



GW2AN-18X and GW2AN-9X Package & Pinout User Guide

UG973-1.2.1E, 12/28/2021

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Revision History

Date	Version	Description
02/25/2021	1.0E	Initial version.
07/16/2021	1.1E	The GW2AN-9X device added.
10/28/2021	1.2E	The GW2AN-9X UG256, PG256, and UG324 packages added.
12/28/2021	1.2.1E	UG324 package outline updated.

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1 About This Guide

1.1 Purpose

This manual mainly contains an introduction to the GW2AN series of FPGA products together with a definition of the pins, list of pin numbers, distribution of pin, and package diagrams.

1.2 Related Documents

The latest user guides are available on GOWINSEMI Website. You can find the related documents at www.gowinsemi.com:

- [DS971E, GW2AN-18X & 9X Data Sheet](#)
- [UG290E, Gowin FPGA Products Programming and Configuration User Guide](#)
- [UG972E, GW2AN-18X Pinout](#)
- [UG978E, GW2AN-9X Pinout](#)

1.3 Abbreviations and Terminology

The abbreviations and terminologies used in this manual are set out in Table 1-1 below.

Table 1-1 Abbreviations and Terminology

Abbreviations and Terminology	Name
FPGA	Field Programmable Gate Array
LVDS	Low-Voltage Differential Signaling
GPIO	Gowin Programmable IO
UG	UBGA
PG	PBGA

1.4 Support and Feedback

Gowin Semiconductor provides customers with comprehensive technical support. If you have any questions, comments, or suggestions, please feel free to contact us directly using the information provided below.

Website: www.gowinsemi.com

E-mail: support@gowinsemi.com

2 Overview

The GW2AN series of FPGA products are the first-generation products of Arora family. They are available in various forms that offer high I/O compatibility and flexible usage.

2.1 PB-Free Package

The GW2AN series of FPGA Products are PB free, in line with the EU ROHS environmental directives. The substances used in the GW2AN series of FPGA products are in full compliance with the IPC-1752 standards.

2.2 Package and Max. I/O Information

Table 2-1 Package and Max. I/O Information

Package	Pitch(mm)	Size(mm)	E-pad Size (mm)	GW2AN-9X	GW2AN-18X
UG484	0.8	19 x 19	-	383 (96)	383 (96)
UG400	0.8	17 x 17	-	335 (95)	335 (95)
UG256	0.8	14 x 14	-	207 (86) -	207 (86)
PG256	1.0	17 x 17	-	207 (86) -	207 (86)
UG332	0.8	17 x 17	-	-	279 (82)
UG324	0.8	15 x 15	-	279 (74) -	279 (74)
PG484	1.0	23 x 23	-	-	381 (96)

Note!

- The package types in this manual are written with abbreviations. See 1.3 Abbreviations and Terminology;
- The JTAGSEL_N and JTAG pins cannot be used as I/O simultaneously. The data in this table is when the loaded four JTAG pins (TCK, TDI, TDO, and TMS) are used as I/O.

2.3 Power Pin

Table 2-2 GW2AN Power Pin

VCC	VCCO0	VCCO1	VCCO2
VCCO3	VCCO4	VCCO5	VCCO6
VCCO7	VCCO8	VCCX	VSS
NC			

2.4 Pin Quantity

2.4.1 Quantity of GW2AN-18X Pins

Table 2-3 Quantity of GW2AN-18X Pins

Pin Type		GW2AN-18X																				
		UG48 4 ^[1]	UG48 4 ^[2]	UG48 4 ^[3]	UG40 0 ^[1]	UG40 0 ^[2]	UG40 0 ^[3]	UG25 6 ^[1]	UG25 6 ^[2]	UG25 6 ^[3]	PG256 1 ^[1]	PG256 2 ^[2]	PG256 3 ^[3]	UG33 2 ^[1]	UG33 2 ^[2]	UG33 2 ^[3]	UG32 4 ^[1]	UG32 4 ^[2]	UG32 4 ^[3]	PG484 1 ^[1]	PG484 2 ^[2]	PG484 3 ^[3]
I/O Single end/Di fferenti al pair/LV DS ^[4]	BANK 0	48/24/ 12	48/24/ 12	48/24/ 12	44/22/ 12	44/22/ 12	44/22/ 12	26/13/ 11	26/13/ 11	26/13/ 11	26/13/ 11	26/13/ 11	26/13/ 11	36/18/ 11	36/18/ 11	36/18/ 11	36/18/ 11	36/18/ 11	36/18/ 11	46/23/ 12	46/23/ 12	46/23/ 12
	BANK 1	47/23/ 12	47/23/ 12	47/23/ 12	39/19/ 12	39/19/ 12	39/19/ 12	25/12/ 10	25/12/ 10	25/12/ 10	25/12/ 10	25/12/ 10	25/12/ 10	33/16/ 12	33/16/ 12	33/16/ 12	35/17/ 12	35/17/ 12	35/17/ 12	47/23/ 12	47/23/ 12	47/23/ 12
	BANK 2	48/24/ 12	48/24/ 12	48/24/ 12	40/20/ 12	40/20/ 12	40/20/ 12	24/12/ 12	24/12/ 12	24/12/ 12	24/12/ 12	24/12/ 12	24/12/ 12	32/16/ 8	32/16/ 8	32/16/ 8	32/16/ 7	32/16/ 7	32/16/ 7	48/24/ 12	48/24/ 12	48/24/ 12
	BANK 3	48/24/ 12	48/24/ 12	48/24/ 12	44/22/ 12	44/22/ 12	44/22/ 12	28/14/ 12	28/14/ 12	28/14/ 12	28/14/ 12	28/14/ 12	28/14/ 12	38/19/ 12	38/19/ 12	38/19/ 12	36/18/ 9	36/18/ 9	36/18/ 9	48/24/ 12	48/24/ 12	48/24/ 12
	BANK 4	48/24/ 12	48/24/ 12	48/24/ 12	42/21/ 12	42/21/ 12	42/21/ 12	26/13/ 12	26/13/ 12	26/13/ 12	26/13/ 12	26/13/ 12	26/13/ 12	36/18/ 10	36/18/ 10	36/18/ 10	36/18/ 7	36/18/ 7	36/18/ 7	48/24/ 12	48/24/ 12	48/24/ 12
	BANK 5	48/24/ 12	48/24/ 12	48/24/ 12	42/21/ 12	42/21/ 12	42/21/ 12	26/13/ 12	26/13/ 12	26/13/ 12	26/13/ 12	26/13/ 12	26/13/ 12	34/17/ 9	34/17/ 9	34/17/ 9	36/18/ 9	36/18/ 9	36/18/ 9	48/24/ 12	48/24/ 12	48/24/ 12
	BANK 6	36/18/ 9	36/18/ 9	36/18/ 9	28/14/ 9	28/14/ 9	28/14/ 9	16/8/6 16/8/6	16/8/6 16/8/6	16/8/6 16/8/6	16/8/6 16/8/6	16/8/6 16/8/6	16/8/6 16/8/6	24/12/ 9	24/12/ 9	24/12/ 9	24/12/ 6	24/12/ 6	24/12/ 6	36/18/ 9	36/18/ 9	36/18/ 9
	BANK 7	24/12/ 6	24/12/ 6	24/12/ 6	24/12/ 6	24/12/ 6	24/12/ 6	16/8/5 16/8/5	16/8/5 16/8/5	16/8/5 16/8/5	16/8/5 16/8/5	16/8/5 16/8/5	16/8/5 16/8/5	16/8/4 16/8/4	16/8/4 16/8/4	16/8/4 16/8/4	16/8/4 16/8/4	16/8/4 16/8/4	16/8/4 16/8/4	24/12/ 6	24/12/ 6	24/12/ 6
	BANK 8	36/18/ 9	36/18/ 9	36/18/ 9	32/16/ 8	32/16/ 8	32/16/ 8	20/10/ 6	20/10/ 6	20/10/ 6	20/10/ 6	20/10/ 6	20/10/ 6	20/10/ 6	30/15/ 7	30/15/ 7	30/15/ 7	28/14/ 9	28/14/ 9	28/14/ 9	36/18/ 9	36/18/ 9

