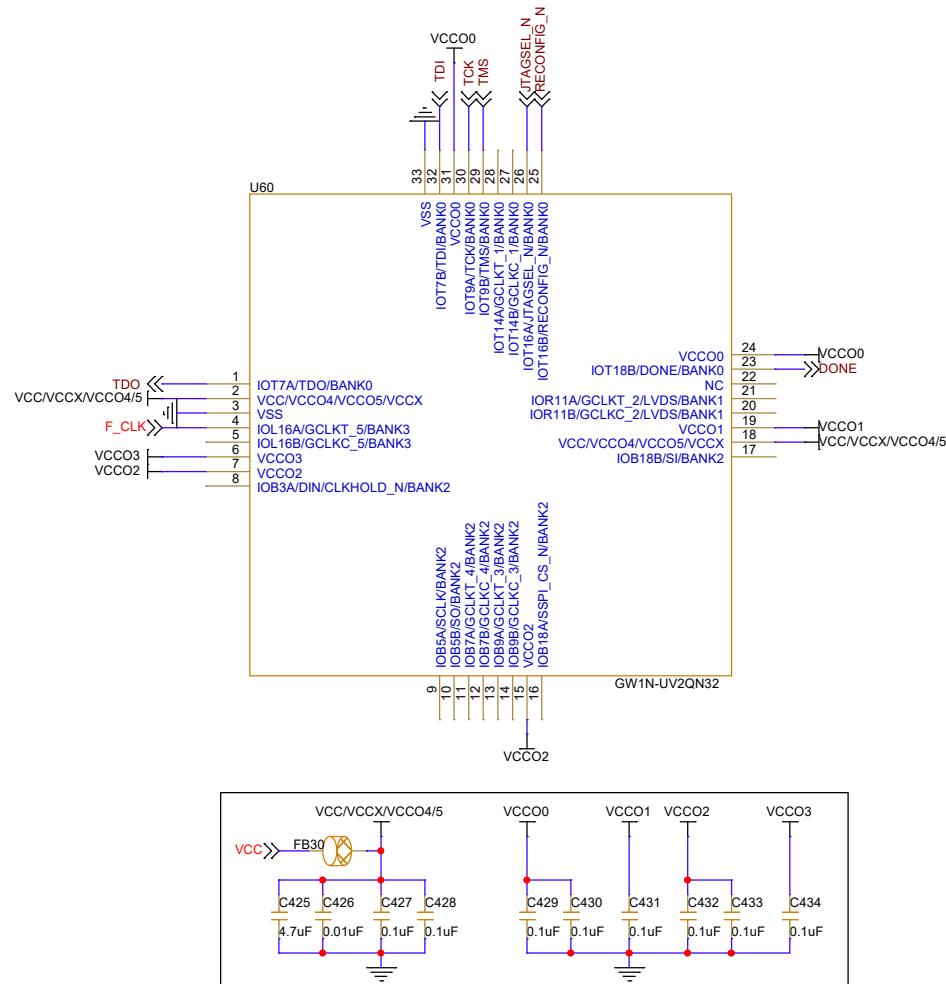
GW1N-UV2MG49



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-UV2MG49	
Date: Thursday, July 04, 2024	Rev 2.2
Sheet 29	of 33



