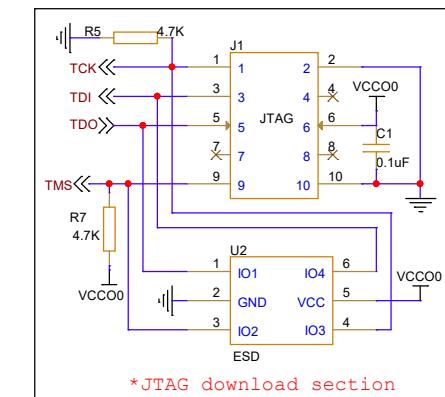
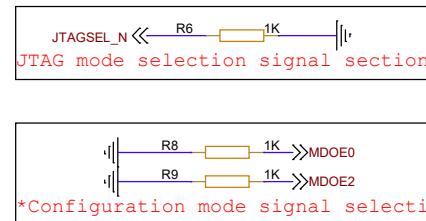
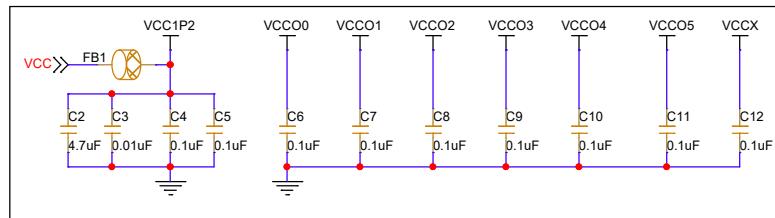
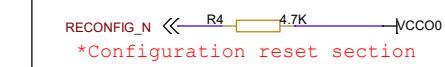
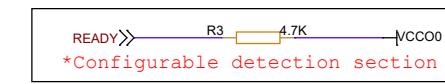
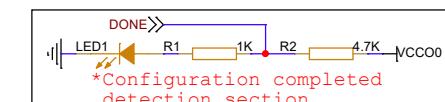
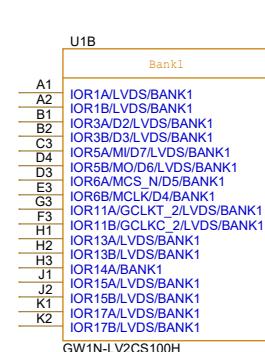
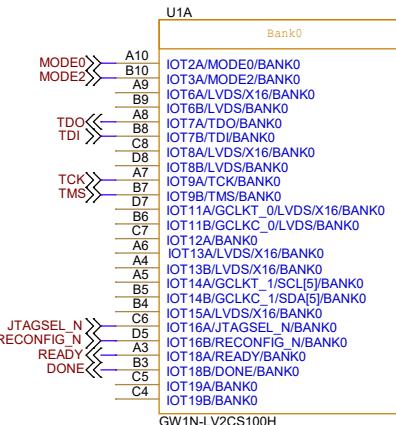
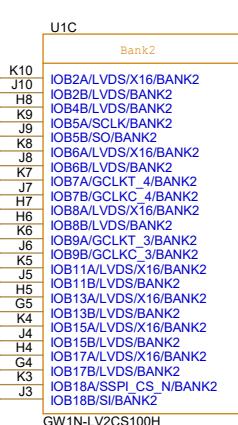
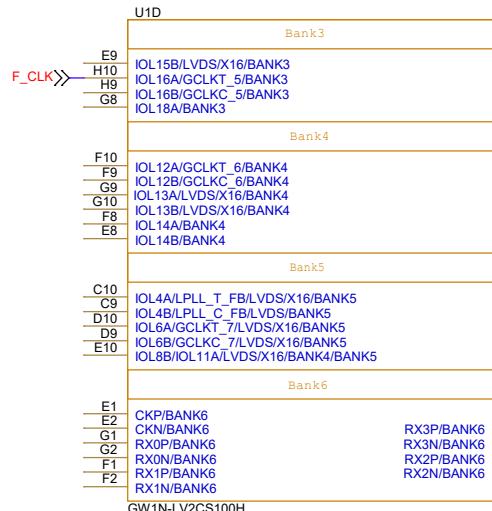


GW1N-LV2CS100H

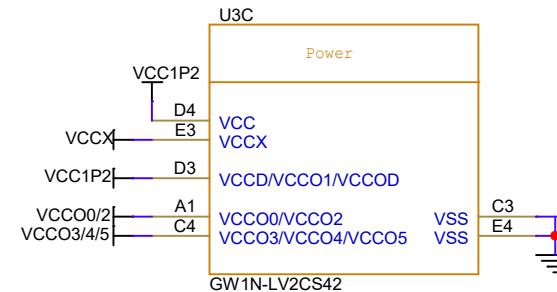
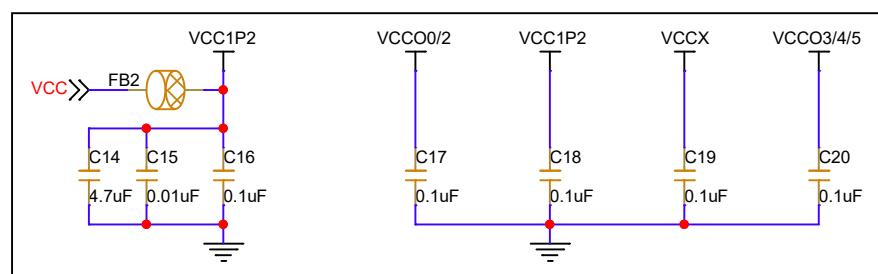
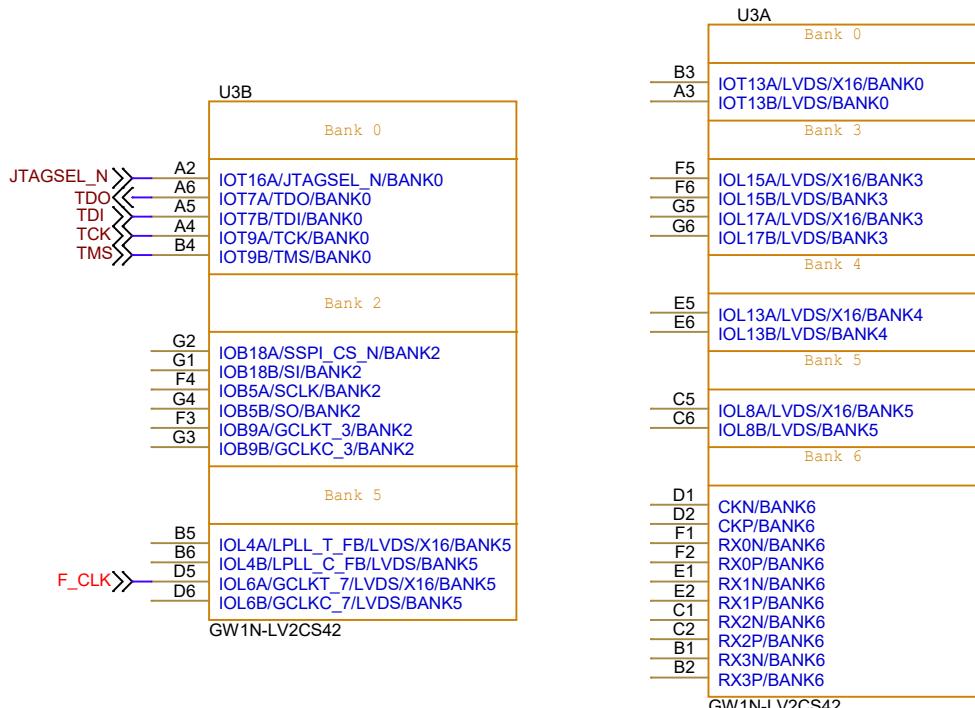


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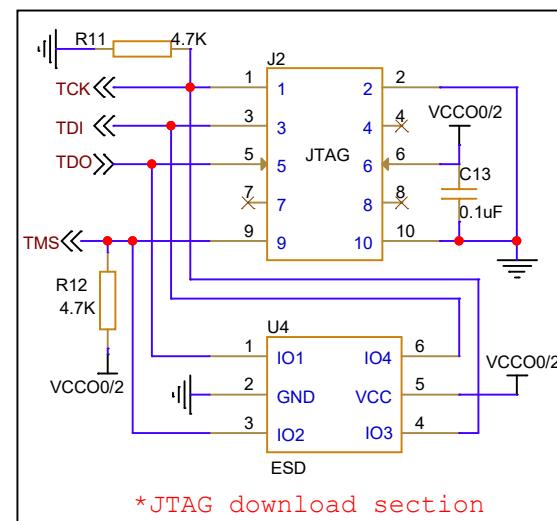
- F_CLK signal is an external input clock signal.
It is recommended that F_CLK signal be provided through an active oscillator crystal.
- It is recommended that add an ESD protection chip to the JTAG download circuit.

Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
B	GW1N-LV2CS100H	2.2
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GW1N-LV2CS42



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

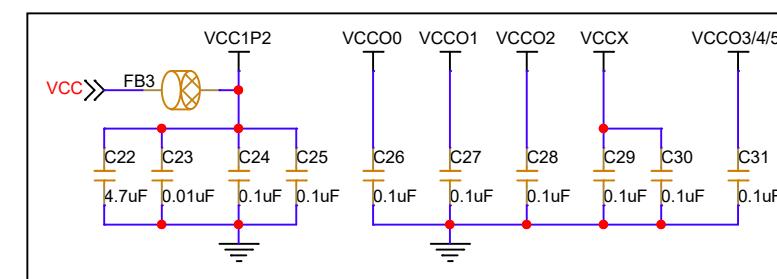
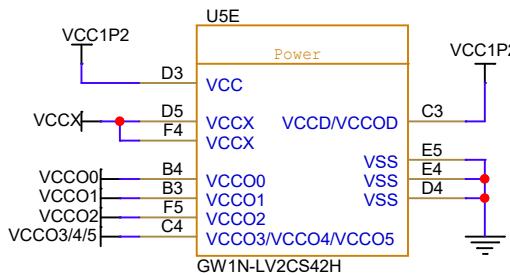
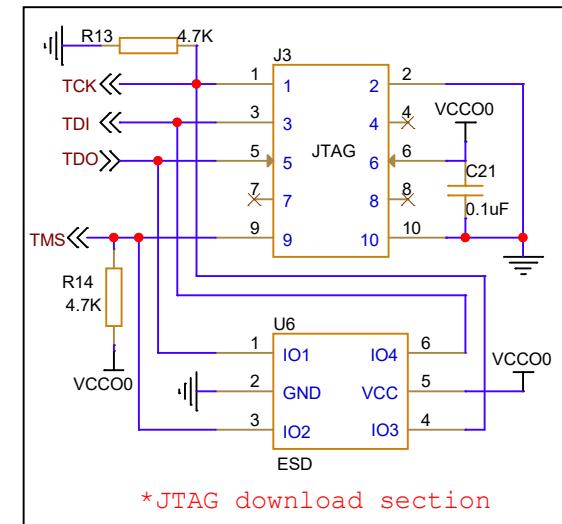
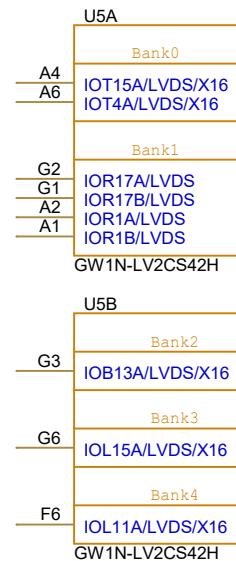
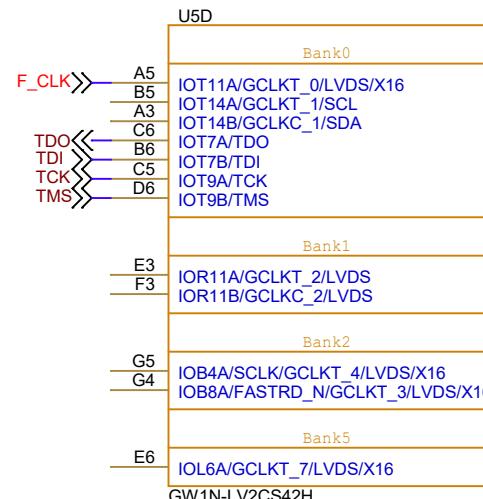


Notes:

- 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

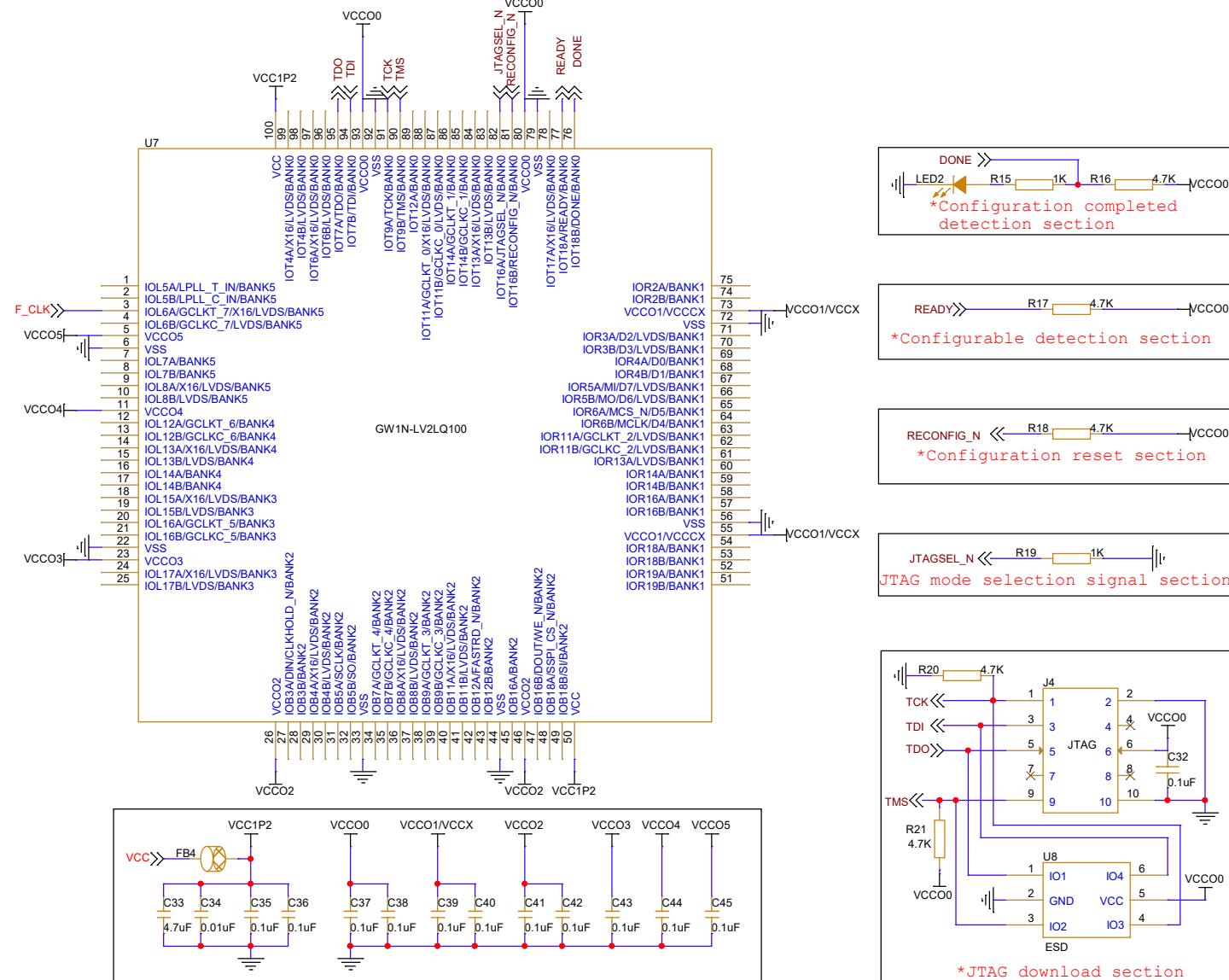
GW1N-LV2CS42H



Notes:

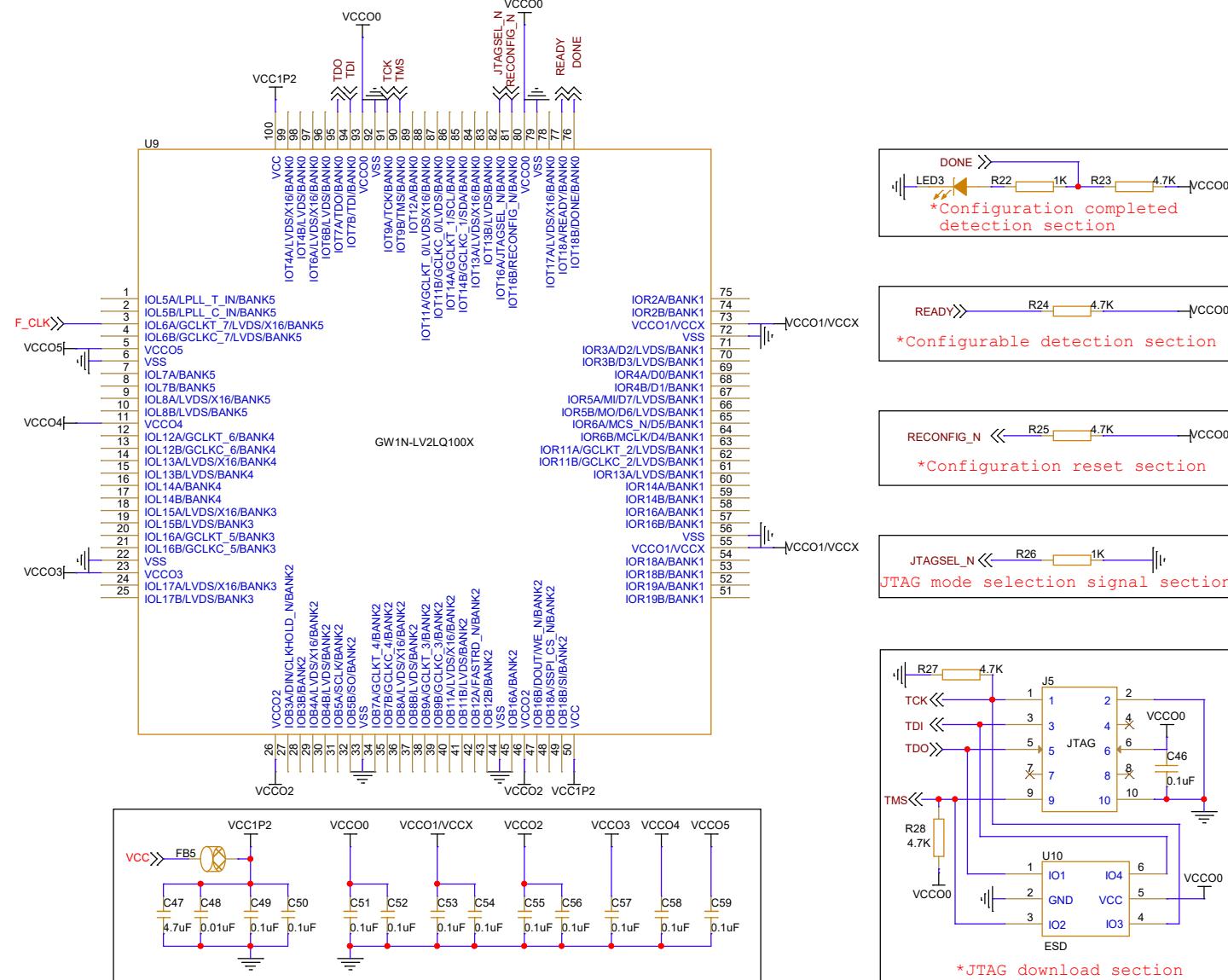
1. F_CLK signal is an external input clock signal.
It is recommended that F_CLK signal be provided through an active oscillator crystal.
2. It is recommended that add an ESD protection chip to the JTAG download circuit.

D

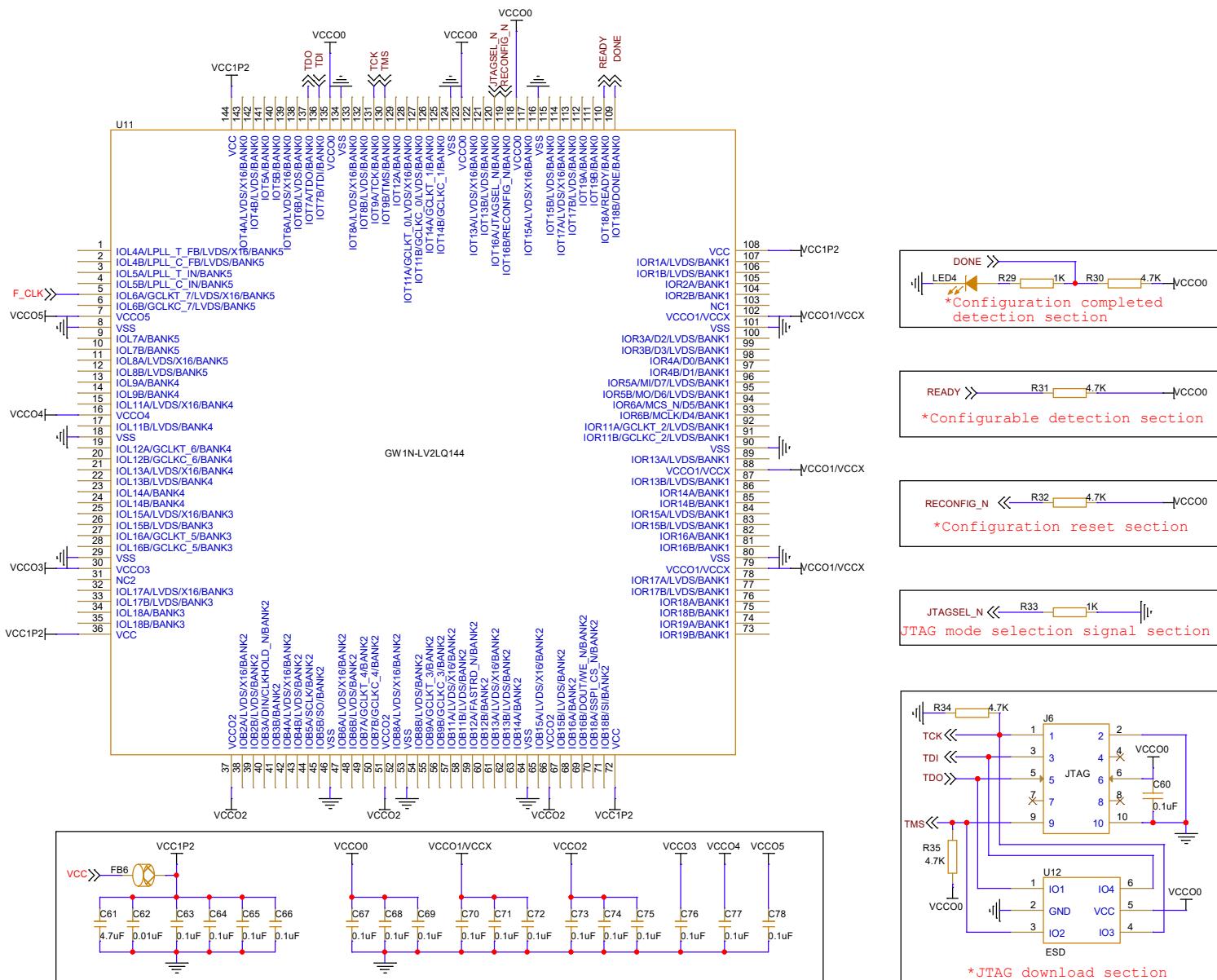
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Title	
GOWIN Minimum System Diagram	
Size B	Document Number GW1N-LV2LQ100
Rev 2.2	Date: Thursday, July 04, 2024

D



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



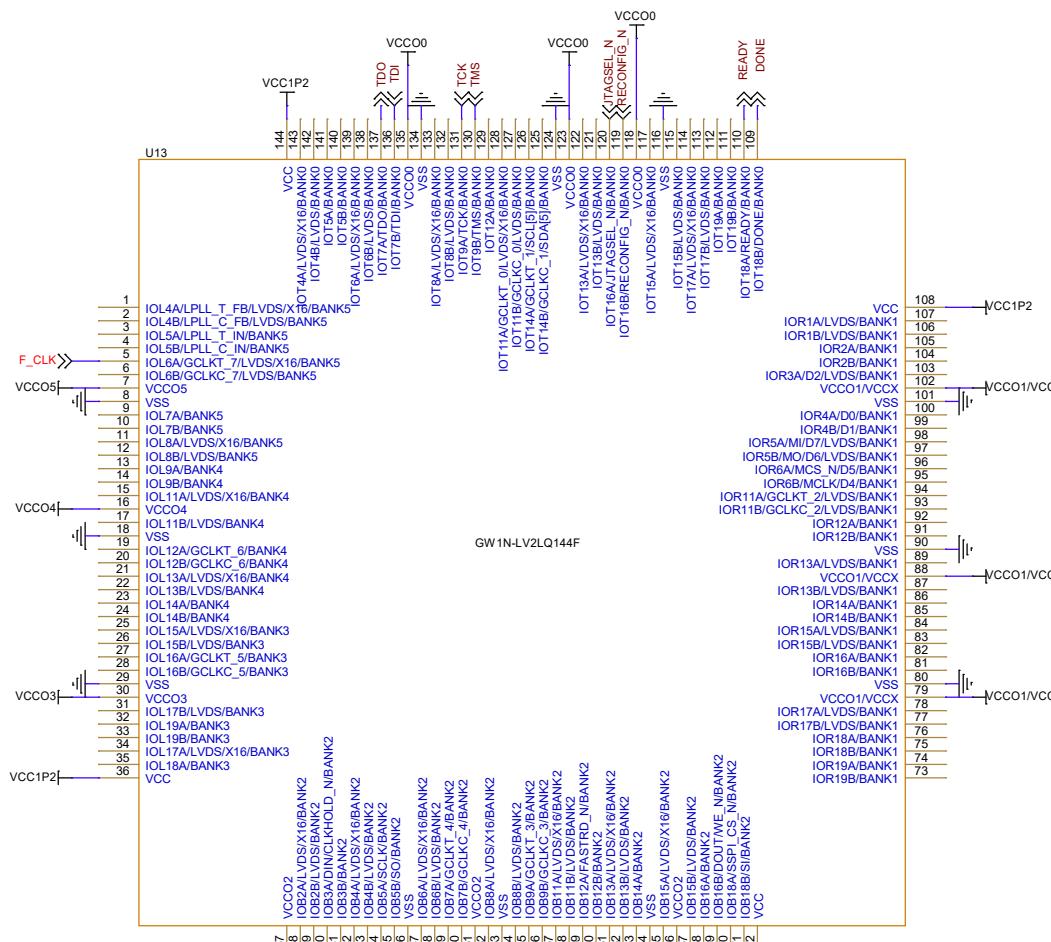
Notes

- 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 GW1-NV2LQ144	Rev 2.2
Date: Thursday, July 04, 2024	Sheet 6	of 33

D

D

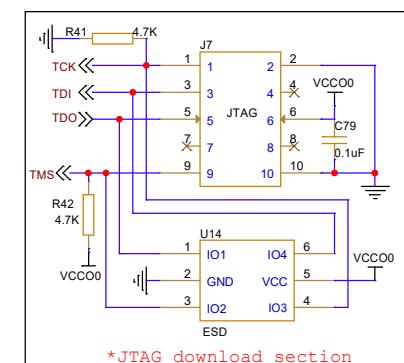
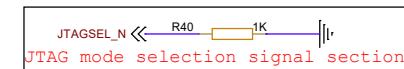
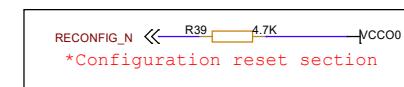
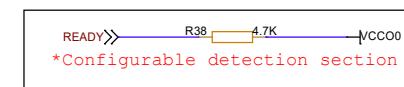
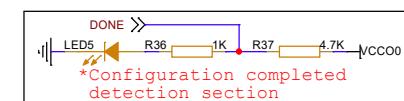


Notes:

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

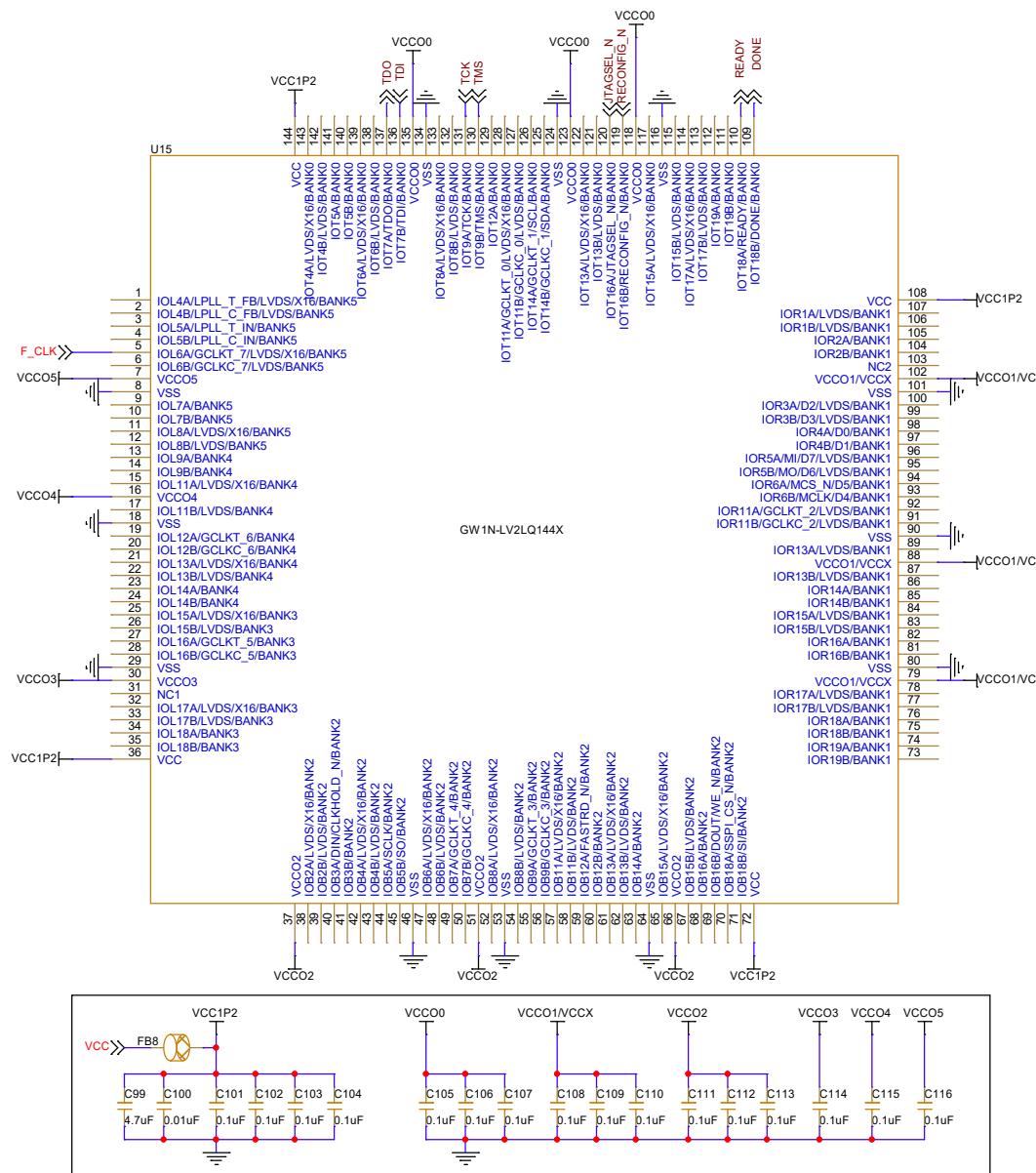
It is recommended that F CLK signal be provided through an active oscillator crystal.