Pin Type		GW2AN-18X																				
		UG48 4 ^[1]	UG48 4 ^[2]	UG48 4 ^[3]	UG40 0 ^[1]	UG40 0 ^[2]	UG40 0 ^[3]	UG25 6 ^[1]	UG25 6 ^[2]	UG25 6 ^[3]	PG256 1 ^[1]	PG256 2 ^[2]	PG256 3 ^[3]	UG33 2 ^[1]	UG33 2 ^[2]	UG33 2 ^[3]	UG32 4 ^[1]	UG32 4 ^[2]	UG32 4 ^[3]	PG484 1 ^[1]	PG484 2 ^[2]	PG484 3 ^[3]
	BANK 9	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
Max. User I/O ^[5]		383	383	383	335	335	335	207	207	207	207	207	207	279	279	279	279	279	279	381	381	381
Differential Pair		191	191	191	167	167	167	103	103	103	103	103	103	139	139	139	139	139	139	190	190	190
TrueLVDS Output		96	96	96	95	95	95	86	86	86	86	86	86	82	82	82	74	74	74	96	96	96
VCC		0	12	12	0	10	10	8	8	8	8	8	8	8	8	8	10	10	10	12	12	12
VCCX		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VCCO0		4	0	0	3	0	0	2	2	2	2	2	2	2	2	2	2	2	2	6	6	6
VCCO1		5	5	5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	5	5	5
VCCO2		4	4	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	5	5	5
VCCO3		5	5	5	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	5	5	5
VCCO4		4	4	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	5	5	5
VCCO5		5	5	5	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	5	5	5
VCCO6		3	3	3	2	2	2	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3
VCCO7		3	3	3	2	2	2	2	2	2	2	2	1	1	1	2	2	2	2	4	4	4
VCCO8		3	3	3	2	2	2	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3
VCC/VCCX		12	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VCCO0/VCC X		0	4	4	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Pin Type	GW2AN-18X																				
	UG48	UG48	UG48	UG40	UG40	UG40	UG25	UG25	UG25	PG256	PG256	PG256	UG33	UG33	UG33	UG32	UG32	UG32	PG484	PG484	PG484
	4 ^[1]	4 ^[2]	4 ^[3]	0 ^[1]	0 ^[2]	0 ^[3]	6 ^[1]	6 ^[2]	6 ^[3]	1 ^[1]	2 ^[2]	3 ^[3]	2 ^[1]	2 ^[2]	2 ^[3]	4 ^[1]	4 ^[2]	4 ^[3]	1 ^[1]	2 ^[2]	3 ^[3]
VSS	52	52	52	33	33	33	24	24	24	24	24	24	27	27	27	16	16	16	49	49	49
MODE0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MODE1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MODE2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JTAGSEL_N	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Note!

- [1] UV version;
- [2] LV version;
- [3] EV version;
- [4] Single end/ Differential/LVDS I/O quantity include CLK pins, and download pins; The EXTR pin is excluded;
- [5] The JTAGSEL_N and JTAG pins cannot be used as I/O simultaneously. The data in this table is when the four JTAG pins (TCK, TDI, TDO, and TMS) are used as I/O.

2.4.2 Quantity of GW2AN-9X Pins

Table 2-4 Quantity of GW2AN-9X Pins

Pin Type		GW2AN-9X															
		UG400 ^[1]	UG400 ^[2]	UG400 ^[3]	UG484 ^[1]	UG484 ^[2]	UG484 ^[3]	UG256 ^[1]	UG256 ^[2]	UG256 ^[3]	PG256 ^[1]	PG256 ^[2]	PG256 ^[3]	UG324 ^[1]	UG324 ^[2]	UG324 ^[3]	
I/O Single end/Diffe rential pair /LVDS ^[4]	BANK0	44/22/12	44/22/12	44/22/12	48/24/12	48/24/12	48/24/12	26/13/11	26/13/11	26/13/11	26/13/11	26/13/11	26/13/11	36/18/11	36/18/11	36/18/11	
	BANK1	39/19/12	39/19/12	39/19/12	47/23/12	47/23/12	47/23/12	25/12/10	25/12/10	25/12/10	25/12/10	25/12/10	25/12/10	35/17/12	35/17/12	35/17/12	
	BANK2	40/20/12	40/20/12	40/20/12	48/24/12	48/24/12	48/24/12	24/12/12	24/12/12	24/12/12	24/12/12	24/12/12	24/12/12	32/16/7	32/16/7	32/16/7	
	BANK3	44/22/12	44/22/12	44/22/12	48/24/12	48/24/12	48/24/12	28/14/12	28/14/12	28/14/12	28/14/12	28/14/12	28/14/12	36/18/9	36/18/9	36/18/9	
	BANK4	42/21/12	42/21/12	42/21/12	48/24/12	48/24/12	48/24/12	26/13/12	26/13/12	26/13/12	26/13/12	26/13/12	26/13/12	36/18/7	36/18/7	36/18/7	
	BANK5	42/21/12	42/21/12	42/21/12	48/24/12	48/24/12	48/24/12	26/13/12	26/13/12	26/13/12	26/13/12	26/13/12	26/13/12	36/18/9	36/18/9	36/18/9	
	BANK6	28/14/9	28/14/9	28/14/9	36/18/9	36/18/9	36/18/9	16/8/6	16/8/6	16/8/6	16/8/6	16/8/6	16/8/6	16/8/6	24/12/6	24/12/6	24/12/6
	BANK7	24/12/6	24/12/6	24/12/6	24/12/6	24/12/6	24/12/6	16/8/5	16/8/5	16/8/5	16/8/5	16/8/5	16/8/5	16/8/5	16/8/4	16/8/4	16/8/4
	BANK8	32/16/8	32/16/8	32/16/8	36/18/9	36/18/9	36/18/9	20/10/6	20/10/6	20/10/6	20/10/6	20/10/6	20/10/6	20/10/6	28/14/9	28/14/9	28/14/9
	BANK9	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
Max. User I/O ^[5]		335	335	335	383	383	383	207	207	207	207	207	207	279	279	279	
Differential Pair		167	167	167	191	191	191	103	103	103	103	103	103	139	139	139	
TrueLVDS Output		95	95	95	96	96	96	86	86	86	86	86	86	74	74	74	
VCC		0	10	10	0	12	12	8	8	8	8	8	8	10	10	10	
VCCX		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
VCCO0		3	0	0	4	0	0	2	2	2	2	2	2	2	2	2	
VCCO1		2	2	2	5	5	5	2	2	2	2	2	2	2	2	2	
VCCO2		2	2	2	4	4	4	2	2	2	2	2	2	2	2	2	
VCCO3		3	3	3	5	5	5	2	2	2	2	2	2	2	2	2	
VCCO4		2	2	2	4	4	4	2	2	2	2	2	2	2	2	2	
VCCO5		3	3	3	5	5	5	2	2	2	2	2	2	2	2	2	
VCCO6		2	2	2	3	3	3	1	1	1	1	1	1	2	2	2	

Pin Type	GW2AN-9X														
	UG400 ^[1]	UG400 ^[2]	UG400 ^[3]	UG484 ^[1]	UG484 ^[2]	UG484 ^[3]	UG256 ^[1]	UG256 ^[2]	UG256 ^[3]	PG256 ^[1]	PG256 ^[2]	PG256 ^[3]	UG324 ^[1]	UG324 ^[2]	UG324 ^[3]
VCC07	2	2	2	3	3	3	2	2	2	2	2	2	2	2	2
VCC08	2	2	2	3	3	3	1	1	1	1	1	1	2	2	2
VCC/VCCX	10	0	0	12	0	0	0	0	0	0	0	0	0	0	0
VCC00/VCCX	0	3	3	0	4	4	0	0	0	0	0	0	0	0	0
VSS	33	33	33	52	52	52	24	24	24	24	24	24	16	16	16
MODE0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MODE1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MODE2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JTAGSEL_N	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

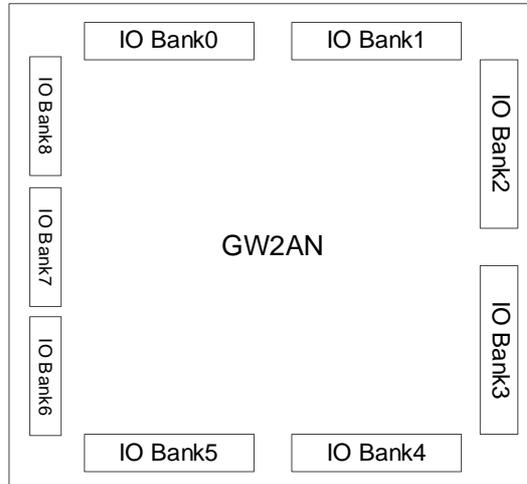
Note!

- [1] UV version;
- [2] LV version;
- [3] EV version;
- [4] Single end/ Differential/LVDS I/O quantity include CLK pins and download pins; The EXTR pin is excluded;
- [5] The JTAGSEL_N and JTAG pins cannot be used as I/O simultaneously. The data in this table is when the four JTAG pins (TCK, TDI, TDO, and TMS) are used as I/O.

2.5 Introduction to the I/O BANK

There are nine I/O Banks in the GW2AN series of FPGA products, as shown in below.

Figure 2-1 I/O Bank View



This manual provides an overview of the distribution view of the pins in the GW2AN series of FPGA products. Please refer to 3 View of Pin Distribution. Different IO Banks in the GW2AN series of FPGA products are marked with different colors.

User I/O, power, and ground are marked with different symbols and colors. The various symbols and colors used for the various pins are defined as follows:

- "  " denotes I/Os in BANK0.
- "  " denotes I/Os in BANK1.
- "  " denotes I/Os in BANK2.
- "  " denotes I/Os in BANK3.
- "  " denotes I/Os in BANK4.
- "  " denotes I/Os in BANK5.
- "  " denotes I/Os in BANK6.
- "  " denotes I/Os in BANK7.
- "  " denotes I/Os in BANK8.
- "  " denotes VCC, VCCX, and VCCO. The filling color does not change;
- "  " denotes VSS. The filling color does not change;
- "  " denotes NC;
- "  " denotes dedicated pins EXTR.

