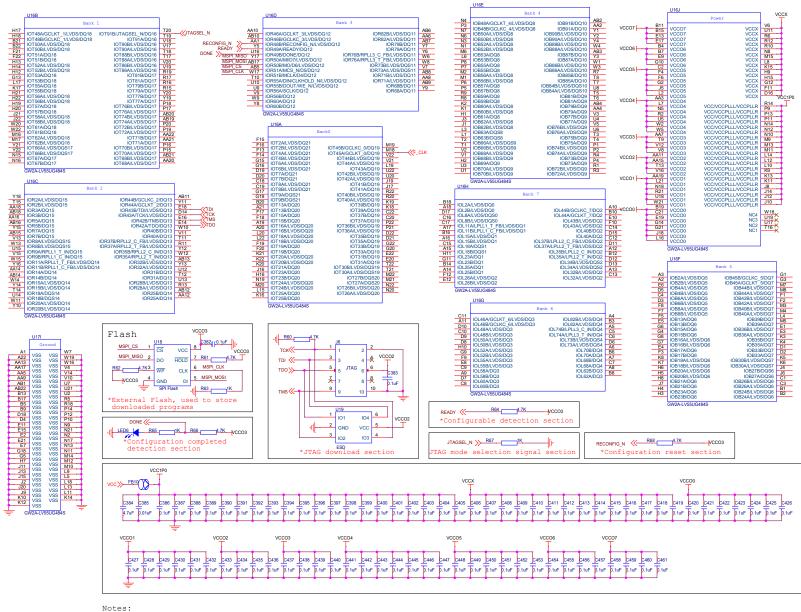


5 GW2A-LV55UG484S 2



- 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.External Flash memory is used to store downloaded programs.
- For details about SPĪ Flash model selection, see Chapter 10 SPI Flash Selection in UG290.
- 3.It is recommended that add an ESD protection chip to the JTAG download circuit.

GOWIN Minimum System Diagram

Size Document Namber Per 2.0

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3 2 4 GW2A-LV55UG676 Bank6 Bank2 U20A BankO Bank4 Power D26 E26 G25 H25 K18 L18 H24 J23 H23 J22 H21 J21 K24 IOR8B/LVDS/DQS15 IOL83B/DQ4 IOL83A/DQ4 32B/LVDS/DQ4 IOL81B/DQ4 IOL81B/DQ4 IOL79B/DQ4 IOL79B/DQ4 Y2 AE13