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

D

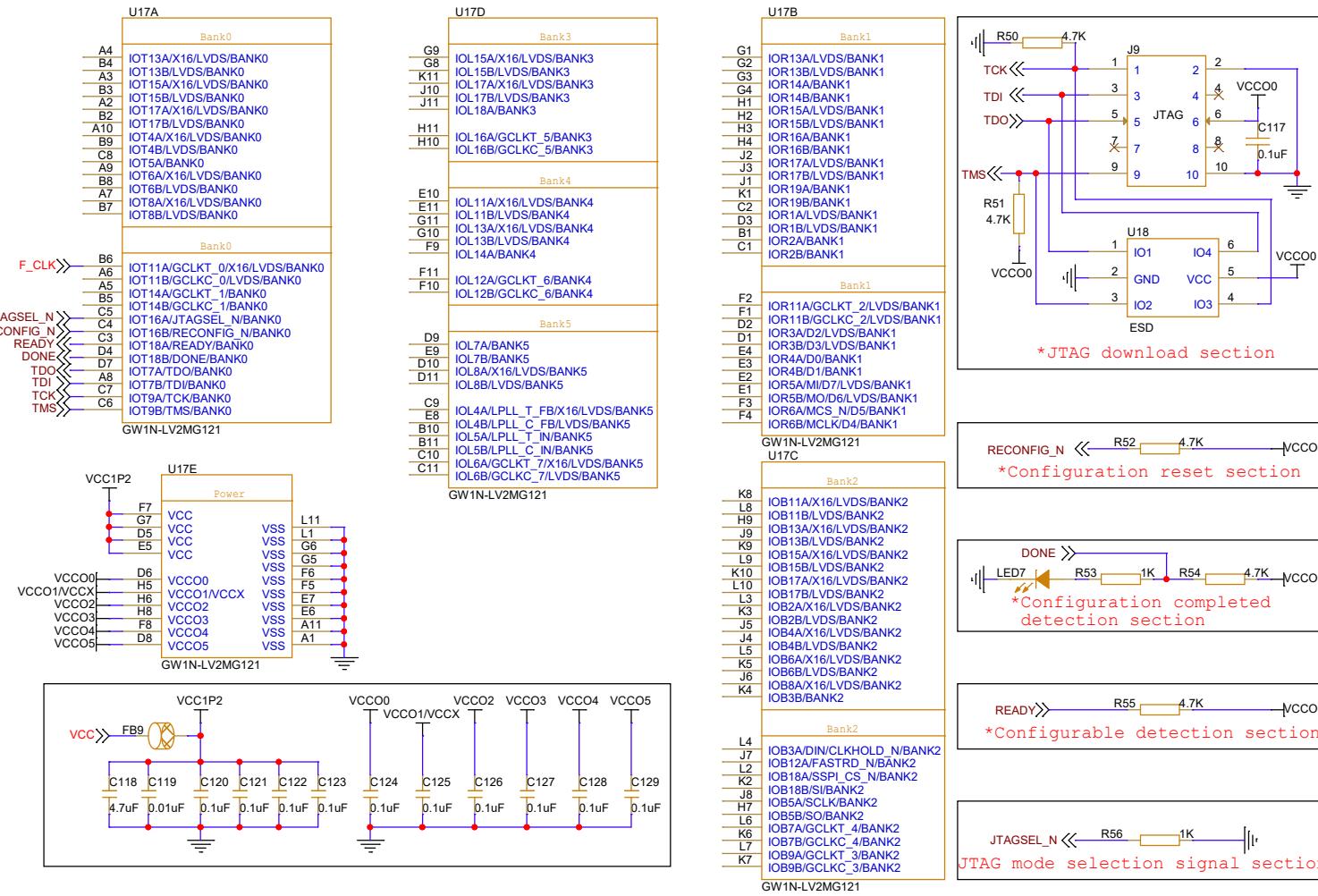
**Notes:**

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

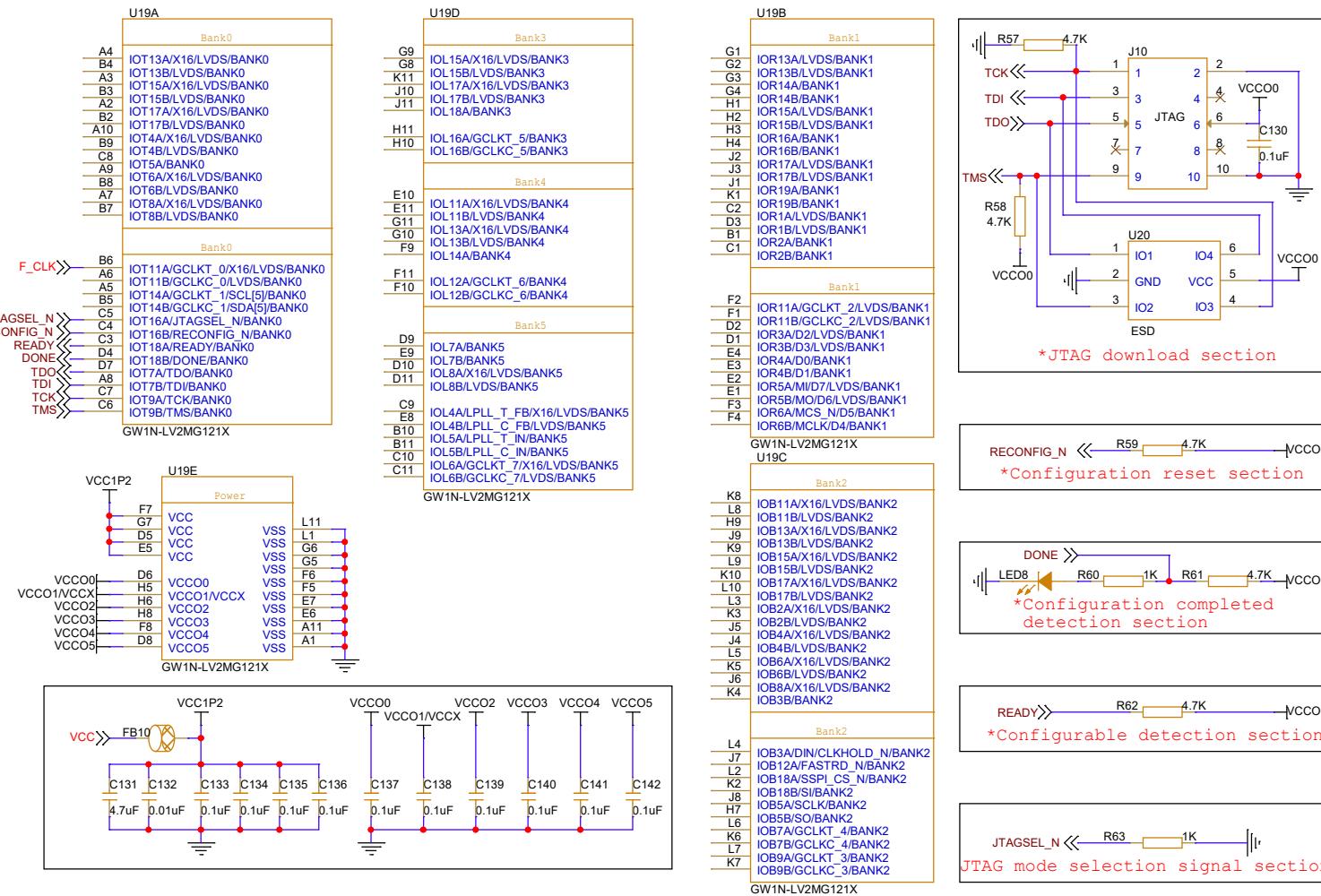
It is recommended that F CLK signal be provided through an active oscillator crystal.

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

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

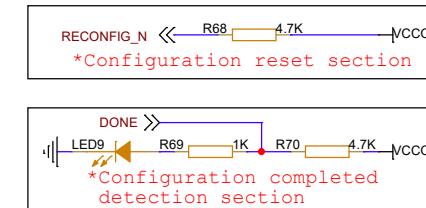
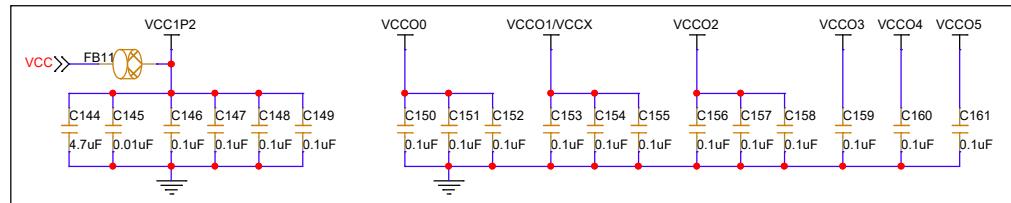
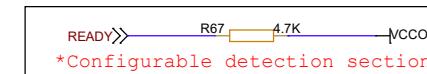
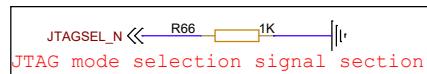
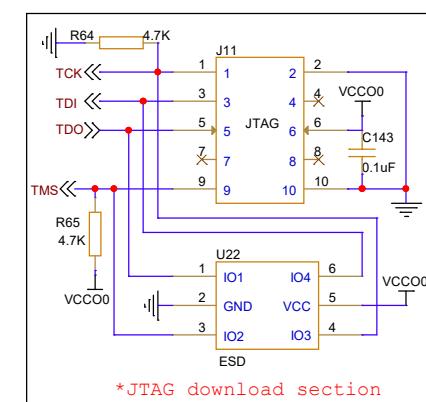
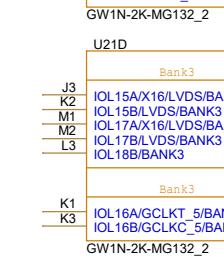
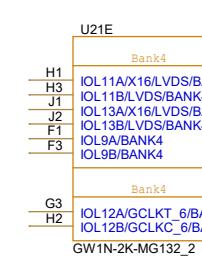
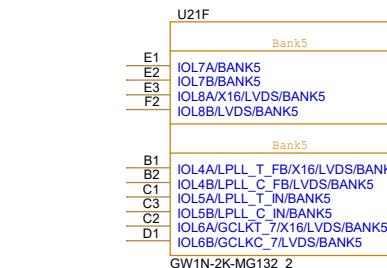
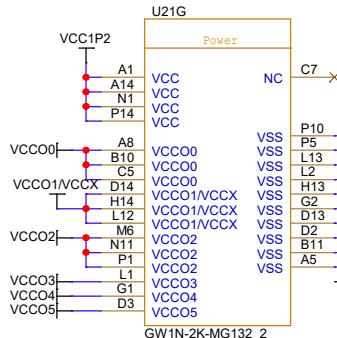
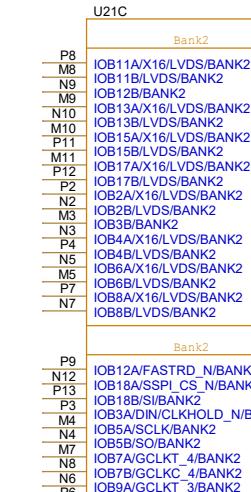
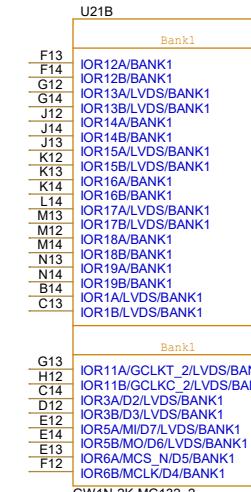
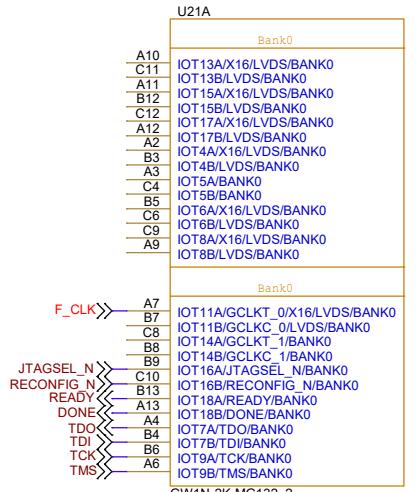


Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
B	GW1N-LV2MG121	2.2

**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

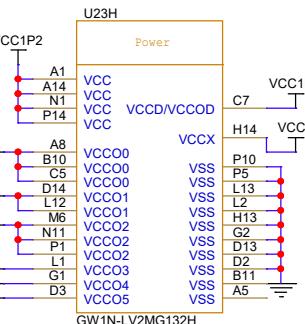
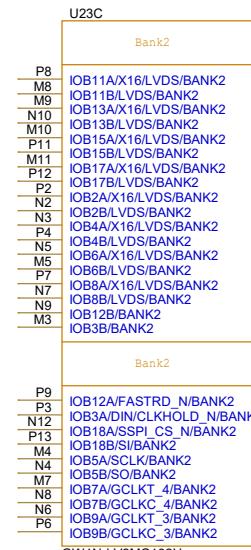
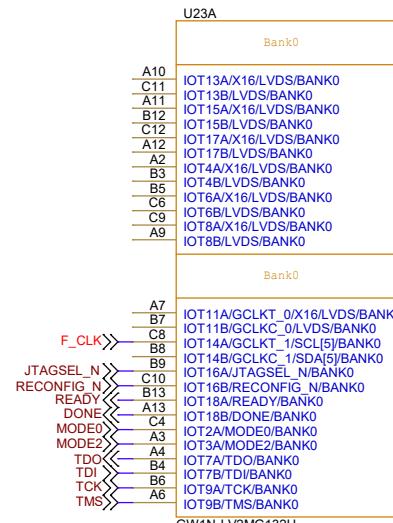


Notes:

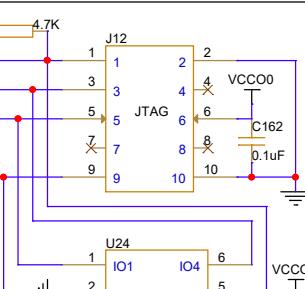
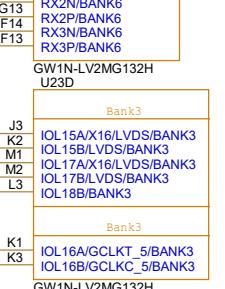
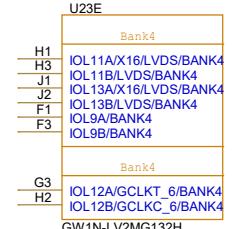
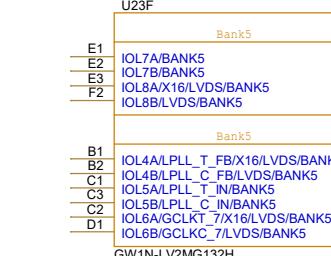
- 1.F CLK signal is an external input clock signal.
It is recommended that F CLK signal be provided through an active oscillator crystal.
 - 2.It is recommended that add an ESD protection chip to the JTAG download circuit.

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

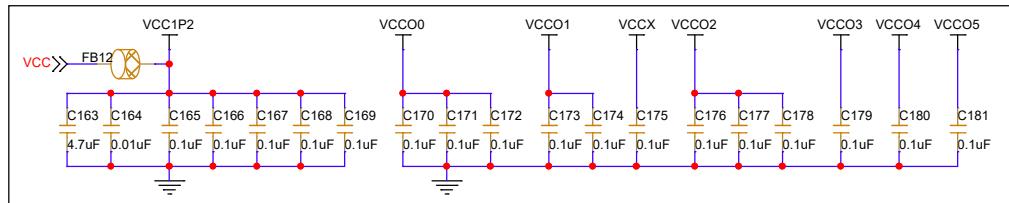
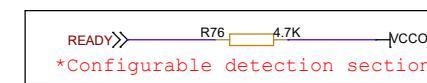
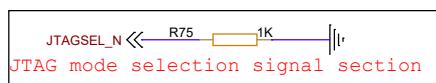
GW1N-LV2MG132H