3 View of Pin Distribution

3.1 View of GW2AN-18X Pins Distribution

3.1.1 View of UG484 UV Pins Distribution

Figure 3-1 GW2AN-18X UG484 UV View of Pins Distribution

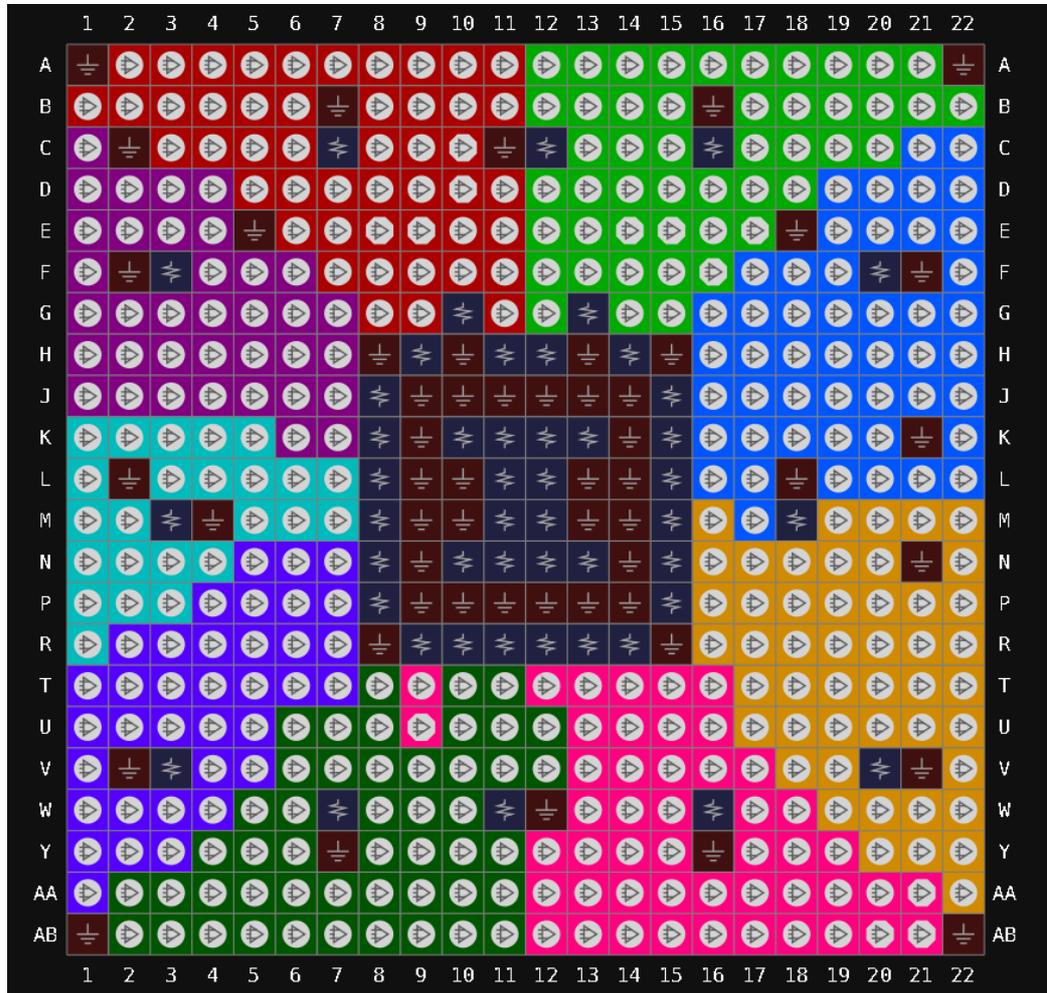


Table 3-1 Other Pins in GW2AN-18X UG484 UV

VCC/VCCX	K10,K11,K12,K13,L11,L12,M11,M12,N10,N11,N12,N13
VCCO0	C7,G10,H11,H9
VCCO1	C12,C16,G13,H12,H14
VCCO2	F20,J15,K15,L15
VCCO3	M15,M18,N15,P15,V20
VCCO4	R12,R13,R14,W16
VCCO5	R10,R11,R9,W11,W7
VCCO6	N8,P8,V3
VCCO7	L8,M3,M8
VCCO8	F3,J8,K8
VSS	A1,A22,AB1,AB22,B16,B7,C11,C2,E18,E5,F2,F21,H10,H13,H15,H8,J10,J11,J12,J13,J14,J9,K14,K21,K9,L10,L13,L14,L18,L2,L9,M10,M13,M14,M4,M9,N14,N21,N9,P10,P11,P12,P13,P14,P9,R15,R8,V2,V21,W12,Y16,Y7

3.1.2 View of UG484 LV Pins Distribution

Figure 3-2 GW2AN-18X UG484 LV View of Pins Distribution

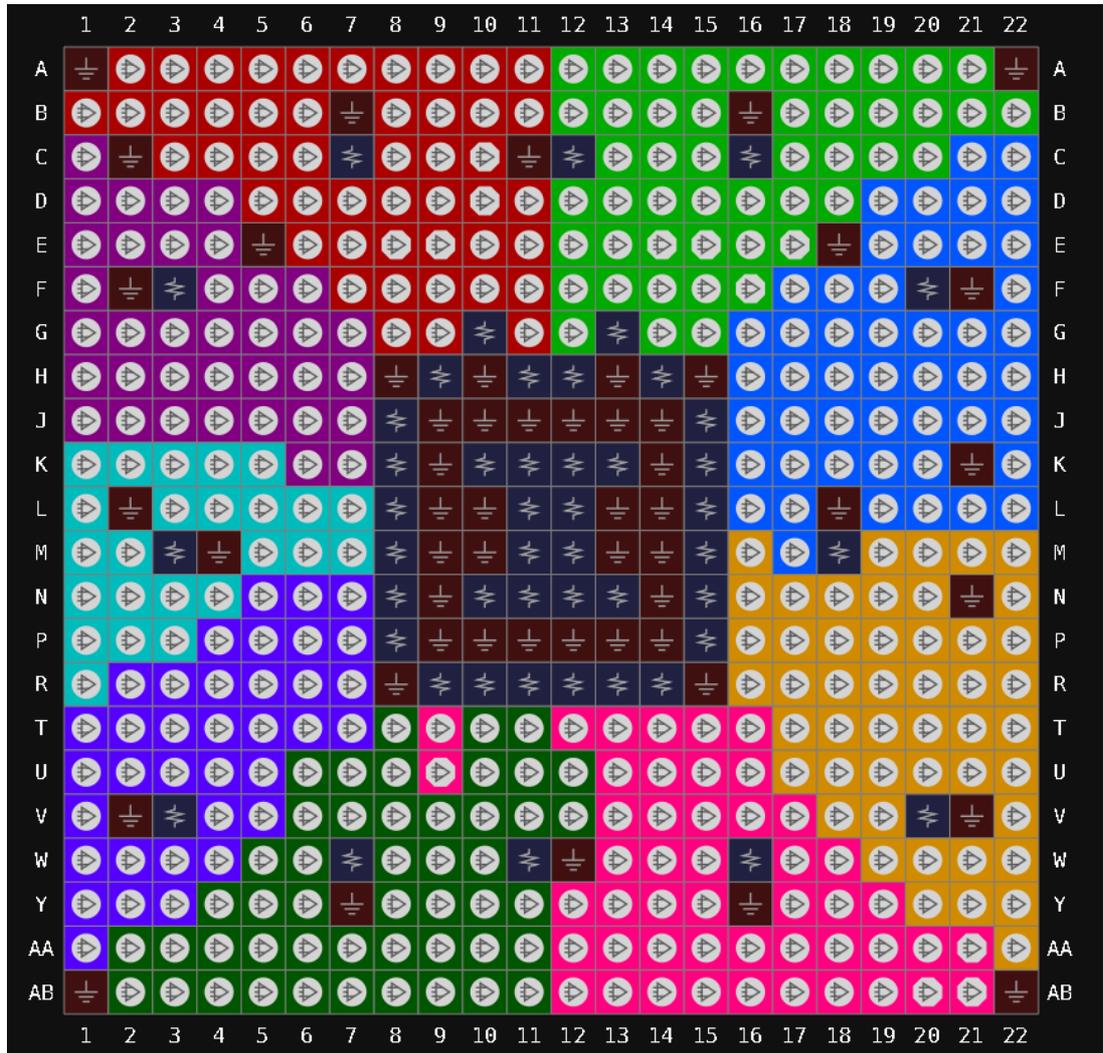


Table 3-2 Other Pins in GW2AN-18X UG484 LV

VCC	K10,K11,K12,K13,L11,L12,M11,M12,N10,N11,N12,N13
VCC0/VCCX	C7,G10,H11,H9
VCC01	C12,C16,G13,H12,H14
VCC02	F20,J15,K15,L15
VCC03	M15,M18,N15,P15,V20
VCC04	R12,R13,R14,W16
VCC05	R10,R11,R9,W11,W7
VCC06	N8,P8,V3
VCC07	L8,M3,M8
VCC08	F3,J8,K8
VSS	A1,A22,AB1,AB22,B16,B7,C11,C2,E18,E5,F2,F21,H10,H13,H15,H8,J10,J11,J12,J13,J14,J9,K14,K21,K9,L10,L13,L14,L18,L2,L9,M10,M13,M14,M4,M9,N14,N21,N9,P10,P11,P12,P13,P14,P9,R15,R8,V2,V21,W12,Y16,Y7