AE14

ID849AD08

TY14

ID849BD08

TY15

ID859ALVISD08

AE17

ID851AD08

TY15

ID861AD08

TY15

TY IOR12A/DQ14 IOR12B/DQ14 IOR13A/LVDS/DQ14 IOR8A/I VDS/DOS15 VCC1P0 VSS W24
VSS W19
VSS W14
VSS V3
VSS U17
VSS U17
VSS U17
VSS U17
VSS T26
VSS T21
VSS T26
VSS T16
VSS T16
VSS T6
VSS T6
VSS T17
VSS T6
VSS T17
VS IOT13A/DQ20 IOT9B/DOS21 IOL48A/LVDS/DQ3 OT13B/DQ20 IOT9A/DQS21 IOR7A/DQ15 IOL48B/LVDS/DQ3 IOL82B/LVDS/DQ4 VCC VCC VCC OT15A/DQ20 IOT8B/LVDS/DQ21 IOR5B/DQ15 IOL82A/LVDS/DQ4 IOL81B/DQ4 OT15B/DQ20 IOT8A/LVDS/DQ2 IOR5A/DQ15 Life VCC
T13 VCC
W12 VCC
W12 VCC
W14 VCC
W14 VCC
W16 VCC
W17 VCC
W17 VCC
W18 V IOT16A/LVDS/DQ20 IOT7B/DQ21 IOT7A/DQ21 IOR4B/LVDS/DQ15 IOR4A/LVDS/DQ15 IOL50A/LVDS/DQ3 IOL50B/LVDS/DQ3 IÖRAALIVDS/DO15 |
IÖRAALIVDS/DO15 |
IORAIDAD13 |
IORAIDAD13 |
IORAIDAD15 |
IORASIDD15 |
IORASIDD15 |
IORASIDD15 |
IORASIDD13 |
IORASID13 IOT6B/LVDS/DQ21 IOT17A/DQ20 IOL51A/DQ3 IOL79A/DO4
IOL77B/DO4
IOL77B/DO4
IOL77B/DO3
IOL73B/UNSIDQS4
IOL73A/UNSIDQS4
IOL72A/DO4
IOL77B/UNSIDQS4
IOL77B/UNSIDQS4
IOL77B/UNSIDQ4
IOL77B/UNSIDQ4
IOL77B/UNSIDQ4
IOL85B/DO4
IOL85B/DO4
IOL85B/DO4
IOL85B/DO4
IOL85B/DO4 IOT6A/LVDS/DQ21 IOT5B/DQ21 IOT5A/DQ21 OT17B/DQ20 IOL51B/DQ3 IOL52A/LVDS/DQ3 IOL52B/LVDS/DQ3 ACT | GESSADOS | | IOT18B/LVDS/DQ20 IOT18B/LVDs/DQ20 IOT19B/DQ20 IOT19B/DQ20 IOT20A/LVDs/DQ20 IOT20B/LVDs/DQ20 IOT21A/DQ20 IOT21B/DQ20 IOT23B/DQ20 IOT23B/DQ20 U3 T10 J10 J11 E9 E10 K11 K12 R10 IOL588/DQ3 IOL598/LVDS/DQ3 IOL598/LVDS/DQ3 IOL598/LVDS/DQ3 IOL598/LVDS/DQ3 IOT24A/LVDS/DQ20 IOT24B/LVDS/DQ20 IOT41B/DQ19 IOT41A/DQ19 IOR31B/DQ13 IOR31A/DQ13 IOR31A/DQ13 IOR2B/LVDS/DQ15 IOR2A/LVDS/DQ15 IOR29B/DQ13 IOR29A/DQ13 IOT25A/DQ20 IOT25B/DQ20 IOT25B/DQ20 IOT26A/LVDS/DQ20 IOL67A/LVDS/DQ4 VCCPLLL IOL62B/DQ3 IOL62A/DQ3 VCCPLLR T15
VCCPLLR T15
VCCPLLR VCCPLLR
VCCPLLR VCCPLLR K21 M21 K26 J26 C7 C8 F9 F10 C4 C5 G9 G10 A9 A10 IOT3B/DQ21 IOT3A/DQ21 IOR28A/I VDS/DQ13 IOR28B/LVDS/DQ13 IOT26B/LVDS/DQ20 IOL60B/DQ3 VSS VSS VSS | 0738B0019 | A13 | 07278D0520 | 0738B0019 | A13 | 0728LVB50221 | 07378D019 | E12 | 0728LVB50221 | 07378D019 | E12 | 0738BLVB50219 | 0738BLVB50019 | C11 | 0738BLVB5019 | 0738BLVB50019 | D12 | 0738BLVB5019 | 0738B0019 | D12 | 0738B0019 | 0738B0019 | D13 IOT27A/DQS20 IOT27B/DQS20 IOT39B/DQ19 VSS VSS VSS VSS VSS AB5
AB11
AB22
E5
E16
E22
J18
K13
L5
N10
P17
T22
U14
V9 VCCX VCCX F23 G23 F22 G22 M22 IOR9A/RPLL1\_T\_IN/DQ15 R3 IOL46A/GCLKT\_6/LVDS/DQ3 | DRBBMPLLT | NDD15|
DRBBMPLLT	NDD15		
DRBBMPLLT	NDD15		