CW1N1V2MC132H

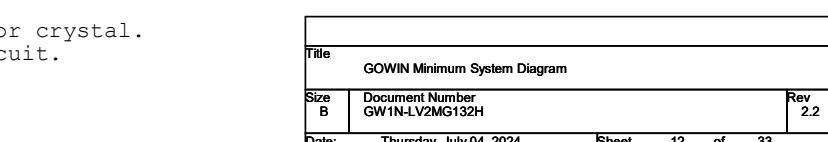


*JTAG download section

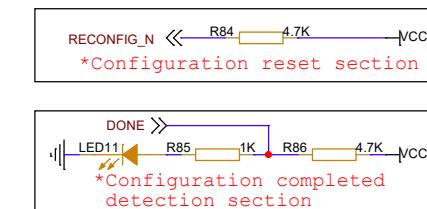
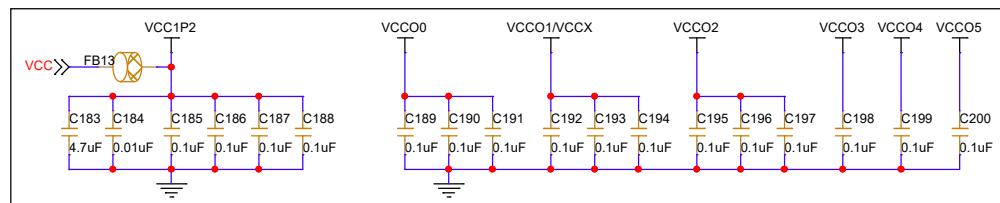
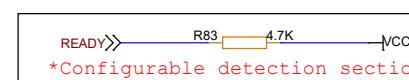
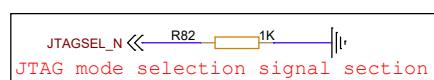
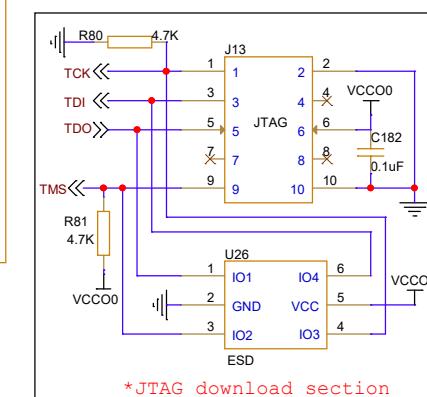
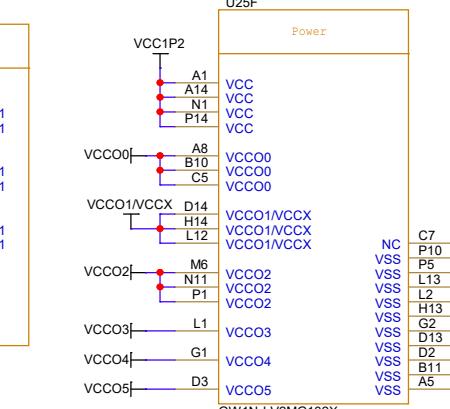
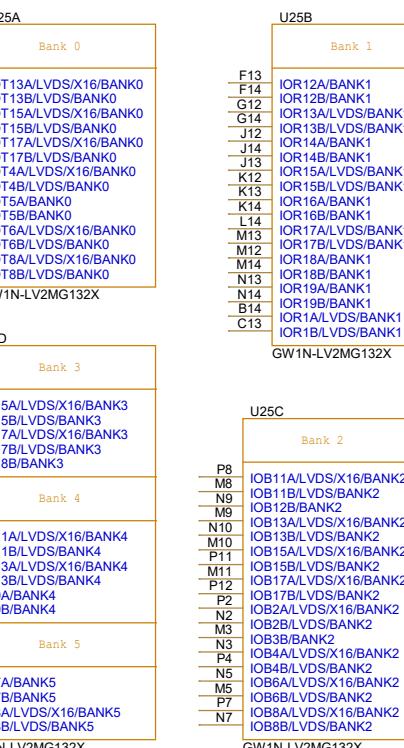
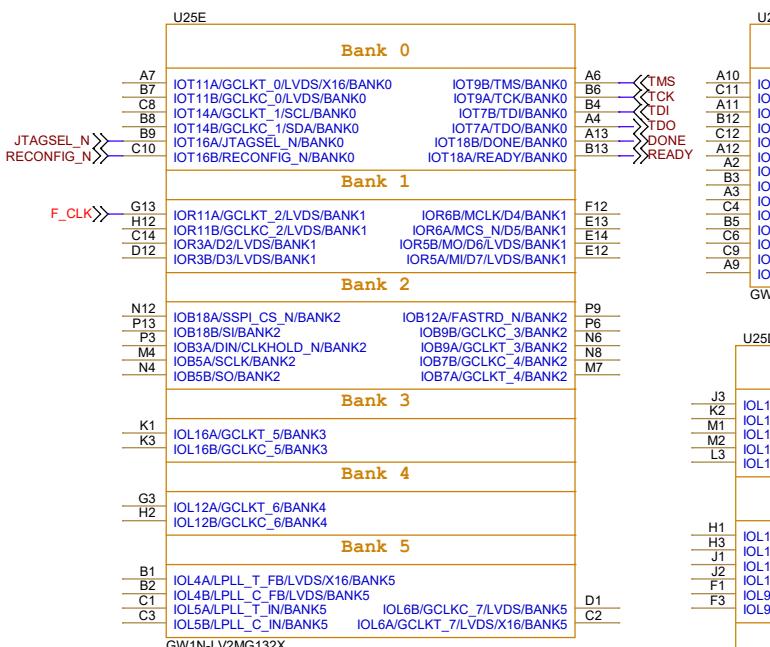


Notes:

- 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.



GW1N-LV2MG132X



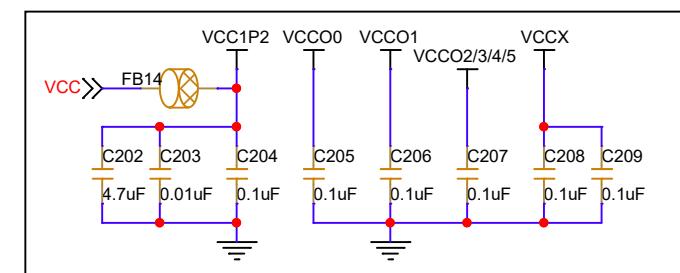
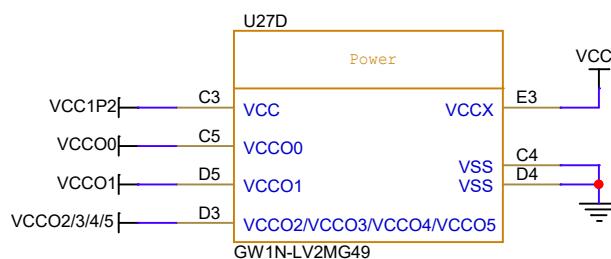
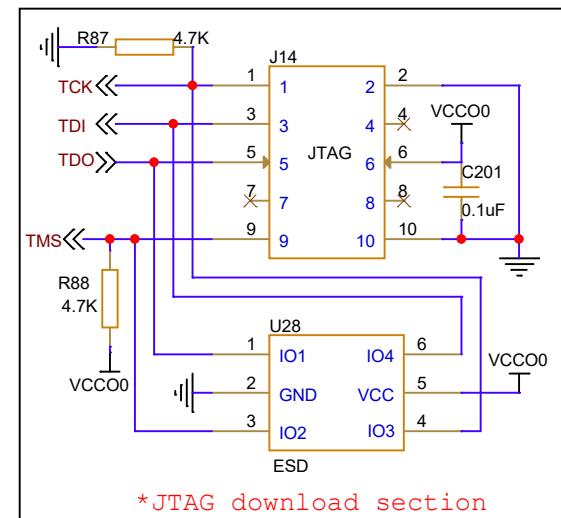
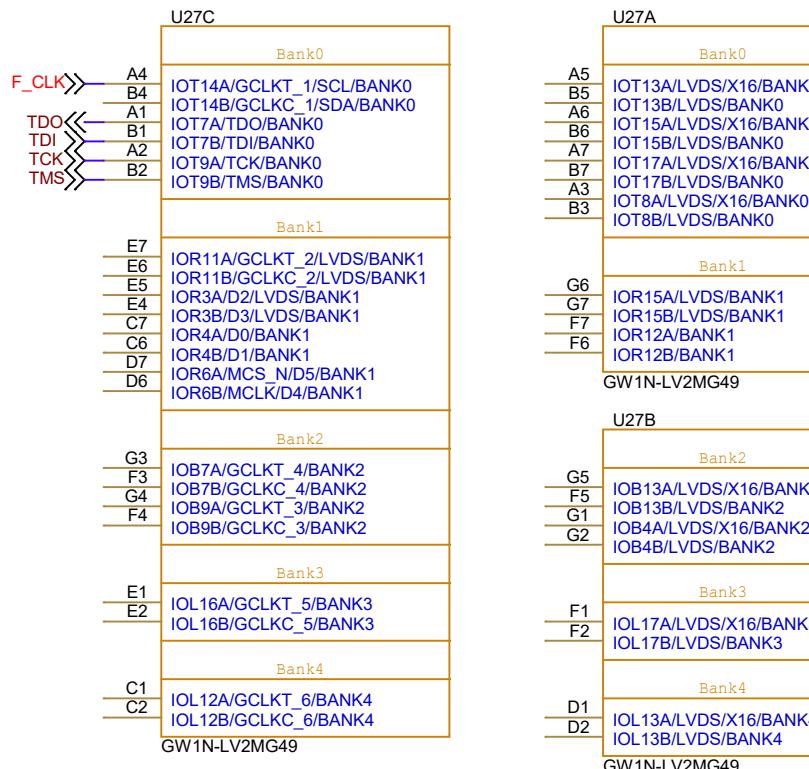
Notes:

- 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-LV2MG132X	2.2

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		
Size		Document Number
A4		GW1N-LV2MG49
Date:	Thursday, July 04, 2024	Rev 2.2

D

D

C

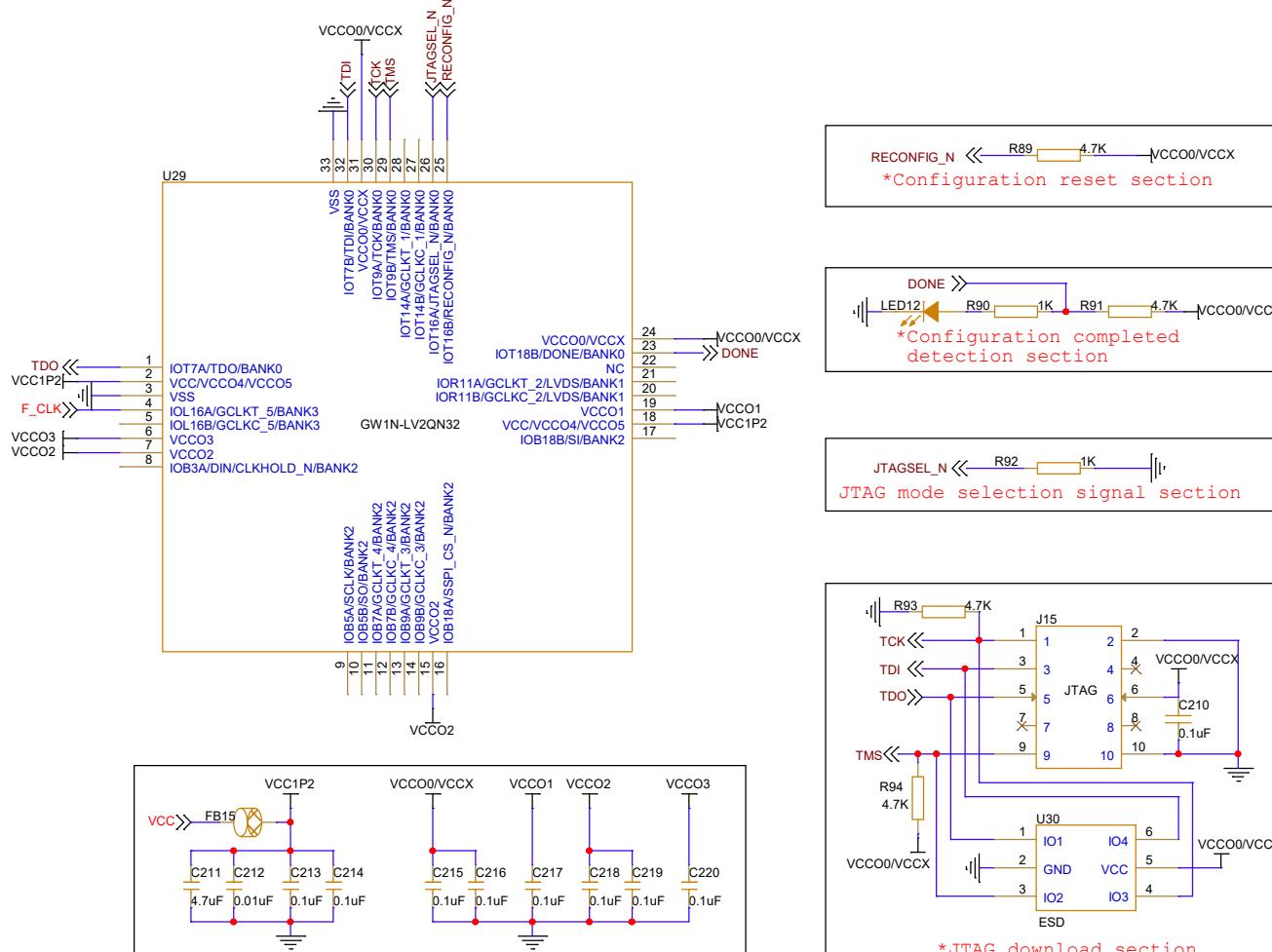
C

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

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D

D

C

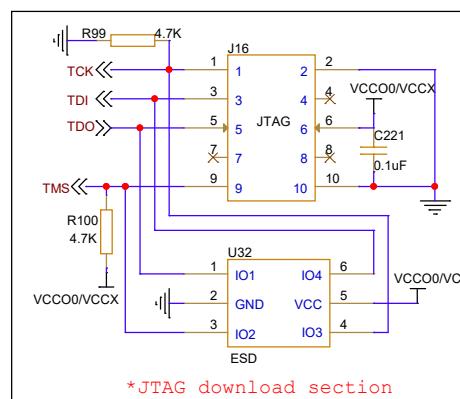
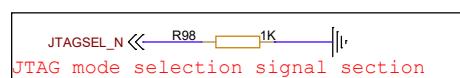
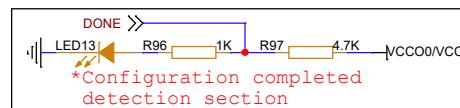
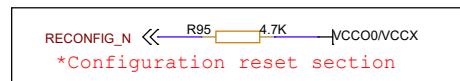
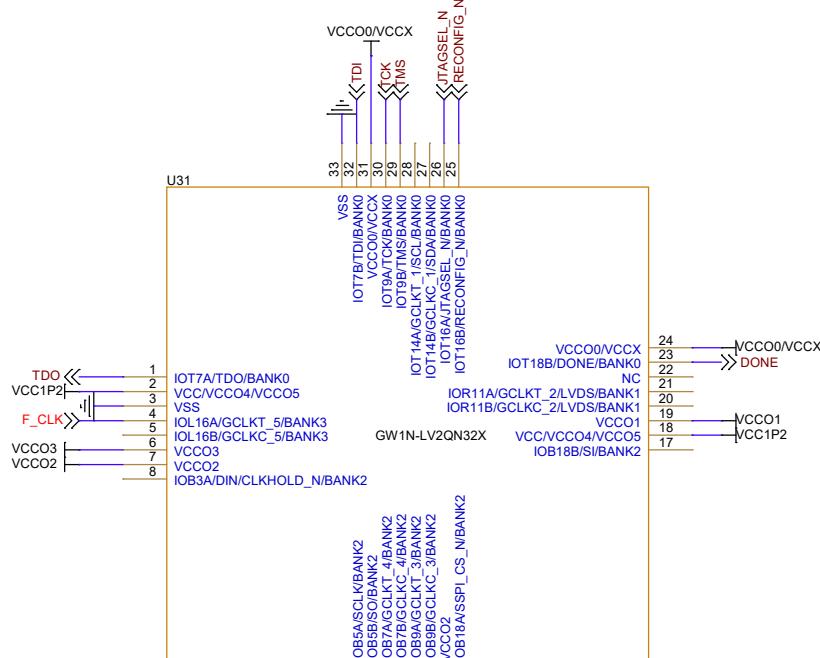
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B

B

A

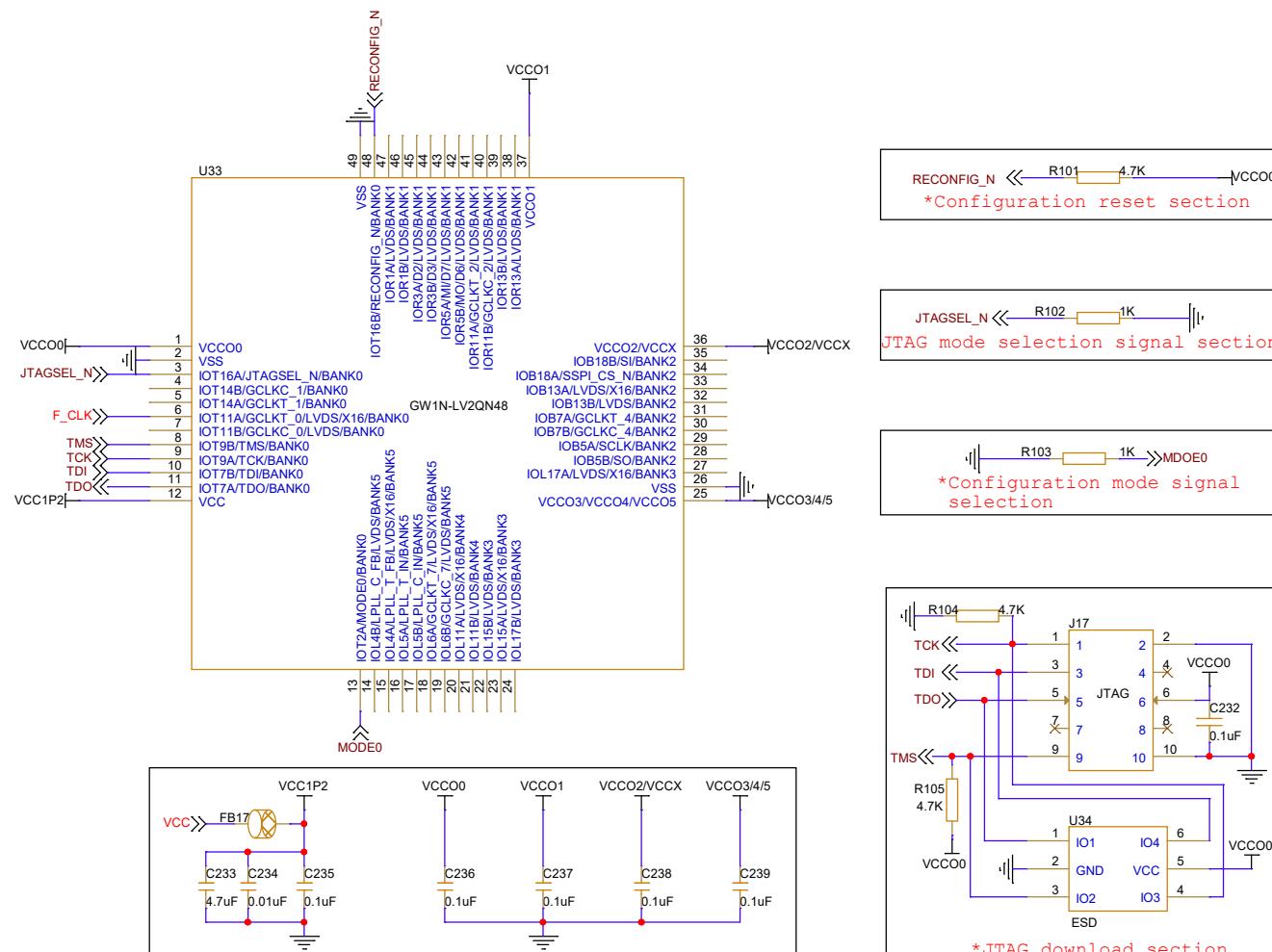
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**Notes:**