3.1.3 View of UG484 EV Pins Distribution

Figure 3-3 GW2AN-18X UG484 EV View of Pins Distribution

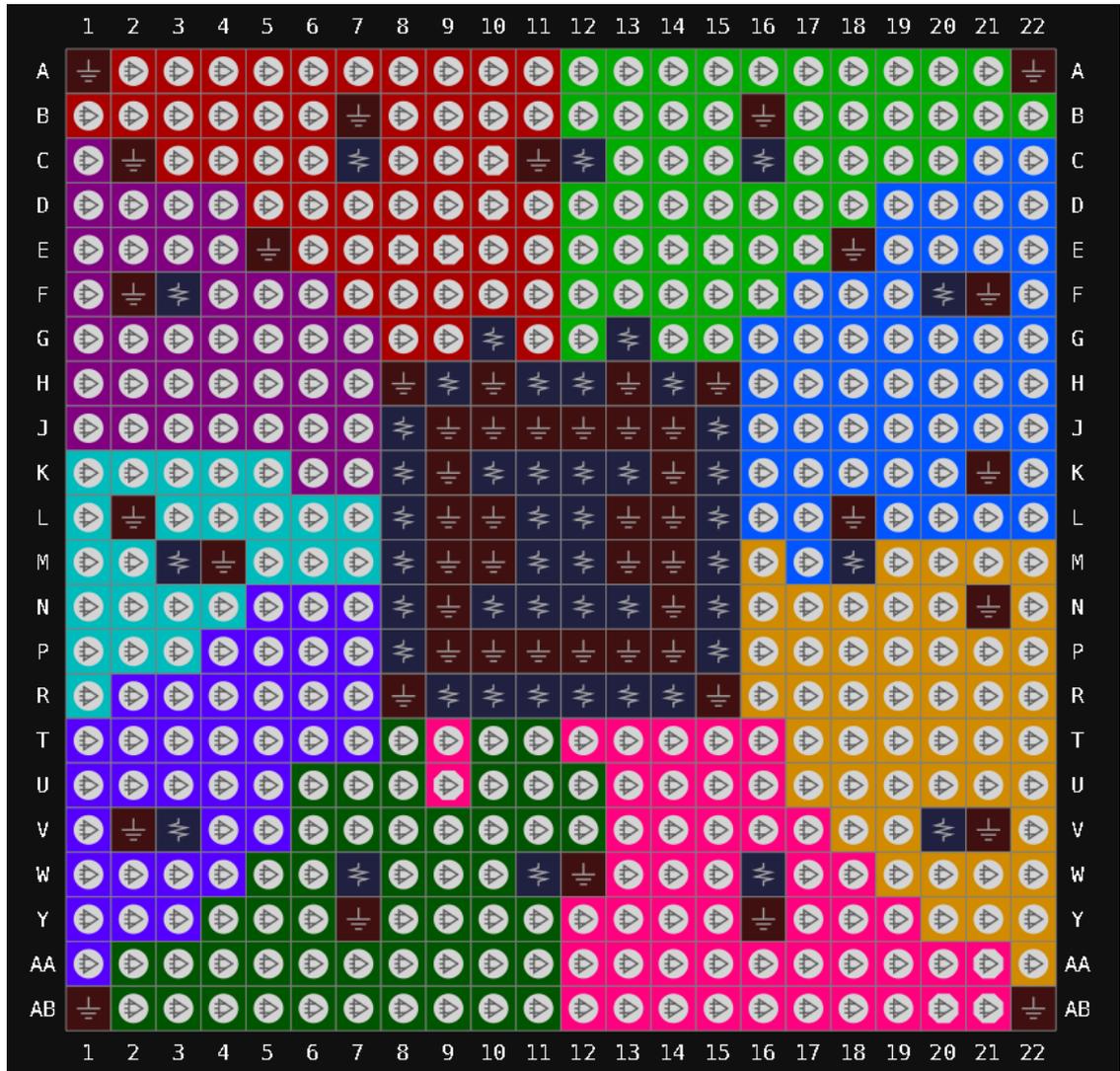


Table 3-3 Other Pins in GW2AN-18X UG484 EV

VCC	K10,K11,K12,K13,L11,L12,M11,M12,N10,N11,N12,N13
VCCO0/VCCX	C7,G10,H11,H9
VCCO1	C12,C16,G13,H12,H14
VCCO2	F20,J15,K15,L15
VCCO3	M15,M18,N15,P15,V20
VCCO4	R12,R13,R14,W16
VCCO5	R10,R11,R9,W11,W7
VCCO6	N8,P8,V3
VCCO7	L8,M3,M8
VCCO8	F3,J8,K8
VSS	A1,A22,AB1,AB22,B16,B7,C11,C2,E18,E5,F2,F21,H10,H13,H15,H8,J10,J11,J12,J13,J14,J9,K14,K21,K9,L10,L13,L14,L18,L2,L9,M10,M13,M14,M4,M9,N14,N21,N9,P10,P11,P12,P13,P14,P9,R15,R8,V2,V21,W12,Y16,Y7

3.1.4 View of UG400 UV Pins Distribution

Figure 3-4 GW2AN-18X UG400 UV View of Pins Distribution (Top View)

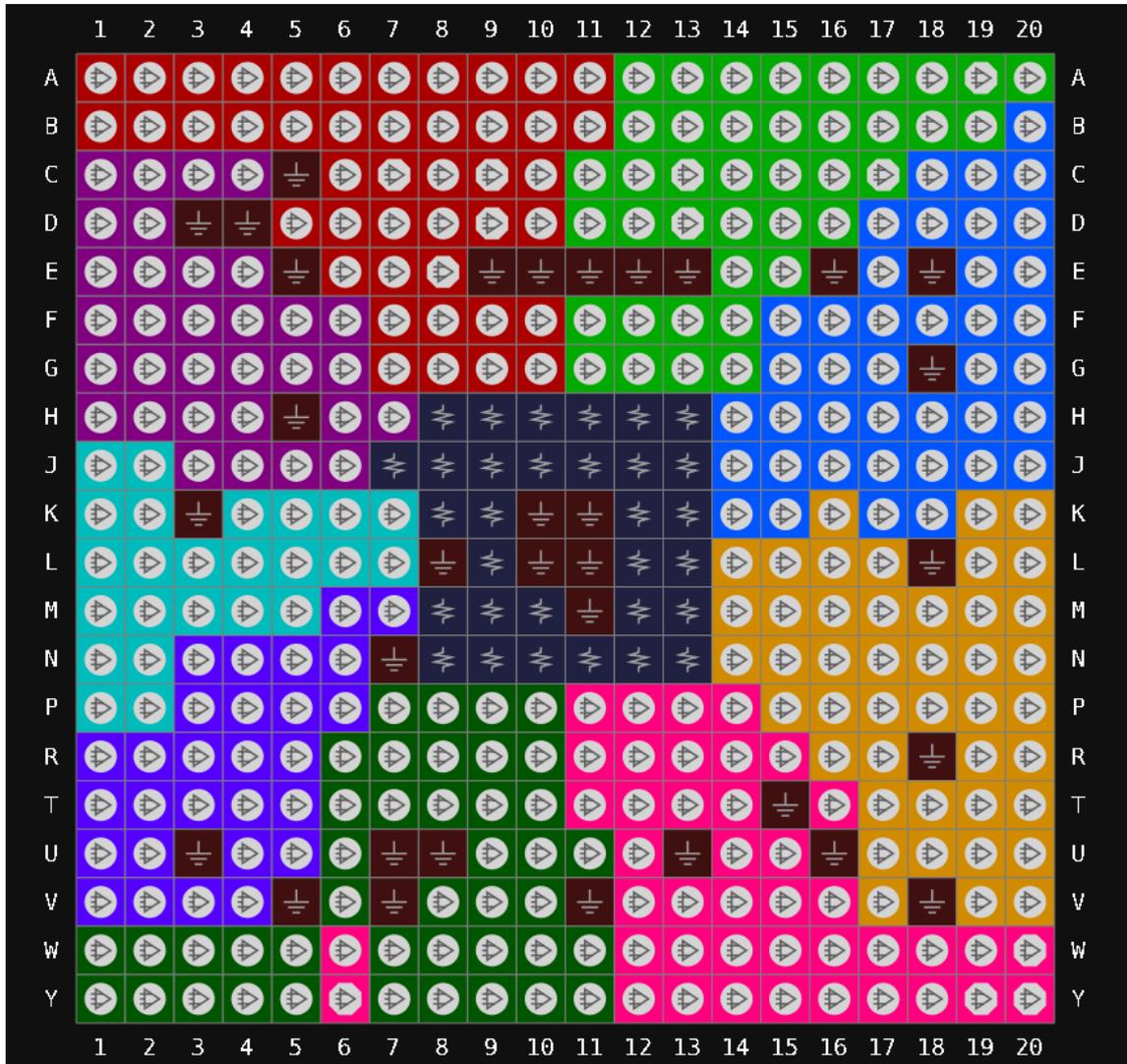


Table 3-4 Other Pins in GW2AN-18X UG400 UV

VCC/VCCX	L9,J9,H12,L12,J10,M10,J11,M12,K12,H13
VCC00	H8,H10,H9
VCC01	H11,J12
VCC02	J13,K13
VCC03	L13,M13,N13
VCC04	N11,N12
VCC05	N9,N10,N8
VCC06	M8,M9
VCC07	K8,K9
VCC08	J7,J8
VSS	C5,D3,E13,U8,E11,D4,V5,K11,E18,V7,U13,T15,L18,H5 ,K3,E5,V11,M11,K10,E12,V18,N7,L8,L10,E9,U16,U3,R 18,L11,G18,E10,U7,E16