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-UV2QN32	2.2

Date: Thursday, July 04, 2024 Sheet 30 of 33

GW1N-UV2QN32X

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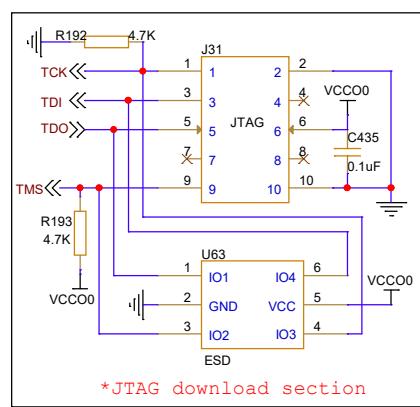
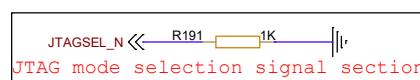
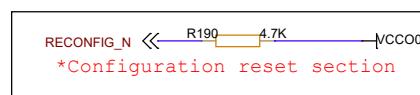
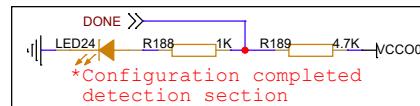
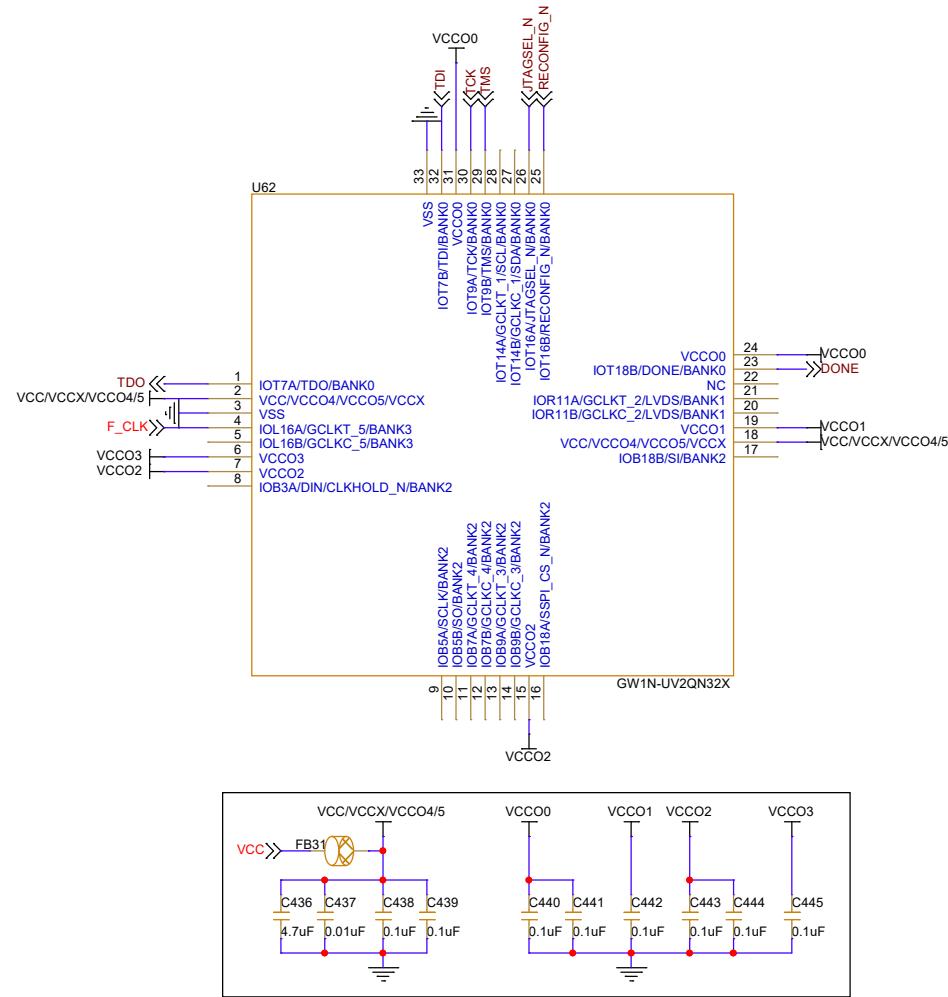
C

B

B

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A



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-UV2QN32X	2.2
Date: Thursday, July 04, 2024	Sheet 31 of 33	