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

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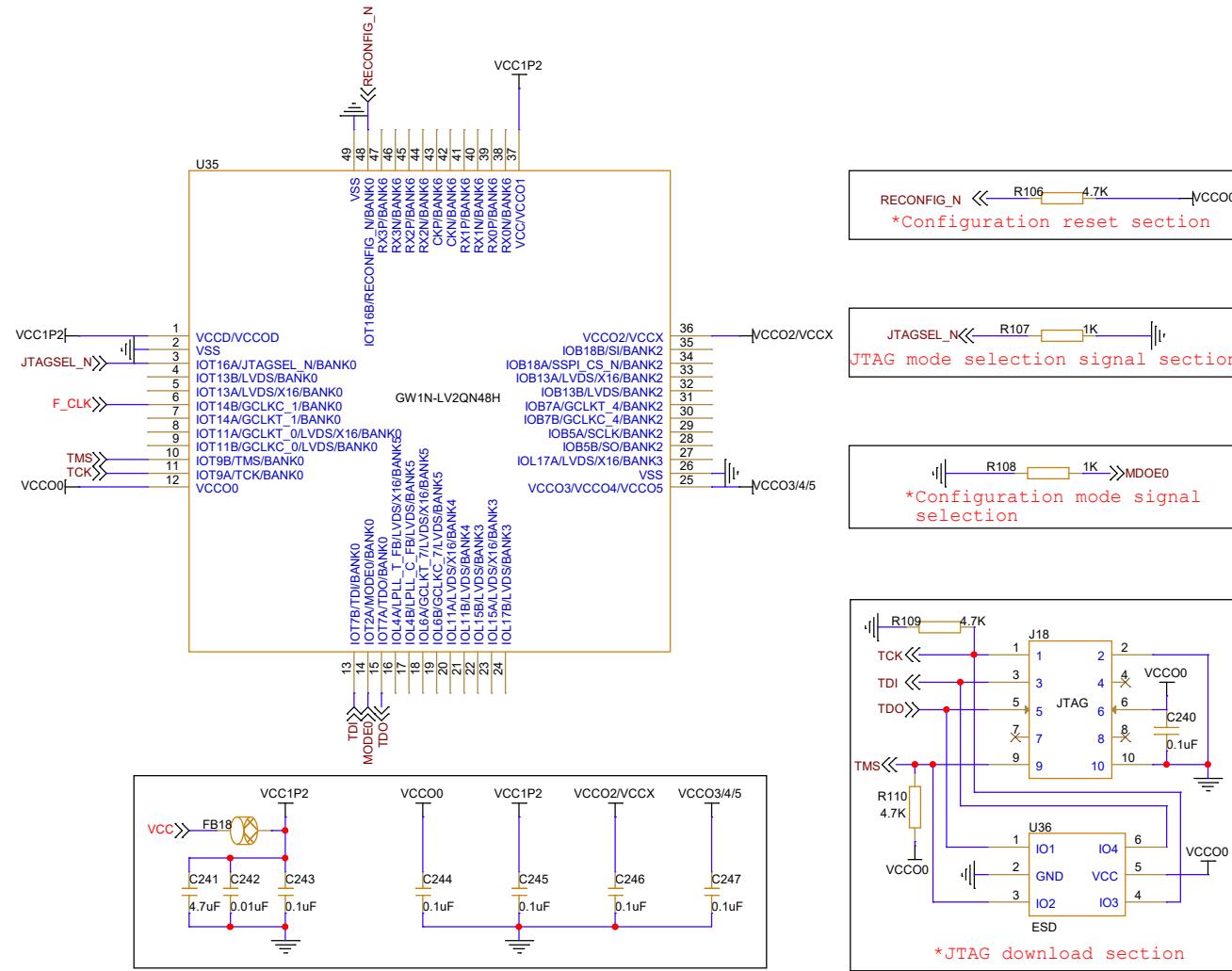
**Notes:**

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 B	Document Number GW1N-LV2QN48	Rev 2.2
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**Notes:**

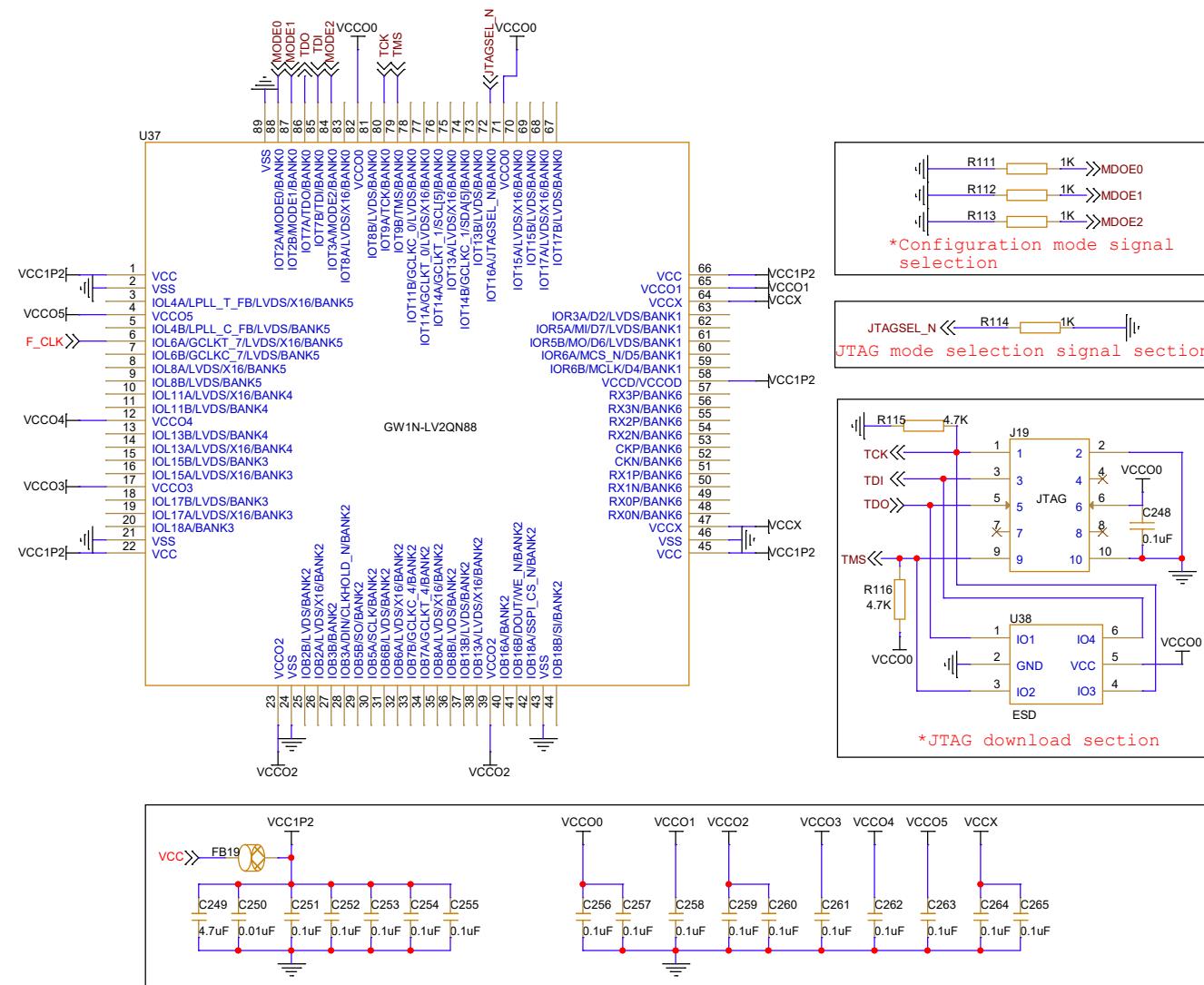
1. F_CLK signal is an external input clock signal.

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		
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Size	Document Number	Rev
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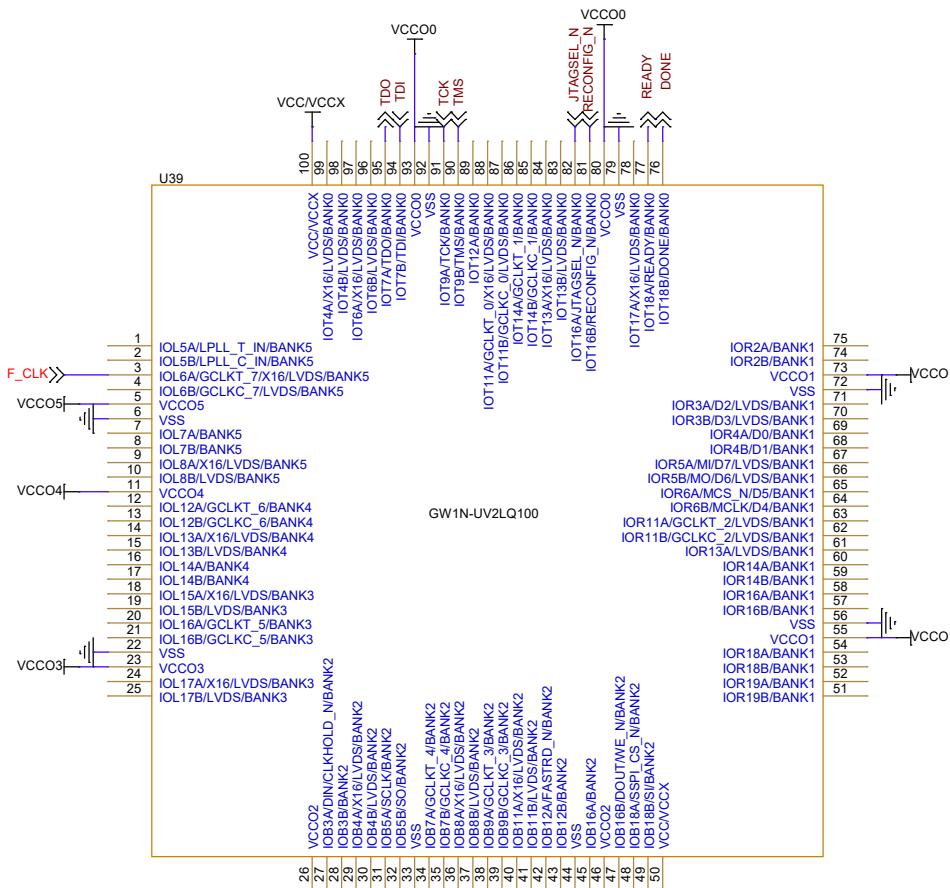
Date: Thursday, July 04, 2024 Sheet 18 of 33

**Notes:**

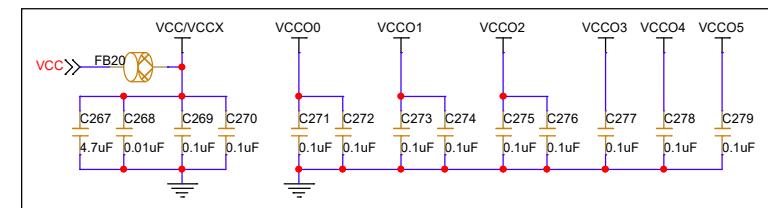
1. F CLK signal is an external input clock signal.
It is recommended that F CLK signal be provided through an active oscillator crystal.
2. It is recommended that add an ESD protection chip to the JTAG download circuit.

Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
B	GW1N-LV2QN88	2.2
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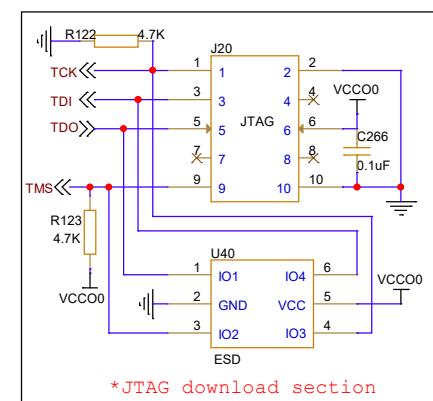
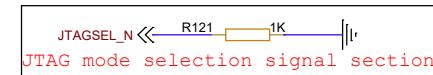
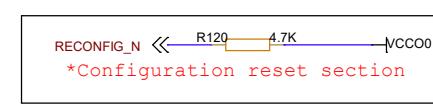
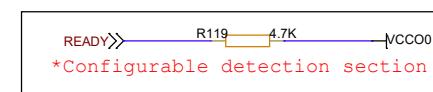
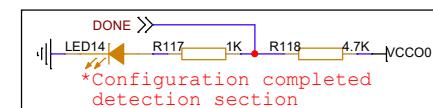
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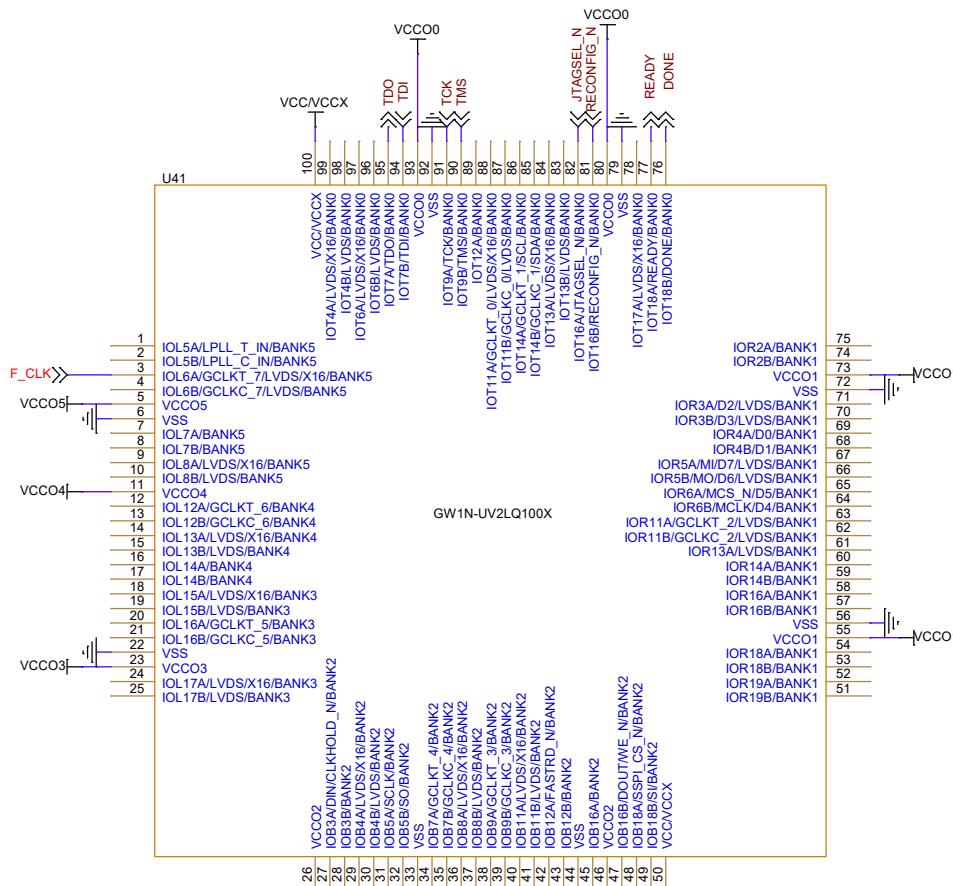
Notes:

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.