3.1.6 View of UG400 EV Pins Distribution

Figure 3-6 GW2AN-18X UG400 EV View of Pins Distribution



Table 3-6 Other Pins in GW2AN-18X UG400 EV

VCC	L9,J9,H12,L12,J10,M10,J11,M12,K12,H13
VCCO0/VCCX	H8,H10,H9
VCCO1	H11,J12
VCCO2	J13,K13
VCCO3	L13,M13,N13
VCCO4	N11,N12
VCCO5	N9,N10,N8
VCCO6	M8,M9
VCCO7	K8,K9
VCCO8	J7,J8
VSS	C5,D3,E13,U8,E11,D4,V5,K11,E18,V7,U13,T15,L18,H5,K3,E5,V11,M11,K10,E12,V18,N7,L8,L10,E9,U16,U3,R18,L11,G18,E10,U7,E16

3.1.7 View of UG256 UV Pins Distribution

Figure 3-7 GW2AN-18X UG256 UV View of Pins Distribution



Table 3-7 Other Pins in GW2AN-18X UG256 UV

VCC/VCCX	T16,G7,A16,K10,K7,T1,G10,A1
VCCO0	G8,D5
VCCO1	D12,G9
VCCO2	E13,H10
VCCO3	M13,J10
VCCO4	N12,K9
VCCO5	N5,K8
VCCO6	M4
VCCO7	H7,J7
VCCO8	E4
VSS	M12,M5,B2,R15,N13,H8,C3,L11,H9,D4,D13,N4,J8,E5, R2,J9,E12,F6,P14,L6,F11,C14,P3,B15

3.1.8 View of UG256 LV Pins Distribution

Figure 3-8 GW2AN-18X UG256 LV View of Pins Distribution



Table 3-8 Other Pins in GW2AN-18X UG256 LV

VCC	T16,G7,A16,K10,K7,T1,G10,A1
VCC00/VCCX	G8,D5
VCC01	D12,G9
VCC02	E13,H10
VCC03	M13,J10
VCC04	N12,K9
VCC05	N5,K8
VCC06	M4
VCC07	H7,J7
VCC08	E4
VSS	M12,M5,B2,R15,N13,H8,C3,L11,H9,D4,D13,N4,J8,E5, R2,J9,E12,F6,P14,L6,F11,C14,P3,B15

3.1.9 View of UG256 EV Pins Distribution

Figure 3-9 GW2AN-18X UG256 EV View of Pins Distribution



Table 3-9 Other Pins in GW2AN-18X UG256 EV

VCC	T16,G7,A16,K10,K7,T1,G10,A1
VCC00/VCCX	G8,D5
VCC01	D12,G9
VCC02	E13,H10
VCC03	M13,J10
VCC04	N12,K9
VCC05	N5,K8
VCC06	M4
VCC07	H7,J7
VCC08	E4
VSS	M12,M5,B2,R15,N13,H8,C3,L11,H9,D4,D13,N4,J8,E5, R2,J9,E12,F6,P14,L6,F11,C14,P3,B15

3.1.10 View of PG256 UV Pins Distribution

Figure 3-10 GW2AN-18X PG256 UV View of Pins Distribution



Table 3-10 Other Pins in GW2AN-18X PG256 UV

VCC/VCCX	T16,G7,A16,K10,K7,T1,G10,A1
VCC0	G8,D5
VCC01	D12,G9
VCC02	E13,H10
VCC03	M13,J10
VCC04	N12,K9
VCC05	N5,K8
VCC06	M4
VCC07	H7,J7
VCC08	E4
VSS	M12,M5,B2,R15,N13,H8,C3,L11,H9,D4,D13,N4,J8,E5, R2,J9,E12,F6,P14,L6,F11,C14,P3,B15

3.1.11 View of PG256 LV Pins Distribution

Figure 3-11 GW2AN-18X PG256 LV View of Pins Distribution



Table 3-11 Other Pins in GW2AN-18X PG256 LV

VCC	T16,G7,A16,K10,K7,T1,G10,A1
VCC0/VCCX	G8,D5
VCC01	D12,G9
VCC02	E13,H10
VCC03	M13,J10
VCC04	N12,K9
VCC05	N5,K8
VCC06	M4
VCC07	H7,J7
VCC08	E4
VSS	M12,M5,B2,R15,N13,H8,C3,L11,H9,D4,D13,N4,J8,E5, R2,J9,E12,F6,P14,L6,F11,C14,P3,B15

3.1.12 View of PG256 EV Pins Distribution

Figure 3-12 GW2AN-18X PG256 EV View of Pins Distribution



Table 3-12 Other Pins in GW2AN-18X PG256 EV

VCC	T16,G7,A16,K10,K7,T1,G10,A1
VCC00/VCCX	G8,D5
VCC01	D12,G9
VCC02	E13,H10
VCC03	M13,J10
VCC04	N12,K9
VCC05	N5,K8
VCC06	M4
VCC07	H7,J7
VCC08	E4
VSS	M12,M5,B2,R15,N13,H8,C3,L11,H9,D4,D13,N4,J8,E5, R2,J9,E12,F6,P14,L6,F11,C14,P3,B15

3.1.13 View of UG332 UV Pins Distribution

Figure 3-13 GW2AN-18X UG332 UV View of Pins Distribution

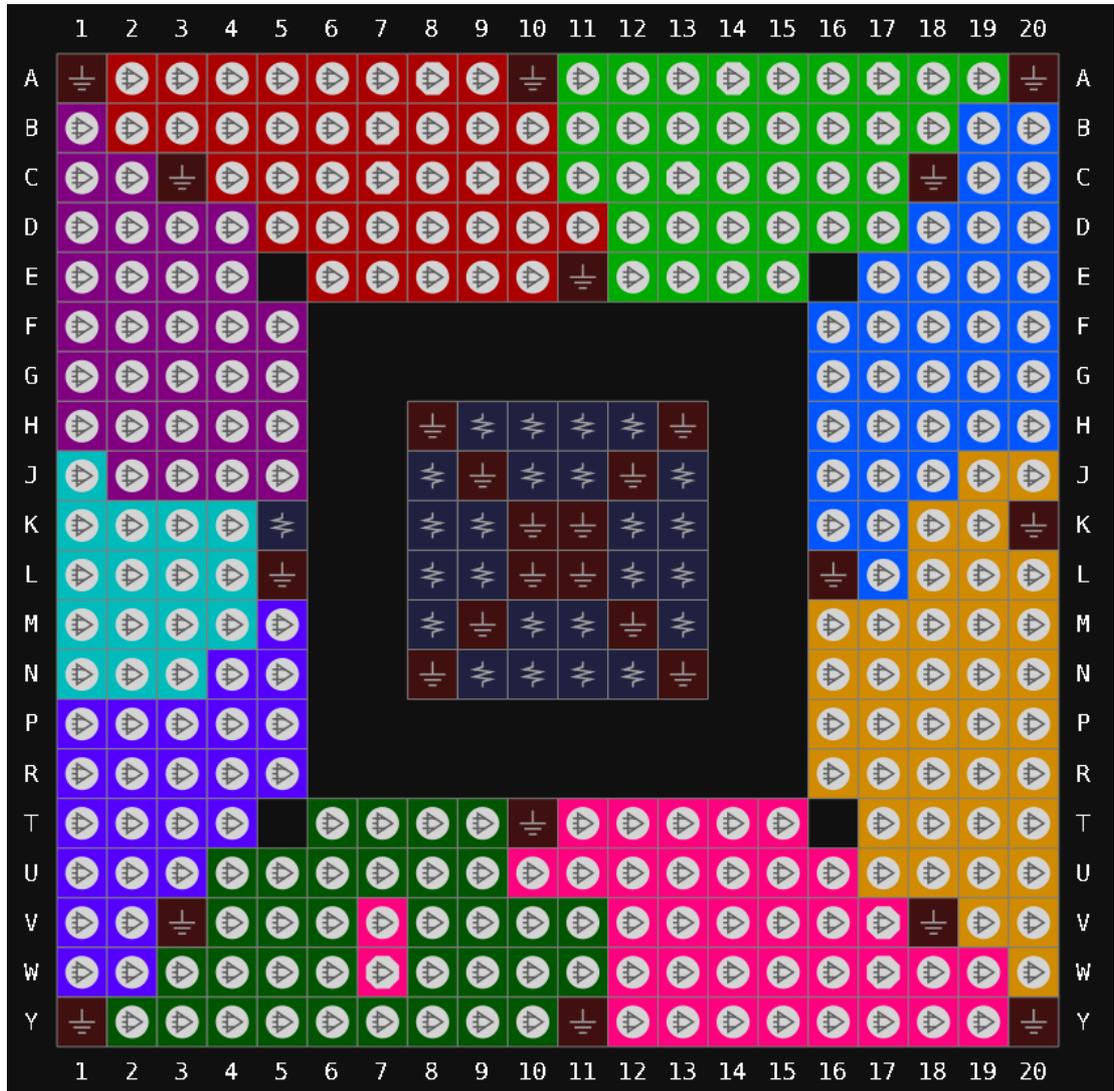


Table 3-13 Other Pins in GW2AN-18X UG332 UV

VCC/VCCX	M11,K12,J11,L9,L12,M10,K9,J10
VCC0	H9,H10
VCC1	H11,H12
VCC2	J13,K13
VCC3	L13,M13
VCC4	N12,N11
VCC5	N9,N10
VCC6	L8,M8
VCC7	K5
VCC8	J8,K8
VSS	A1,A10,J9,Y20,H8,A20,M12,K10,V18,N8,K20,L5,C3,N13,L10,H13,T10,L11,L16,C18,Y1,V3,M9,K11,E11,Y11,J12