5

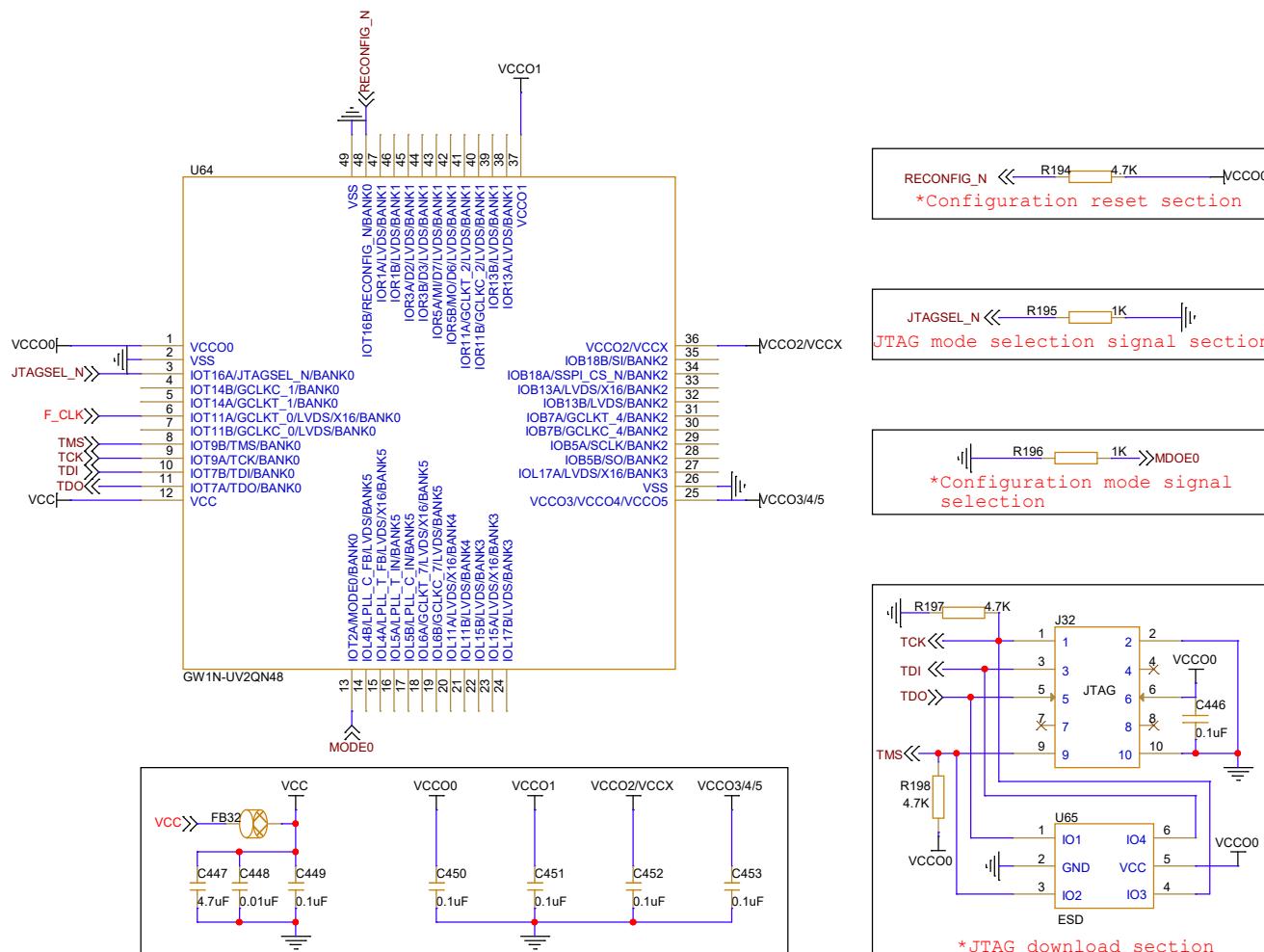
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3