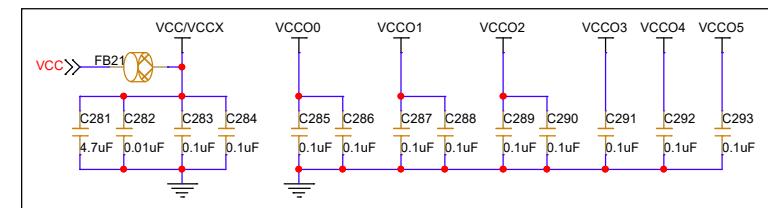
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Size	Document Number GW1N-UV2LQ100
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D



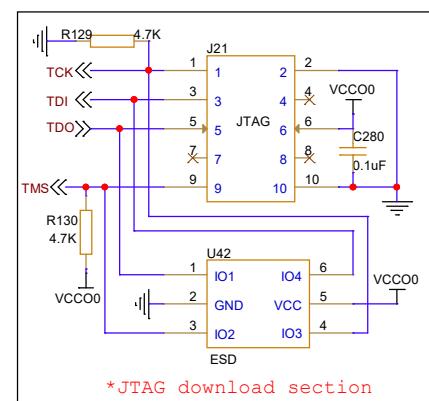
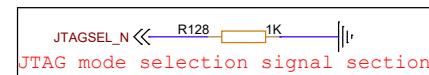
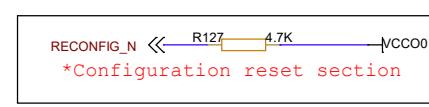
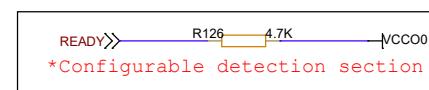
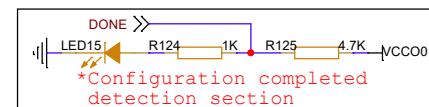
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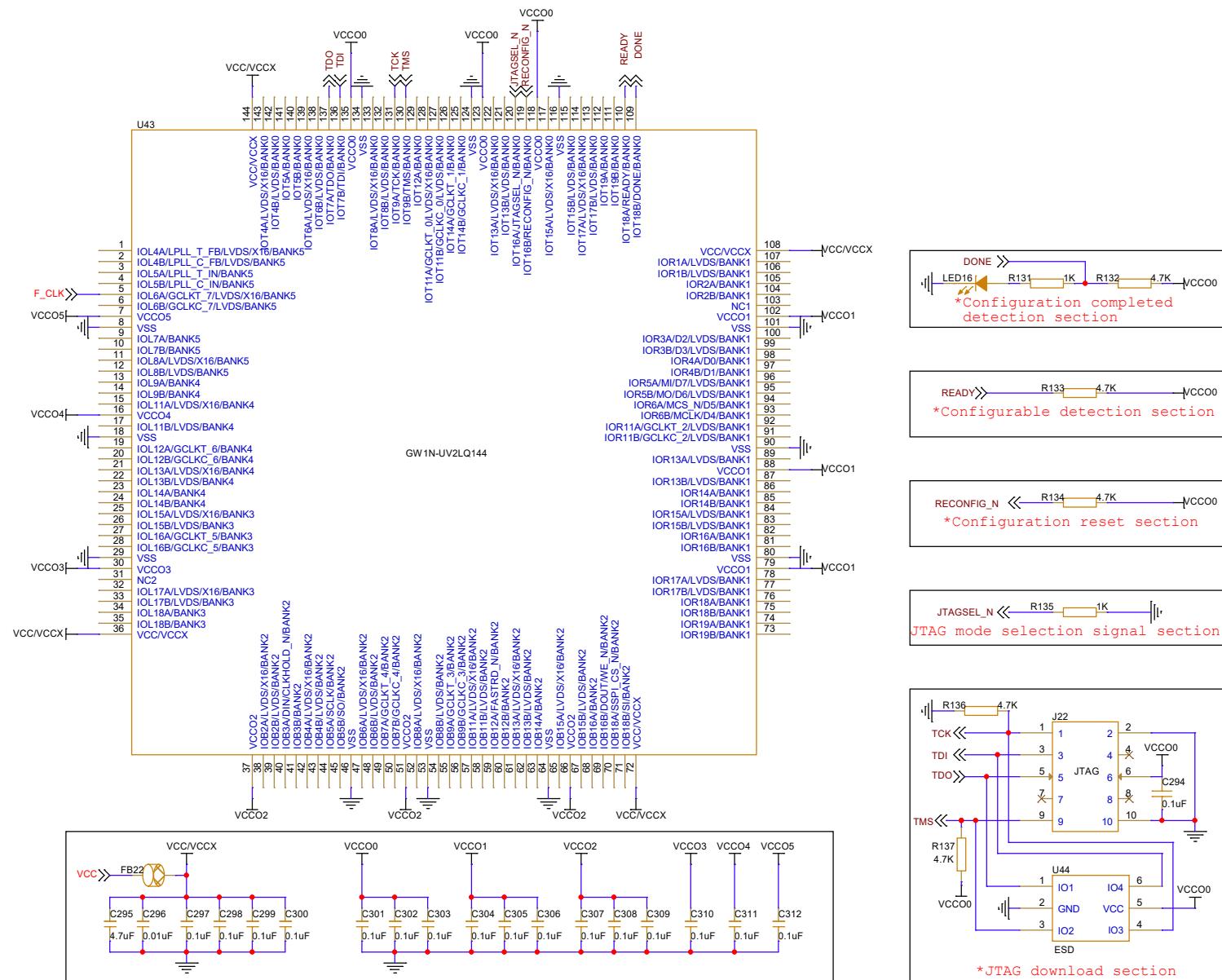
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Notes:

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.



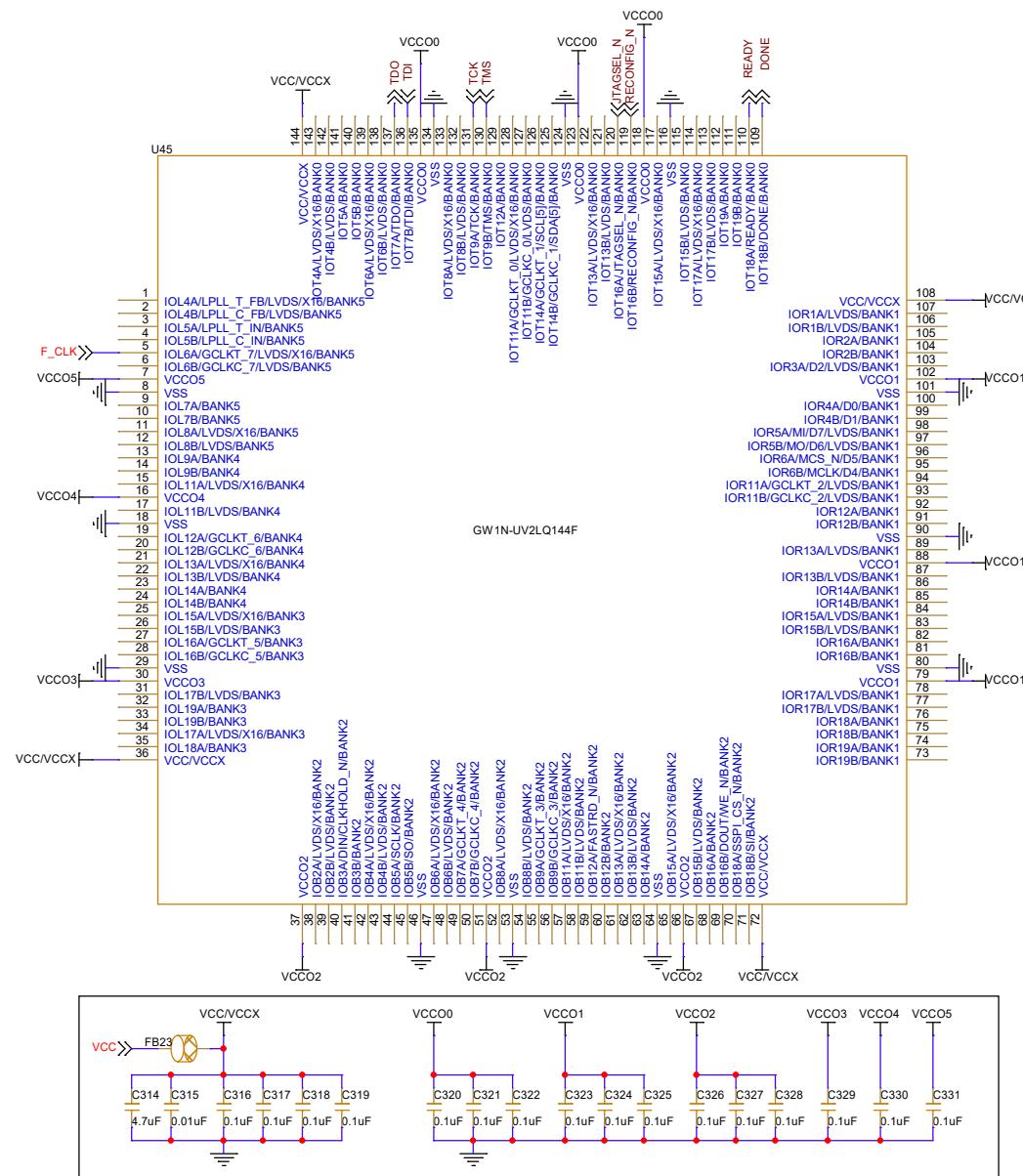
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Size	Document Number
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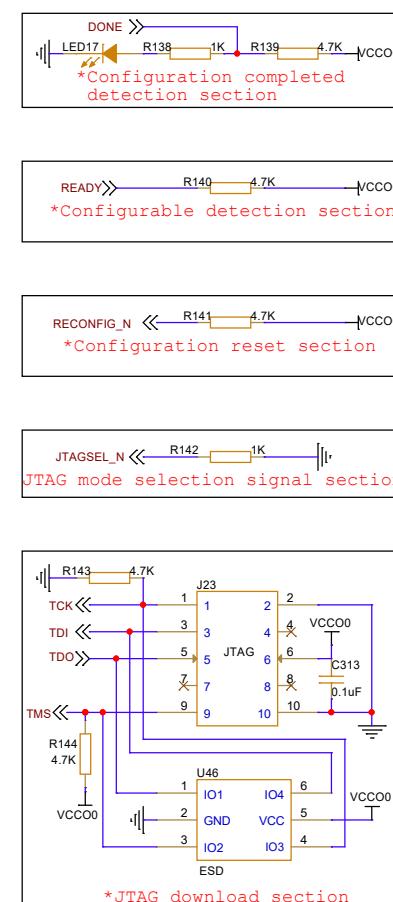
Notes:

- 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.

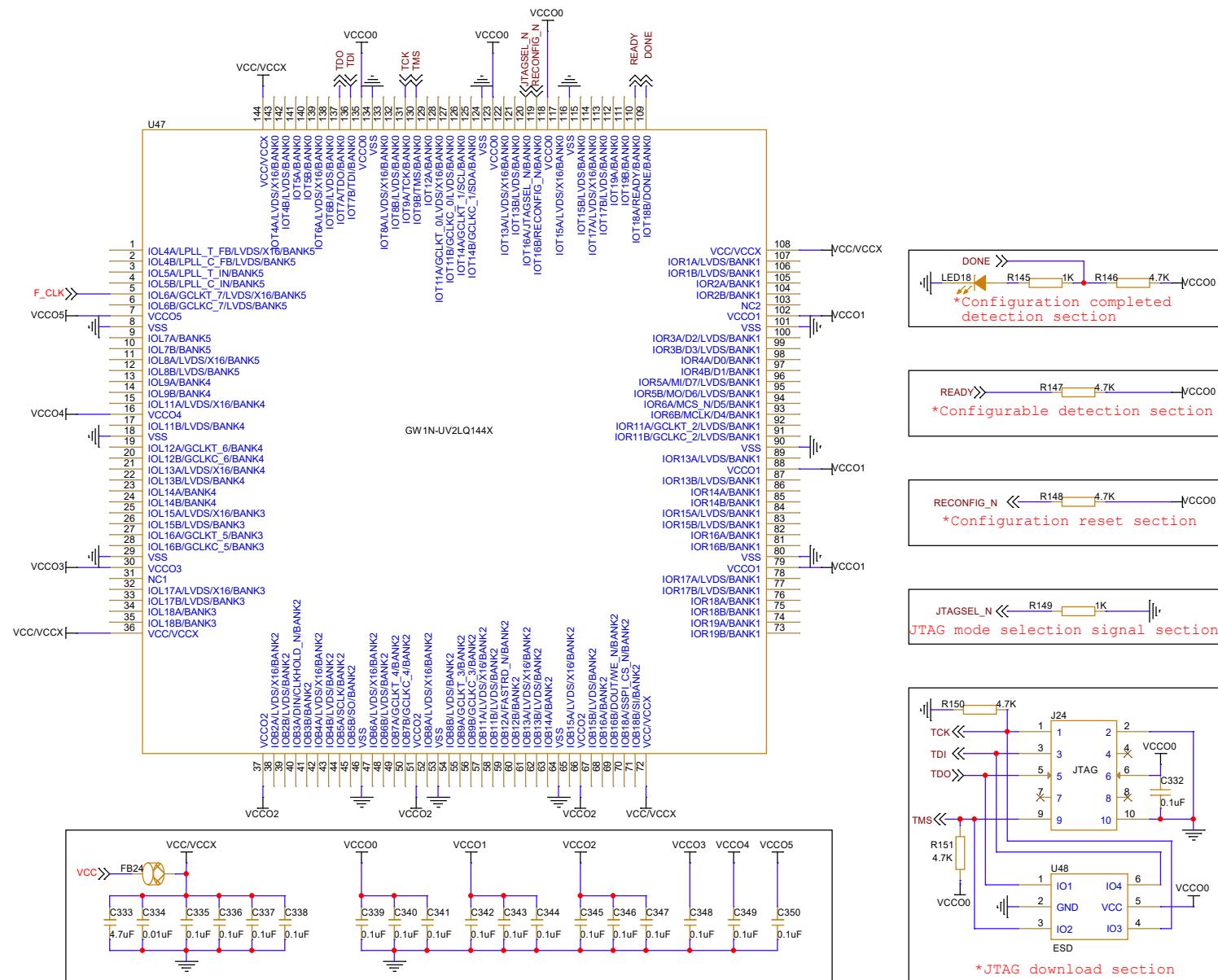
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Size A3	Document Number GW1-UV2LQ144	Rev 2.2
Date: Thursday, July 04, 2024	Sheet 22	of 33