3.1.14 View of UG332 LV Pins Distribution

Figure 3-14 GW2AN-18X UG332 LV View of Pins Distribution

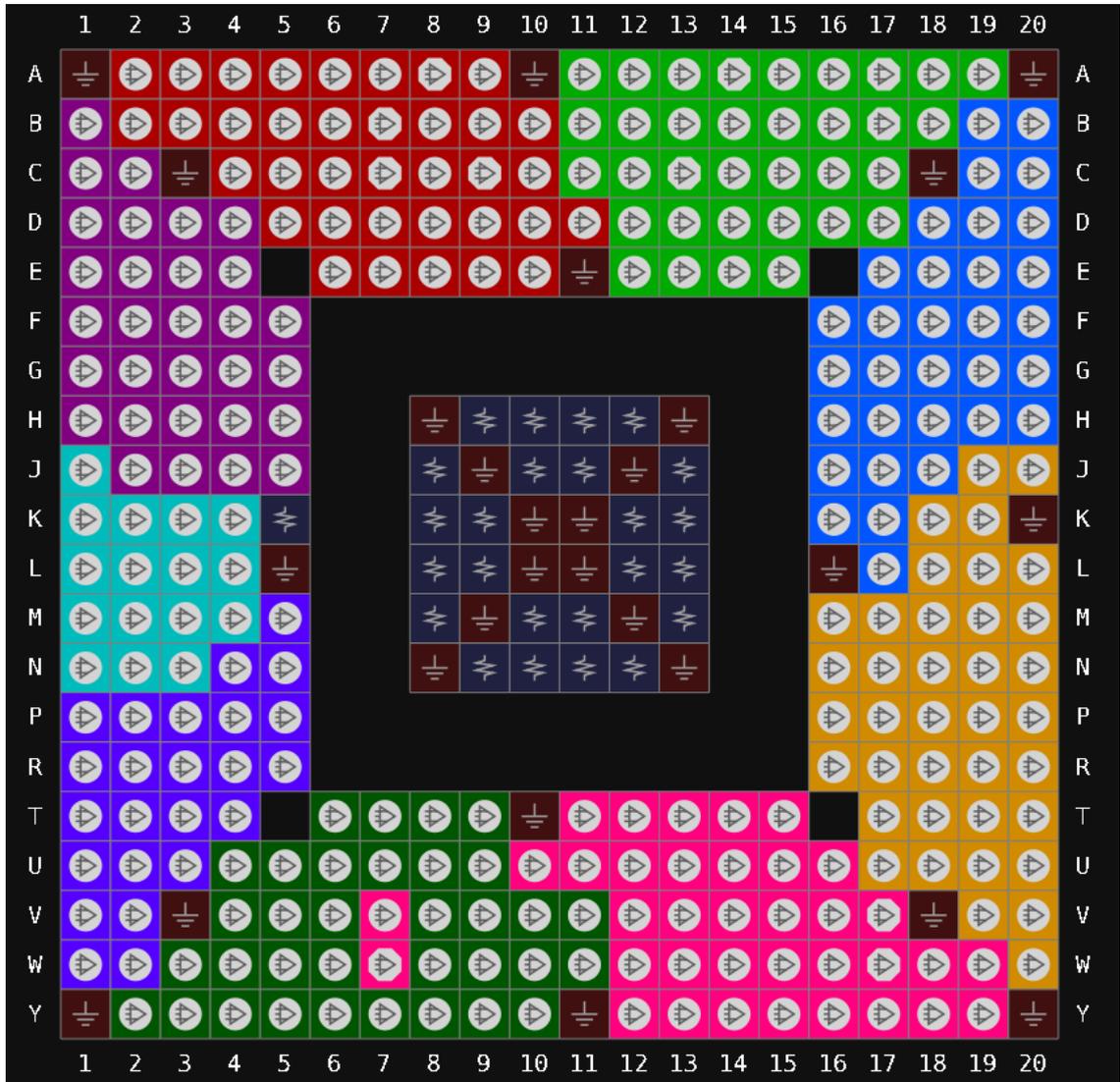


Table 3-14 Other Pins in GW2AN-18X UG332 LV

VCC	M11.K12,J11,L9,L12,M10,K9,J10
VCCO0/VCCX	H9,H10
VCCO1	H11,H12
VCCO2	J13,K13
VCCO3	L13,M13
VCCO4	N12,N11
VCCO5	N9,N10
VCCO6	L8,M8
VCCO7	K5
VCCO8	J8,K8
VSS	A1,A10,J9,Y20,H8,A20,M12,K10,V18,N8,K20,L5,C3,N13,L10,H13,T10,L11,L16,C18,Y1,V3,M9,K11,E11,Y11,J12

3.1.15 View of UG332 EV Pins Distribution

Figure 3-15 GW2AN-18X UG332 EV View of Pins Distribution

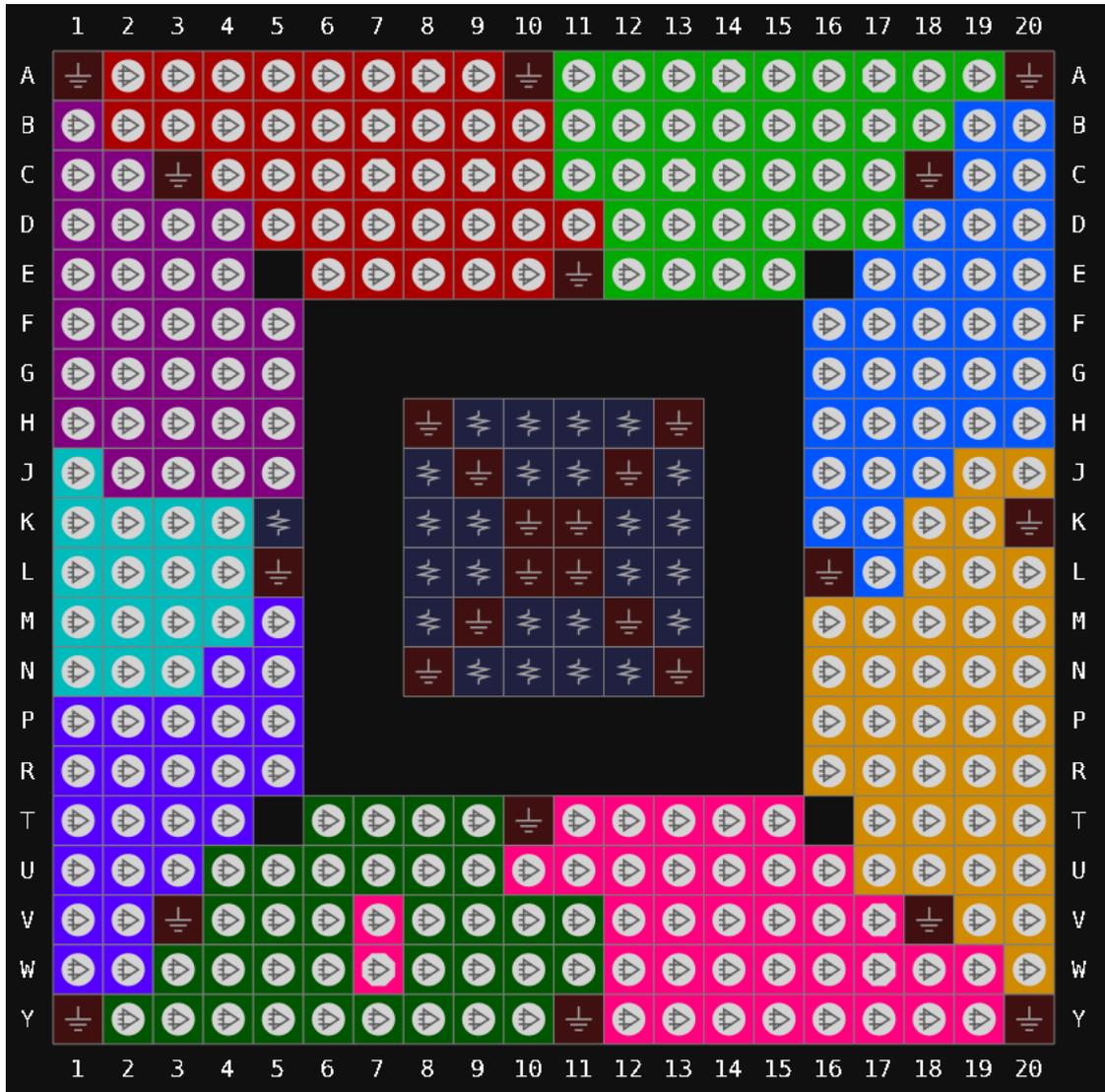


Table 3-15 Other Pins in GW2AN-18X UG332 EV

VCC	M11,K12,J11,L9,L12,M10,K9,J10
VCC0/VCCX	H9,H10
VCC01	H11,H12
VCC02	J13,K13
VCC03	L13,M13
VCC04	N12,N11
VCC05	N9,N10
VCC06	L8,M8
VCC07	K5
VCC08	J8,K8
VSS	A1,A10,J9,Y20,H8,A20,M12,K10,V18,N8,K20,L5,C3,N13,L10,H13,T10,L11,L16,C18,Y1,V3,M9,K11,E11,Y11,J12