DRT 1 ARAL	T FBLVDSD014	DRABGCLKC 2/D013	P20
DRT 1 ARAL	T FBLVDSD014	DRABGCLKC 2/D013	P20
DRT 1 ARAL	T FBLVDSD014	DRABGCLKC 2/D013	P20
DRT 1 ARAL	T FBLVDSD013	DRABGTLKC 2/D013	
DRT 1 ARAL	T FBLVDSD013	DRABGTLKD 2/D013	
DRT 1 ARAL	T FBLVDSD013	DRABGTLKD 2/D013	
DRT 1 ARAL	T FBLVDSD013	DRABGTLKD 2/D013	
DRT 1 ARAL	T FBLVDSD013	DRT 1 ARAL	T FBLVDSD015
DRT 1 ARAL	T FBLVDSD013	DRT 1 ARAL	T FBLVDSD015
DRT 1 ARAL	T FBLVDSD015	DRT 1 ARAL	T FBLVDSD015
DRT 1 ARAL	T FBLVDSD015	DRT 1 ARAL	T FBLVDSD015
DRT 1 ARAL	T FBLVDSD015	DRT 1 ARAL	T FBLVDSD015
DRT 1 ARAL	T FBLVDSD015	DRT 1 ARAL	T FBLVDSD015
DRT 1 ARAL	T FBLVDSD015	DRT 1 ARAL	T FBLVDSD015
DRT 1 ARAL	T FBLVDSD015	DRT 1 ARAL	T FBLVDSD015
DRT 1 ARAL	T FBLVDSD015	DRT 1 ARAL	T FBLVDSD015
DRT 1 ARAL	T FBLVDSD015	DRT 1 ARAL	T FBLVDSD015
DRT 1 ARAL	T FBLVDSD015	DRT 1 ARAL	T FBLVDSD015
DRT 1 ARAL	T FBLVDSD015	DRT 1 ARAL	T FBLVDSD015
DRT 1 ARAL	T FBLVDSD015	DRT 1 ARAL	T FBLVDSD015
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DRT 1 ARAL	T FBLVDSD015	DRT 1 ARAL	T FBLVDSD015
DRT 1 ARAL	T FBLVDSD015	DRT 1 ARAL	T FBLVDSD015
DRT 1 ARAL	T FBLVDSD015	DRT 1 ARAL	T FBLVDSD015 A9 IOT31A/DQ19
B9 IOT31B/DQ19			
B10 IOT33A/DQ19			
IOT33B/DQ19 GW2AJ V55UG676 GW2A-I V55LIG676 Bank4 F13 D13 IOT45A/GCLKT\_0/DQ19 IOT45B/GCLKC\_0/DQ19 U20D Bank7 AA13 IOB48A/GCLKT\_4/LVDS/DQ8 IOB48B/GCLKC\_4/LVDS/DQ8 GW2A-LV55UG676 Bank3 D1 E1 G3 IOI 124/DO1 IOL8B/LVDS/DOS0 E1 IOL12AIDQ1			
G3 IOL12B/DQ1			
IOL13AILVDS/DQ1			
IOL13AILVDS/DQ1			
IOL14A/DQ1			
IOL14B/DQ1 IOL8B/LVDS/DQS0 IOL8A/LVDS/DQS0 IOL7B/DQ0 IOL7A/DQ0 IOL5B/DQ0 B5 B11 VCC00 VCC00 VCC00 VCC00 GW2A-LV55UG676 VCCO0 -II20B IOR83B/DQ11 AD25 AE26 IOR56B/DQ12 IOR57A/LVDS/DQ12 IOR57B/LVDS/DQ12 IOR834/DO1	ORBANDO11	ACTA	
INTERNATION	ACTA		
ORBANDO11	ACTA		
ACTA			
ORBANDO11	ACTA		
ORBANDO11	ACTA		
ORBANDO11	ACTA		
ACTA			
ORBANDO11	ACTA		
U20F Bankl IOL5A/DQ0 Bank5 IOT91A/DQ16 IOR58A/DQ12 IOR58B/DQ12 IOL43B/LVDS/DQ2 ### (1818ADG)	1818ADG	VCCO1 -AM (07 TABADO18 AM (07 TABADO1 IOL43A/LVDS/DQ2 IOL42B/DQ2 U23 V23 U22 V22 U21 V21 U20 V20 W26 Y26 V19 DT50A/LVDS/DQ18 IOR59B/LVDS/DQ12 IOL42A/DQ2 IOB9B/DQS5 IOB9A/DQS5 B8B/LVDS/DQ5 B8A/LVDS/DQ5 IOB7B/DQ5 W7	IOLE/ADO2
AB7
AB9
V10
V11
AD7
AD9
AA8
AA9
AC4
AD4
Y8
Y9