**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.

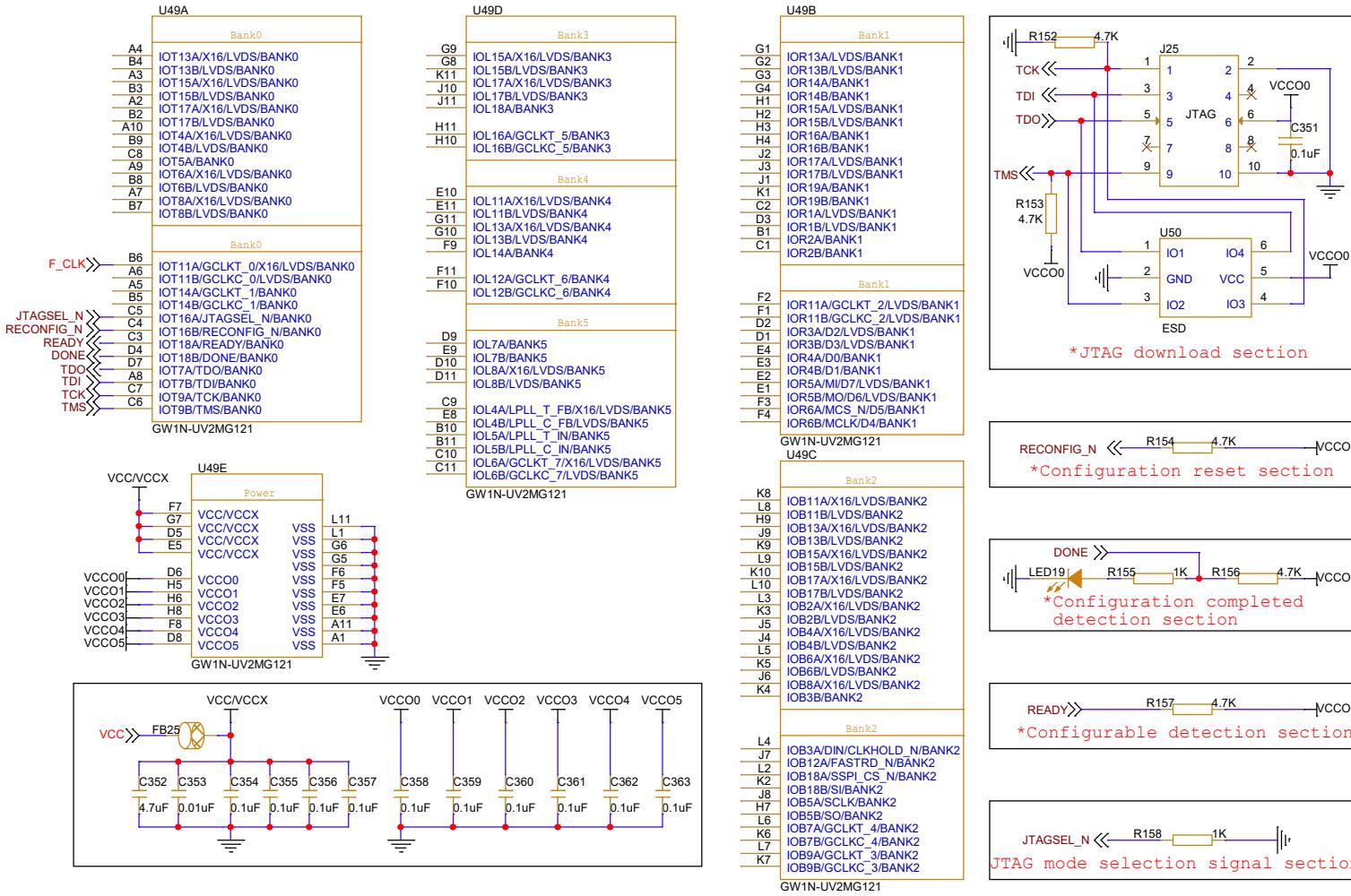


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Size	A3
Date:	Thursday, July 04, 2024
Document Number	GW1N-UV2LQ144F
Rev	2.2

**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.

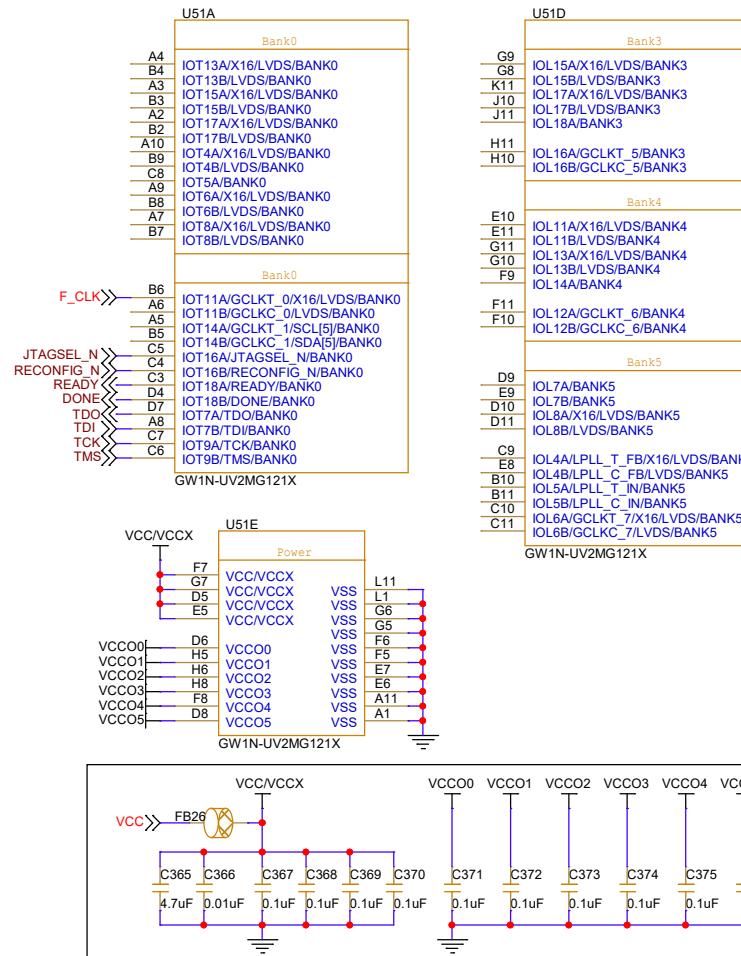
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Size A3 Document Number GW1N-UV2LQ144X	
Date:	Rev 2.2
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**Notes:**

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
B	GW1N-UV2MG121	2.2

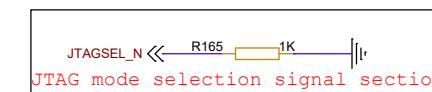
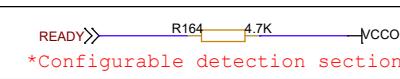
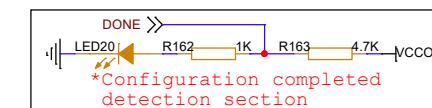
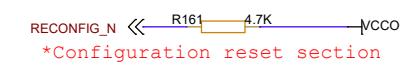
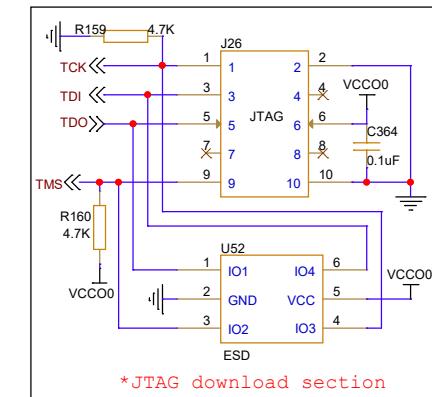
Date: Thursday, July 04, 2024 Sheet 25 of 33

**Notes:**

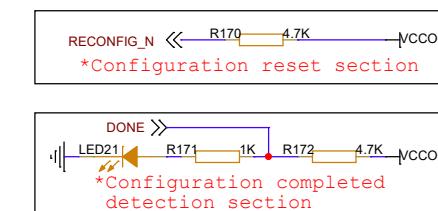
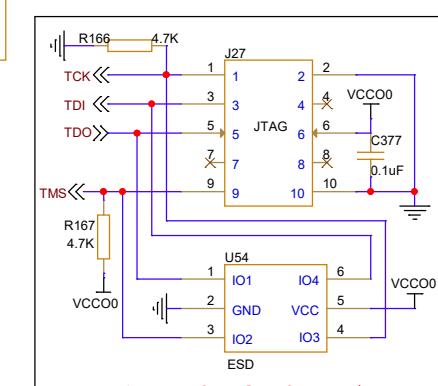
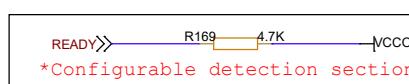
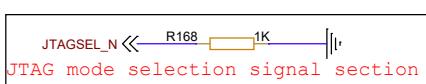
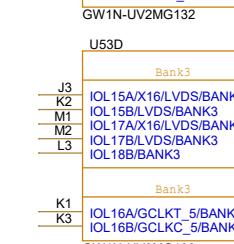
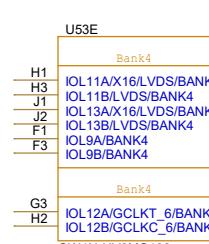
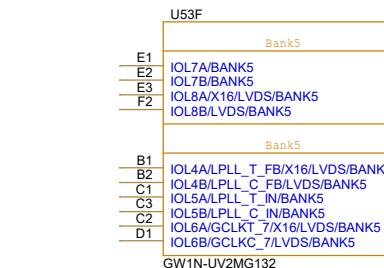
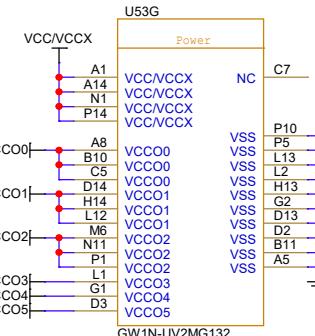
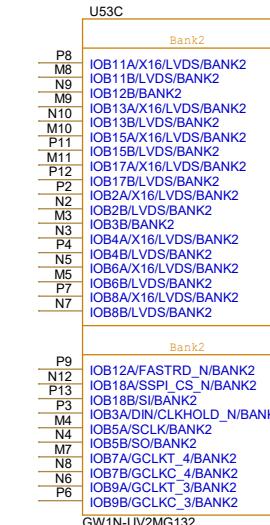
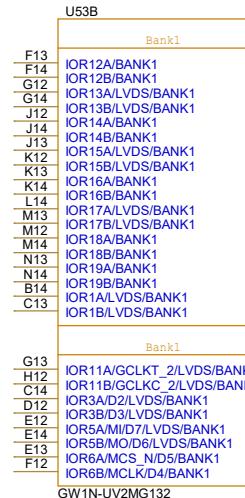
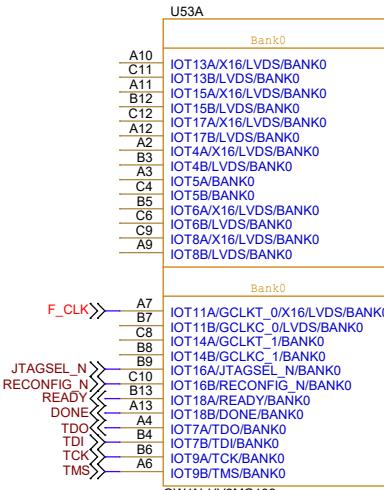
1. F_CLK signal is an external input clock signal.

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.



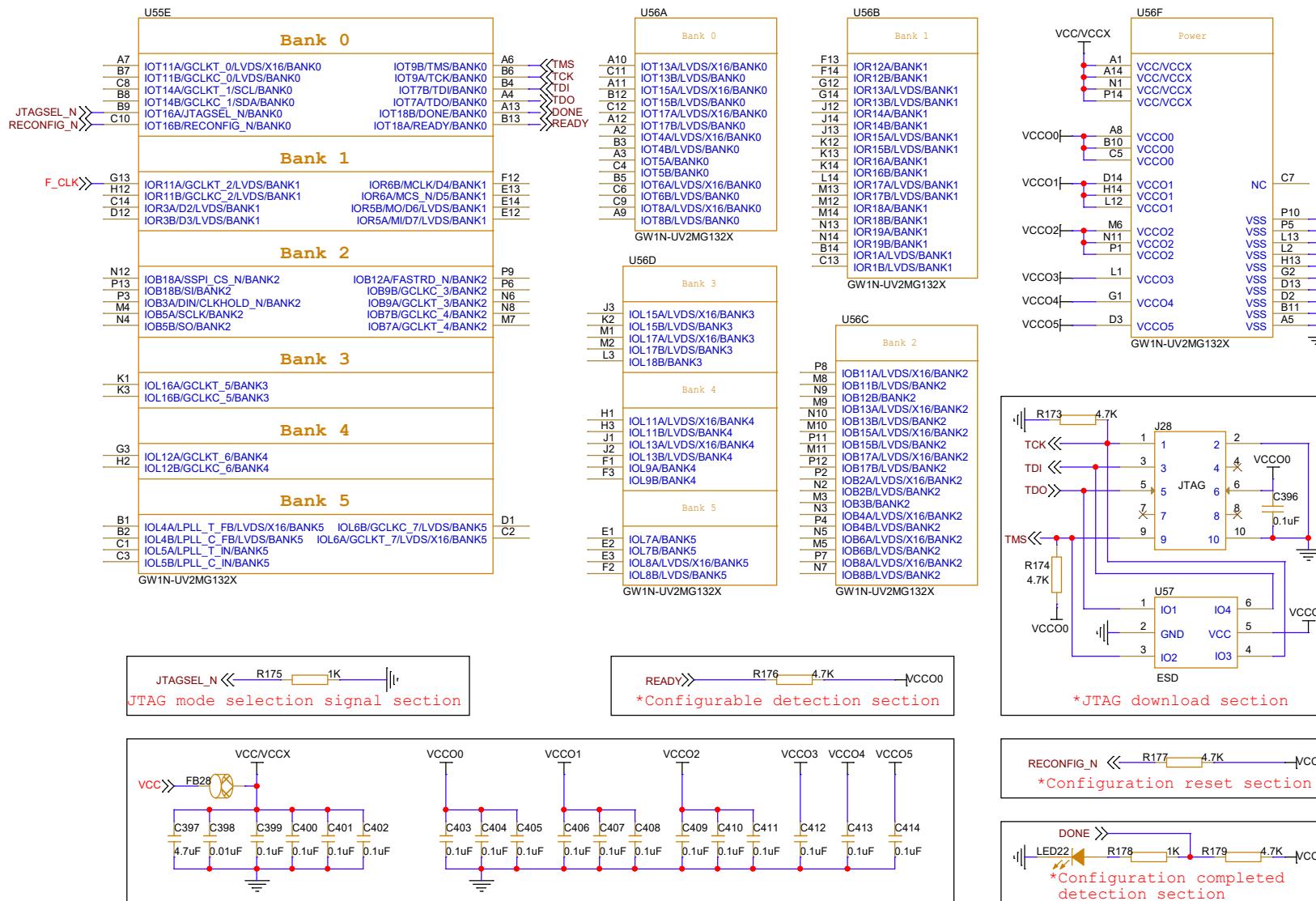
Title		
GOWIN Minimum System Diagram		
Size	Document Number	Rev
B	GW1N-UV2MG121X	2.2



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
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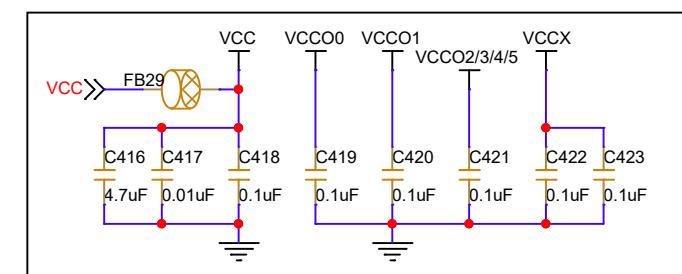
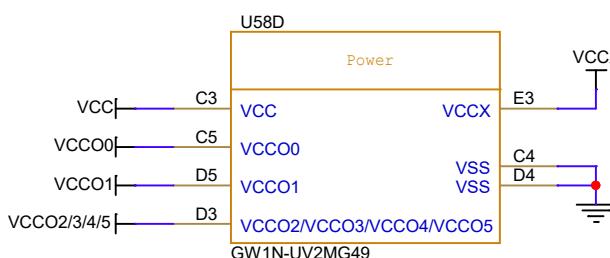
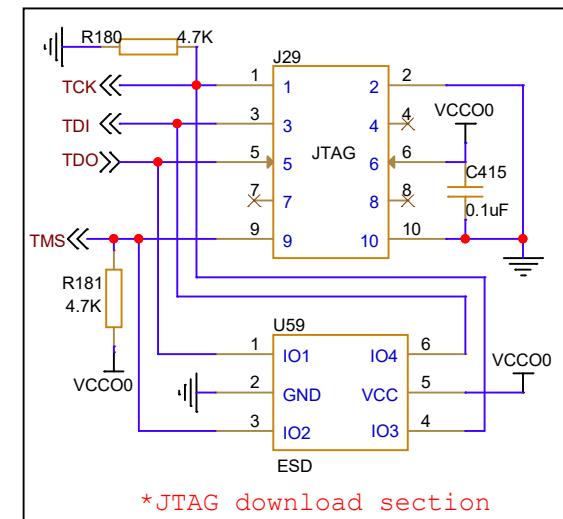
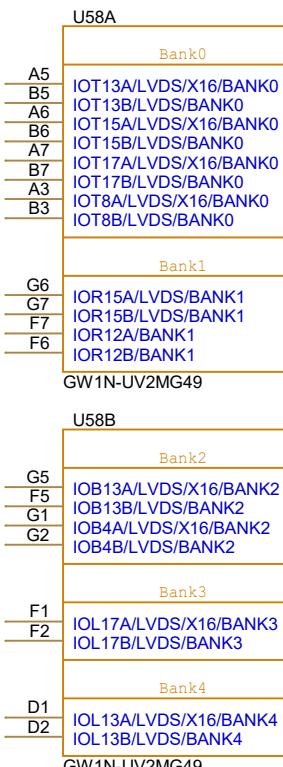
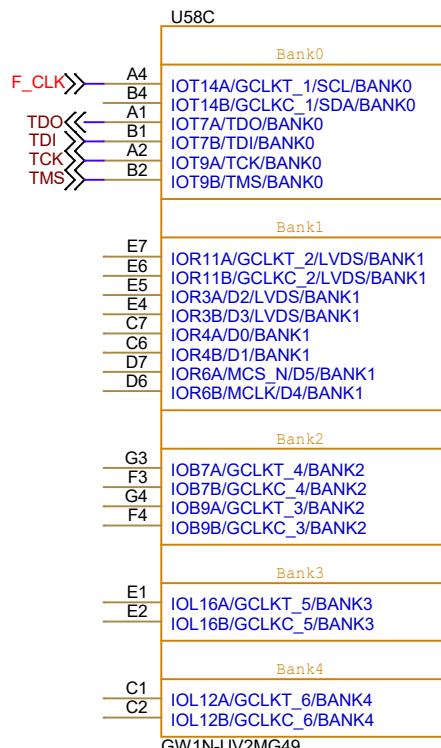