2

1

GW1N-UV2QN48

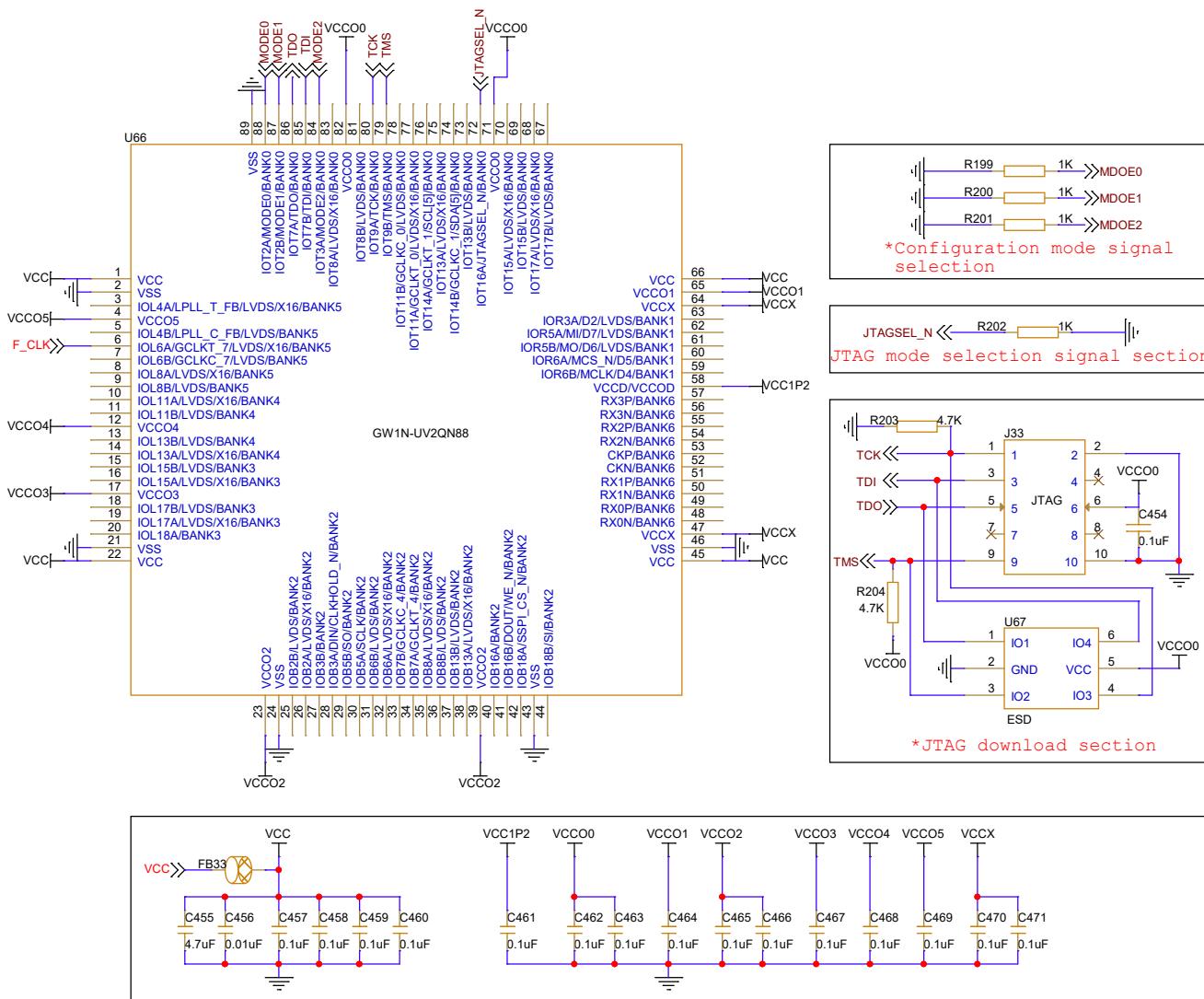


Notes:

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-UV2QN48	2.2

Date: Thursday, July 04, 2024 Sheet 32 of 33

**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-UV2QN88	2.2

Date: Thursday, July 04, 2024 Sheet 33 of 33