3.1.16 View of UG324 UV Pins Distribution

Figure 3-16 GW2AN-18X UG324 UV View of Pins Distribution



Table 3-16 Other Pins in GW2AN-18X UG324 UV

VCC/VCCX	L10,H10,H8,L11,H11,M12,L8,L9,H9,G12
VCC0	G8,G9
VCC01	G10,G11
VCC02	H12,J11
VCC03	K11,L12
VCC04	M11,M10
VCC05	M8,M9
VCC06	L7,M7
VCC07	J8,K8
VCC08	G7,H7
VSS	A1,A18,K9,J9,B2,N6,U2,U17,B17,V1,J10,V18,F6,N13,F13,K10

3.1.17 View of UG324 LV Pins Distribution

Figure 3-17 GW2AN-18X UG324 LV View of Pins Distribution

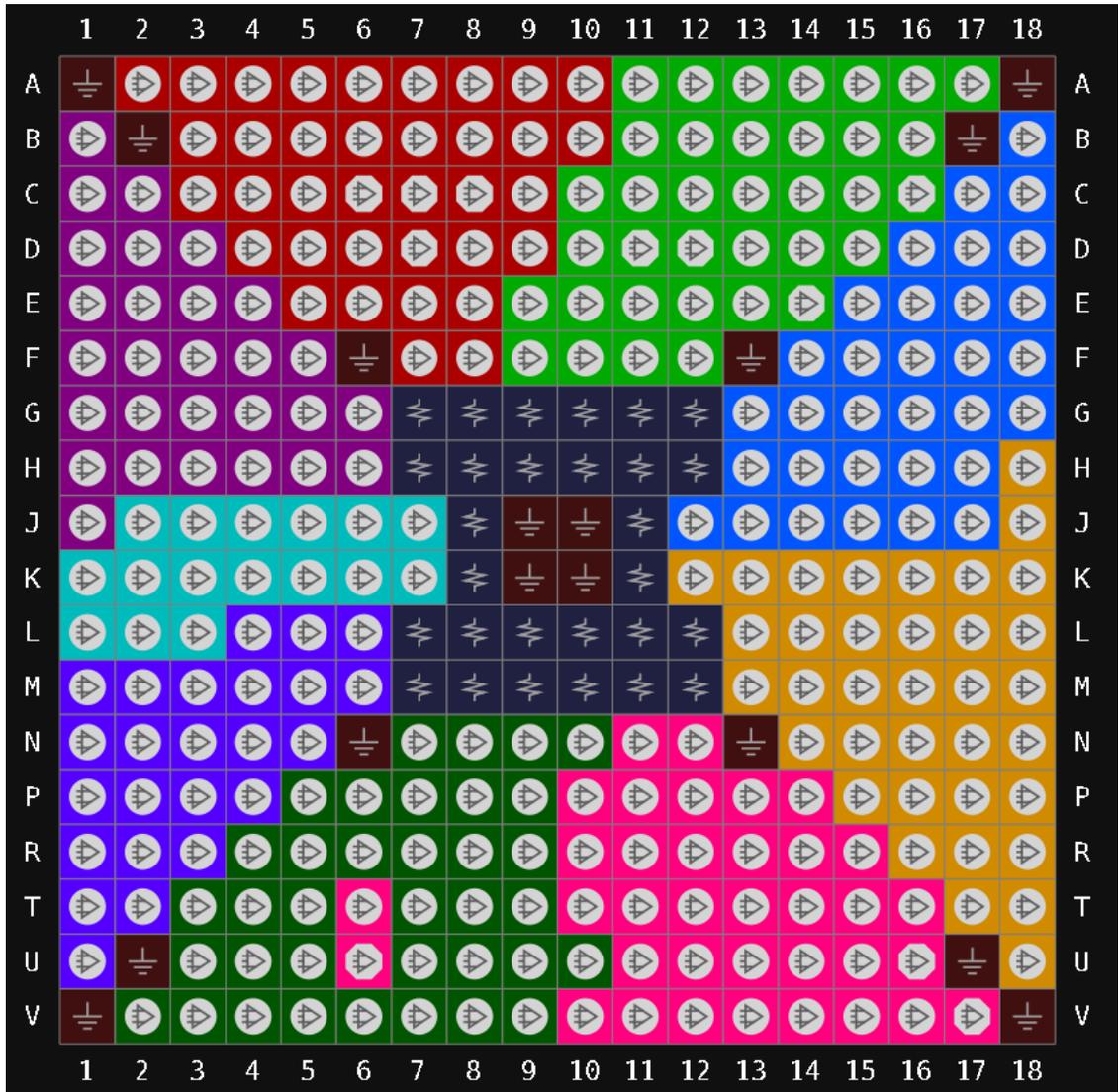


Table 3-17 Other Pins in GW2AN-18X UG324 LV

VCC	L10,H10,H8,L11,H11,M12,L8,L9,H9,G12
VCCO0/VCCX	G8,G9
VCCO1	G10,G11
VCCO2	H12,J11
VCCO3	K11,L12
VCCO4	M11,M10
VCCO5	M8,M9
VCCO6	L7,M7
VCCO7	J8,K8
VCCO8	G7,H7
VSS	A1,A18,K9,J9,B2,N6,U2,U17,B17,V1,J10,V18,F6,N13,F13,K10

3.1.18 View of UG324 EV Pins Distribution

Figure 3-18 GW2AN-18X UG324 EV View of Pins Distribution

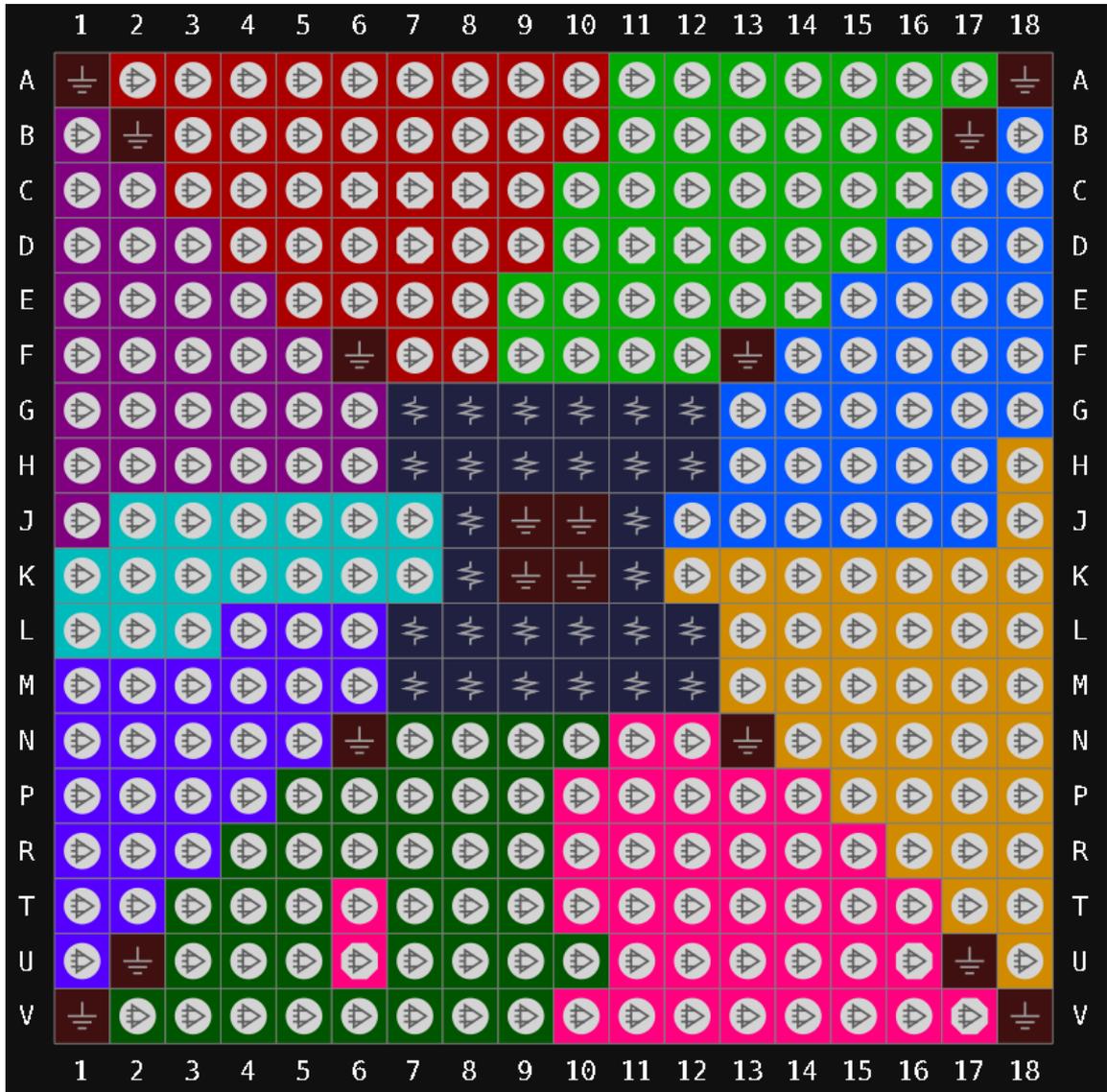


Table 3-18 Other Pins in GW2AN-18X UG324 EV

VCC	L10,H10,H8,L11,H11,M12,L8,L9,H9,G12
VCCO0/VCCX	G8,G9
VCCO1	G10,G11
VCCO2	H12,J11
VCCO3	K11,L12
VCCO4	M11,M10
VCCO5	M8,M9
VCCO6	L7,M7
VCCO7	J8,K8
VCCO8	G7,H7
VSS	A1,A18,K9,J9,B2,N6,U2,U17,B17,V1,J10,V18,F6,N13,F13,K10