Notes:

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-UV2MG132X	2.2
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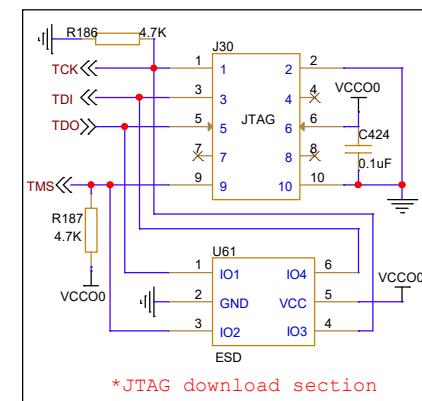
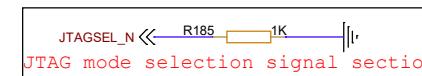
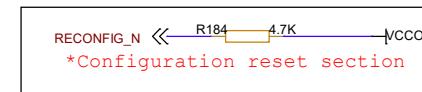
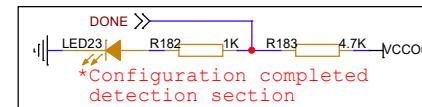
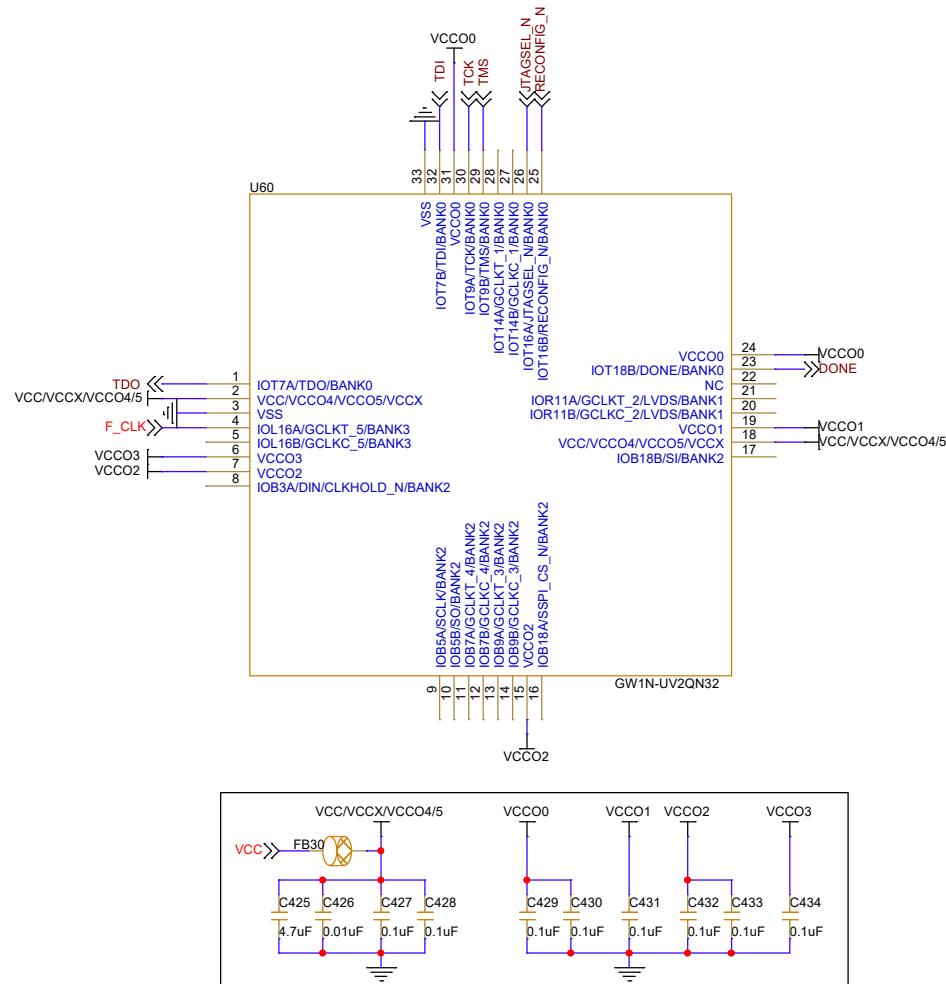
GW1N-UV2MG49



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	
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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-UV2QN32	2.2

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GW1N-UV2QN32X

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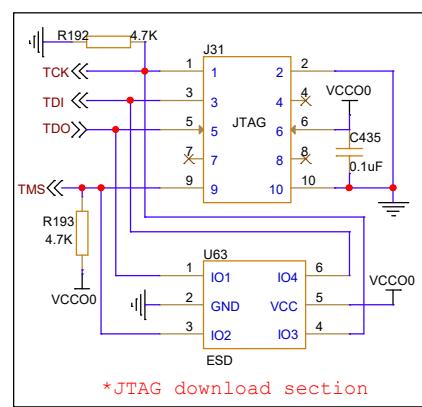
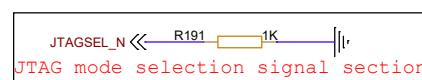
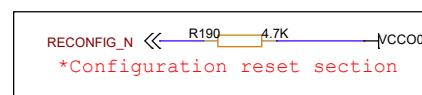
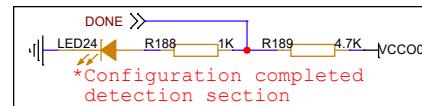
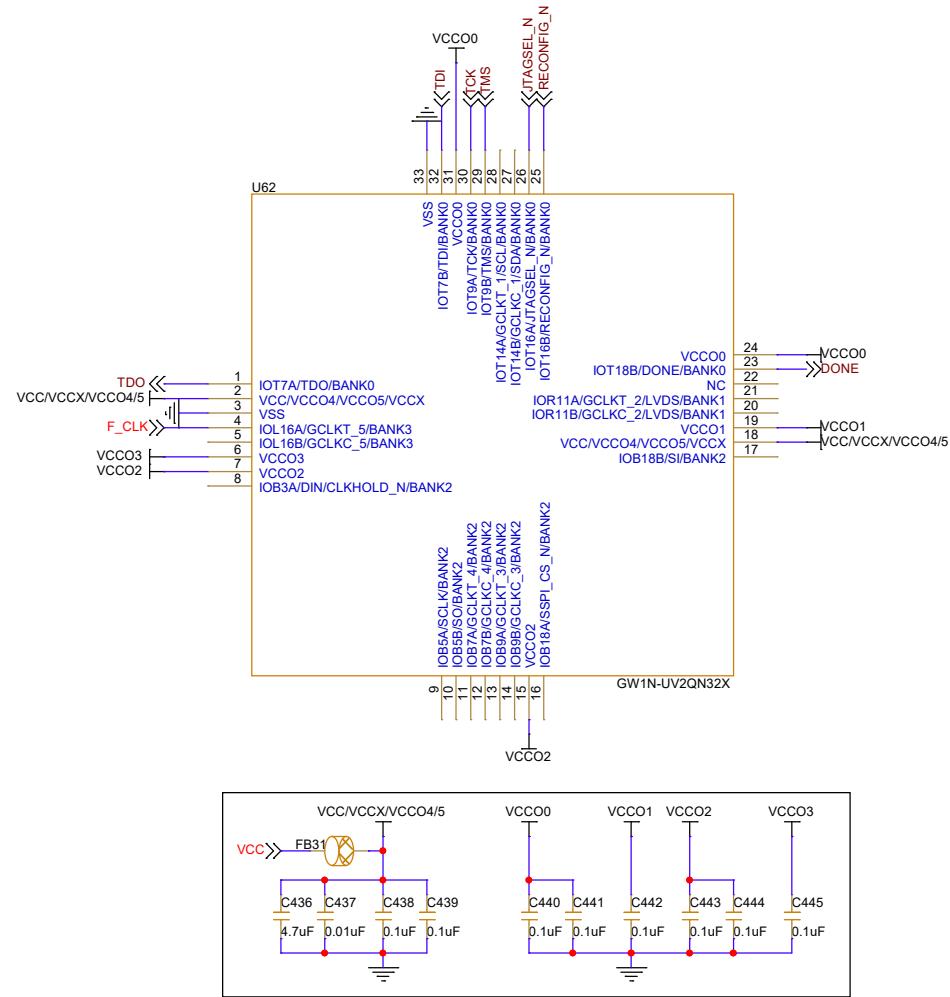
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Notes:

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-UV2QN32X	2.2
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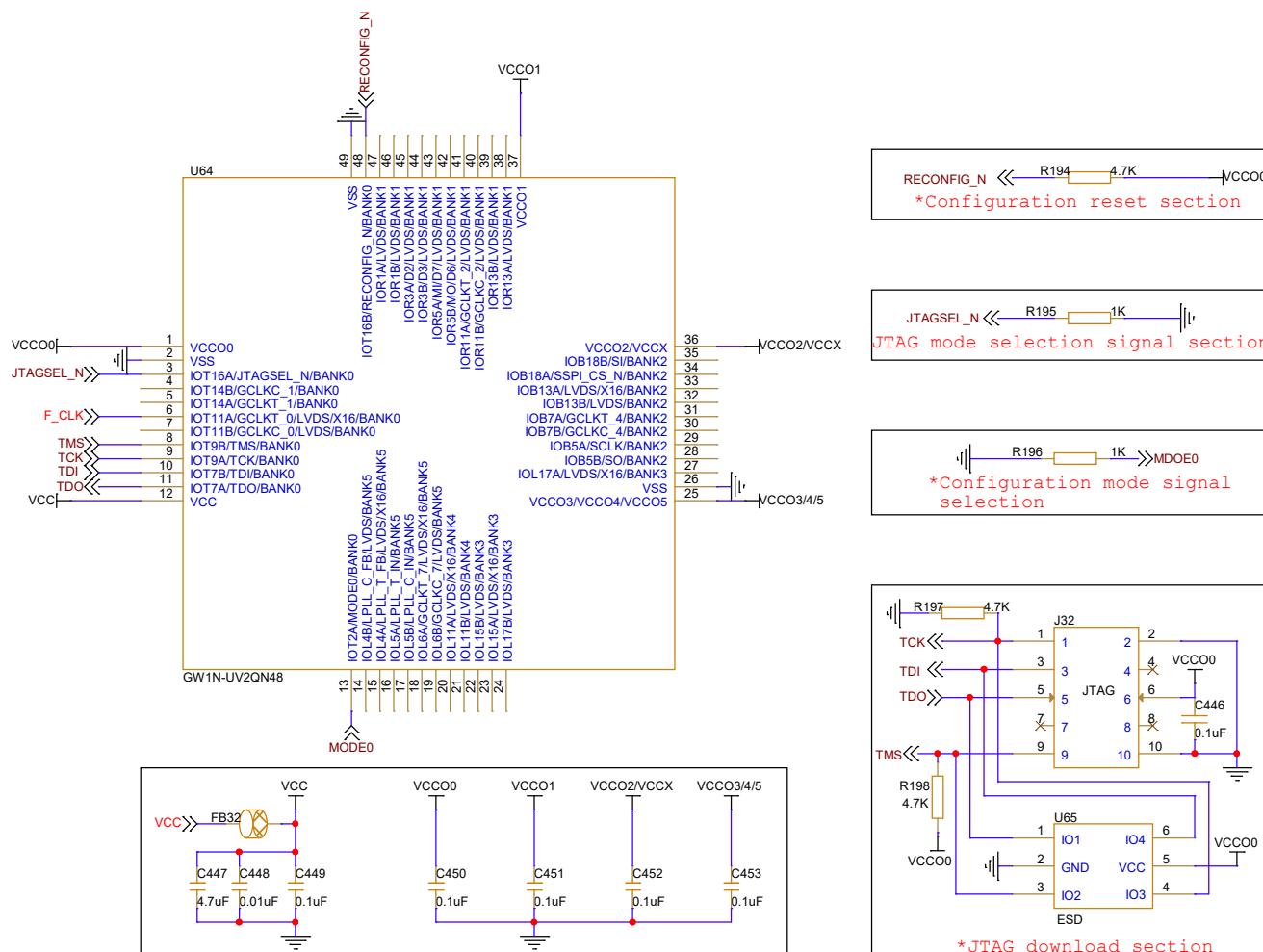
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GW1N-UV2QN48



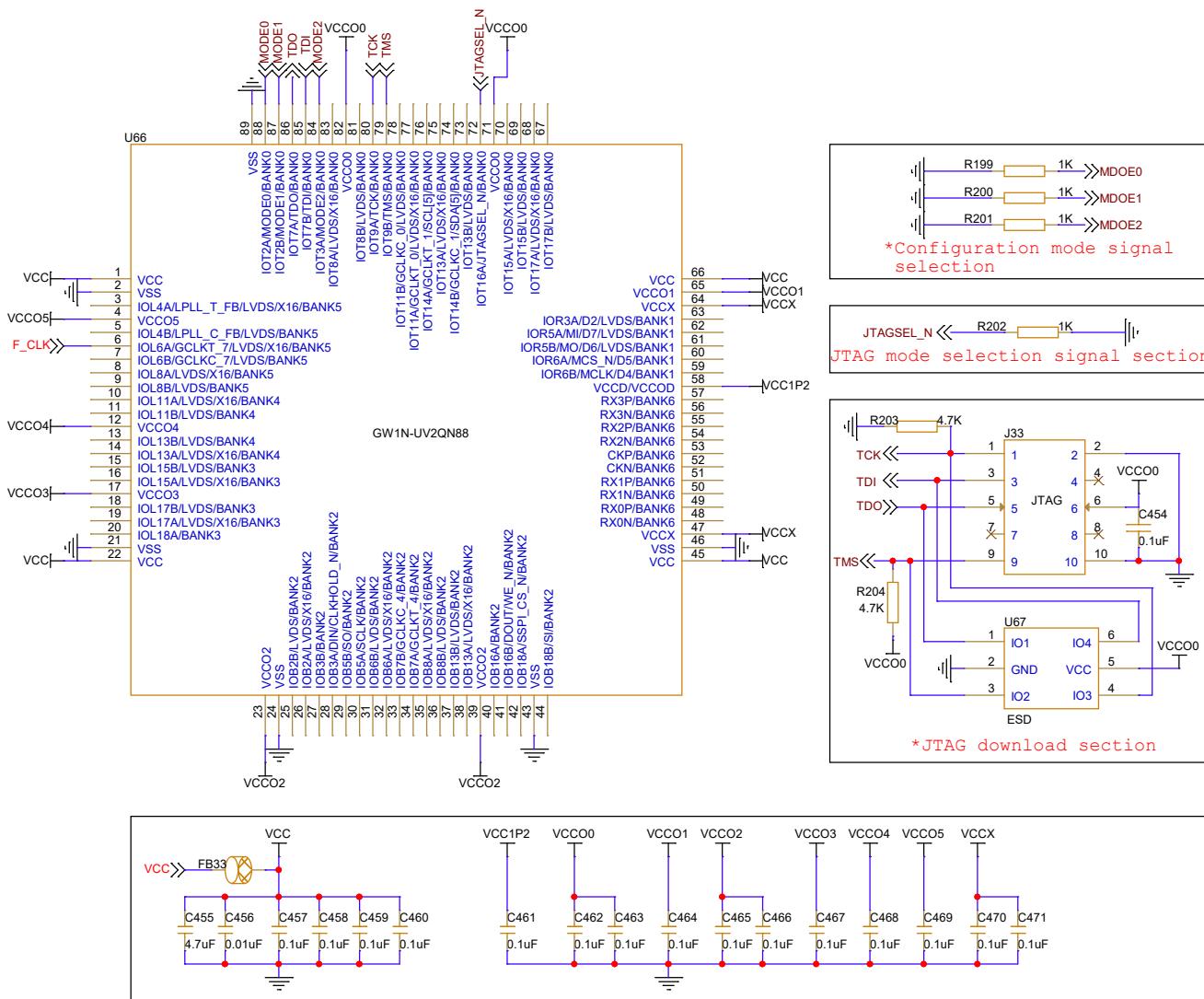
Notes:

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
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**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-UV2QN88	2.2
	Date: Thursday, July 04, 2024	Sheet 33 of 33