AE9 C21 C20 A23 IOT76R/I VDS/DO1 MODE1 IOT76B/LVDS/DQ17 IOT76A/LVDS/DQ17 IOT75B/DQ17 IOT75A/DQ17 IOT74B/LVDS/DQ17 IOR74B/RPLL3\_C\_IN/DQ11 IOR74A/RPLL3\_T\_IN/DQ11 /DQ12 IOR56A/SCIK/DQ12 IOR55B/DOUT/WE\_NL/DS/DQ12 IOR55A/DIN/CLKHOLD\_N/LVDS/DQ12 | 108248/LVDS/DQ6 | 10842A/LVDS/DQ7 | 10825A/DQ6 | 108418/DQ7 | 108258/DQ6 | 10841A/DQ7 | 108268/LVDS/DQ6 | 108408/LVDS/DQ7 | 108268/LVDS/DQ6 | 10840A/LVDS/DQ7 | 108268/LVDS/DQ6 | 10840A/LVDS/DQ7 | 108267A/DQS6 | 10838/DQ5 MODE2 VCCO6 IOT61B/DQ18 IOT62A/LVDS/DQ18 IOR48A/MODE2/LVDS/DQ12 IOR48B/RECONFIG N/LVDS/DQ12 VCCO6 | USE | 10R56A/SGLK/DO12 | USE | 10R56A/DIN/CLKH-OLD NLVOS/DO12 | USE | 10R56A/DIN/CLKH-OLD NLVOS/DO12 | USE | 10R53A/SOID/DO152 | R10 | 10R53A/SOID/DO152 | R15 | 10R52A/SOID/DO152 | R25 | 10R52A/SOID/LVOS/DO12 | PSE | 10R52A/SAID/LVOS/DO12 | PSE | W12 A22 F20 F19 OT62B/LVDS/DO18 VCCO6 VCCO6 IOT63A/DQS18 IOT63B/DQS18 IOT74A/LVDS/DQ17 VCCO7 IOT73B/DQ17 IOT73A/DQ17 IOT72B/LVDS/DQ17 IOT66A/I VDS/DQS1 OT66B/LVDS/DQS17 OT67A/DQ17 IOT72A/LVDS/DQ17 VCCO7 VSS IOT68A/LVDS/DQ17 В IOT71B/DQ17 IOT71A/DQ17 IOT68B/LVDS/DQ17 READY (CC03 \*Configurable detection section C462 C463 C464 C465 C12 C13 D24 IOT48A/GCLKT\_1/LVDS/DQ18 IOT48B/GCLKC\_1/LVDS/DQ18 IOT91B/JTAGSEL\_N/DQ16 F\_CLK >> JTAGSEL\_N >> R71 0.1uF 0.1uF 0.1uF 0.1uF RECONFIG\_N 
R70 4.7K VCC03 R72 10K Y12 Y13 IOB45A/GCLKT\_5/DQ7 IOB45B/GCLKC\_5/DQ7 FXTR <<-JTAGSEL N >>-\*Configuration reset section TAG mode selection signal section \*Dedicated Pin sectio GW2A-LV55UG676 GW2A-LV55UG676 VCCO3 VCCPLLL Flash R73 4.71 8 C466 | O.1uF vcc>>\_FB11 VCC>> FB12 MSPI\_CS 1 CS VCC MSPI\_MISO 2 DO HOLD 7 R74 4.7K VCCO2 4 4 C467 C468 C469 C470 C471 C472 C473 C474 C475 C476 C477 C478 C479 C480 C481 C482 C483 C484 C485 C486 C487 C488 C489 C490 C491 C492 C493 C494 C495 C496 6 MSPI\_CLK JTAG 6 R75 4.7K3 WP CLK 4.7uF 0.01uF 0.1uF 0.1uF K. TUE D. DEED D. TUE D C497 VCCO3 4 GND SPI FI DI 5 MSPI\_MOSI 8 <del>-</del> & 0.1uF R76 SPI Flash VCCPLLB \*External Flash, used to store VCCX VCC00 VCCO1 VCCO2 VCCO3 vcc>> FB13 IO4 6 101 VCCO2 DONE //\_ C498 C499 C500 C501 2502 C503 C504 C505 C506 C507 C508 C509 C510 C511 C512 C513 C514 C515 C516 C517 C518 C519 C520 C521 C522 C523 C524 C525 C526 C527 C528 2 GND VCC LED7 R77 1K R78 1.7K VCCO3 D.14F 4.7uF 0.01uF 0.1uF 0.1uF IO3 IO2 onfiguration completed detection section \*JTAG download section 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. External Flash memory is used to store downloaded programs. For details about SPI Flash model selection, see Chapter 10 SPI Flash Selection in UG290. 3.It is recommended that add an ESD protection chip to the JTAG download circuit. GOWIN Minimum System Diagram Document Number GW2A-LV55UG676