3.1.19 View of PG484 UV Pins Distribution

Figure 3-19 GW2AN-18X PG484 UV View of Pins Distribution

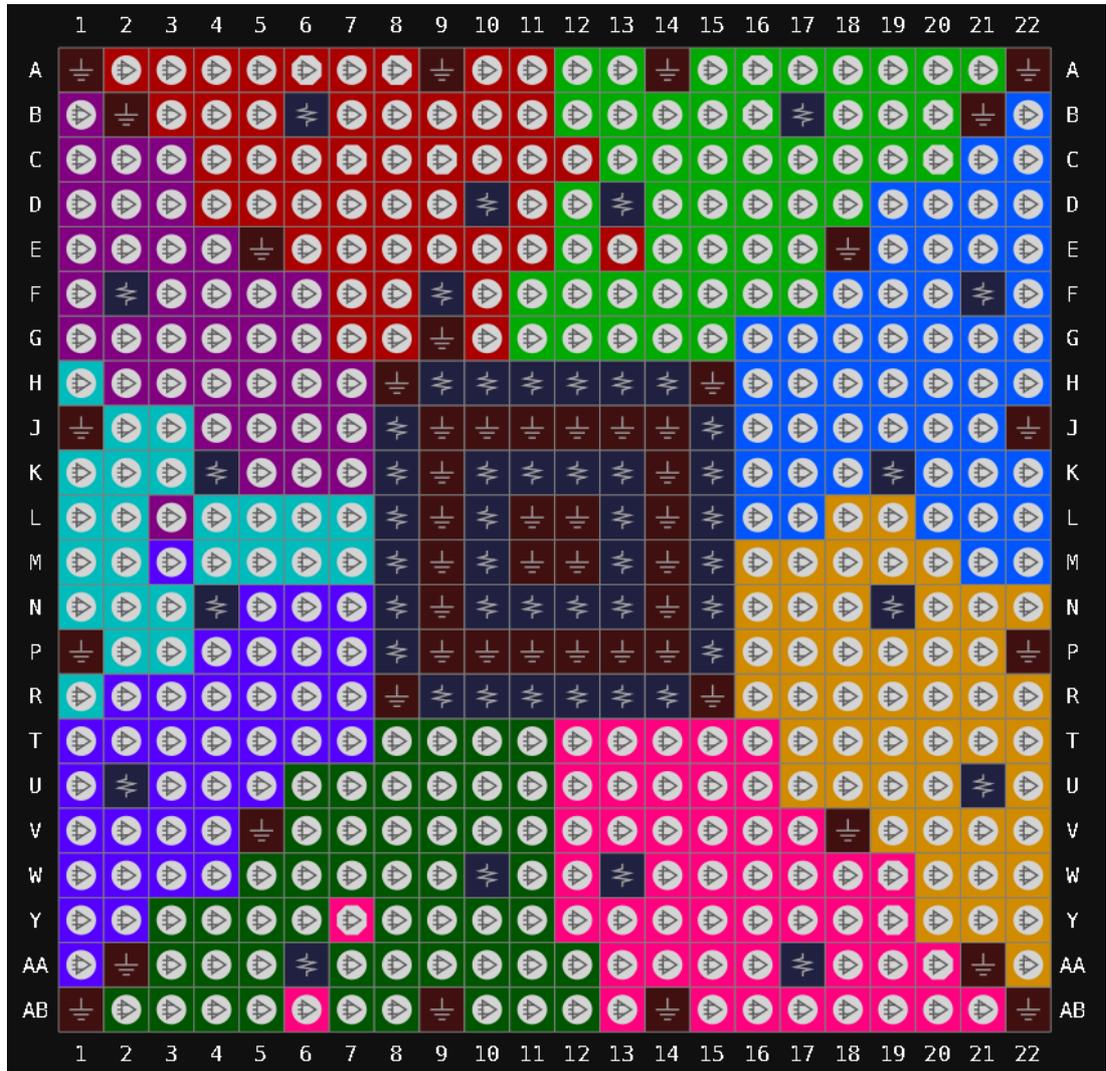


Table 3-19 Other Pins in GW2AN-18X PG484 UV

VCC/VCCX	N13,M13,K13,K11,N10,L10,N11,L13,N12,M10,K12,K10
VCCO0	F9,B6,D10,H10,H9,H11
VCCO1	B17,H14,H12,D13,H13
VCCO2	J15,K15,L15,F21,K19
VCCO3	M15,P15,N15,N19,U21
VCCO4	R14,R13,R12,AA17,W13
VCCO5	R11,AA6,R9,R10,W10
VCCO6	N8,P8,U2
VCCO7	K4,M8,L8,N4
VCCO8	K8,F2,J8
VSS	A1,A14,AB22,P22,L11,V18,AB1,R15,V5,A22,L9,J11,B2,P13,M11,L12,J9,J12,E18,N14,E5,A9,N9,M12,J13,H15,AB14,P1,M14,J14,H8,R8,P10,J1,AA2,P11,M9,L14,K14,J22,J10,P12,B21,P14,G9,AA21,K9,AB9,P9

3.1.20 View of PG484 LV Pins Distribution

Figure 3-20 GW2AN-18X PG484 LV View of Pins Distribution

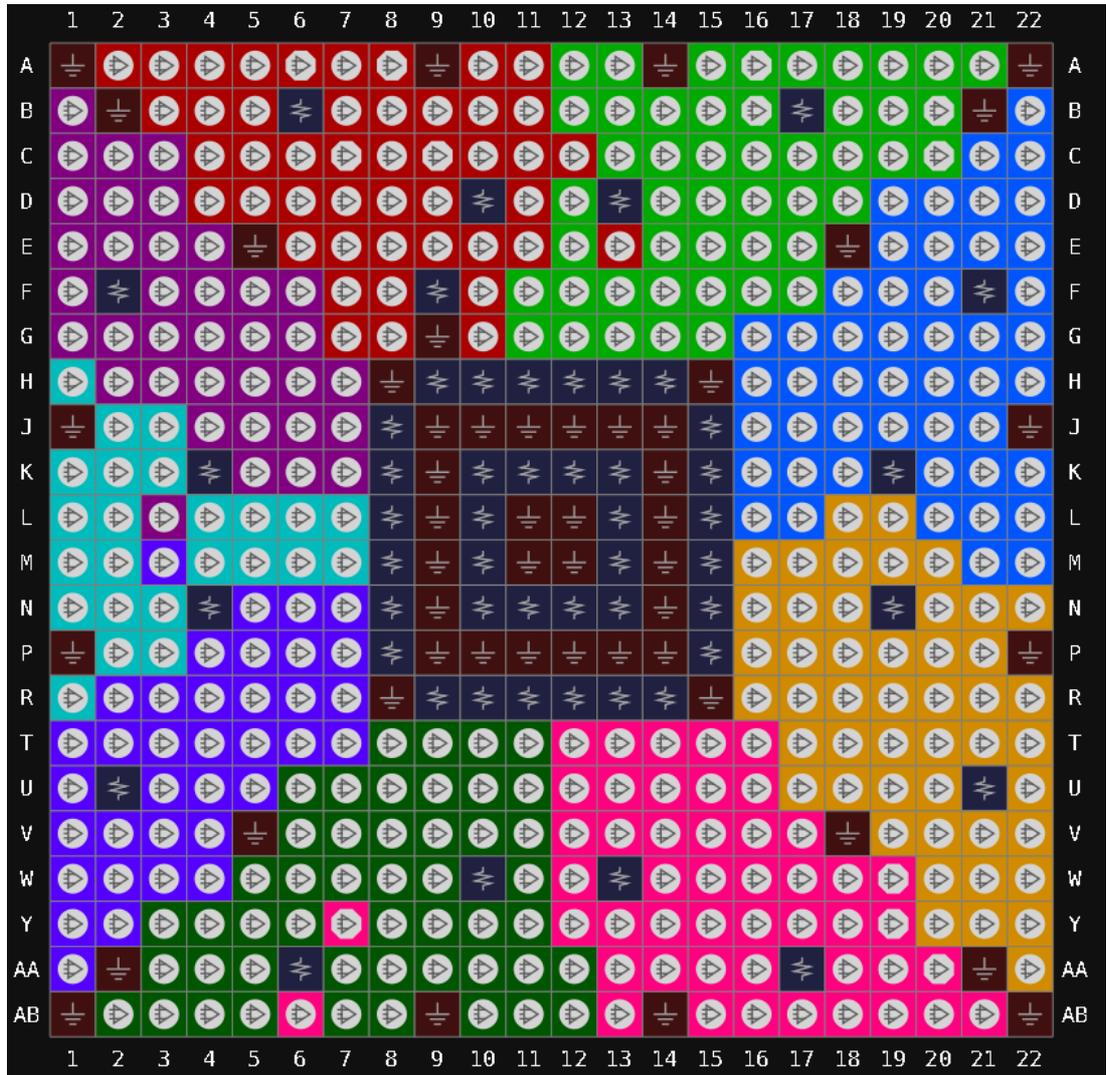


Table 3-20 Other Pins in GW2AN-18X PG484 LV

VCC	N13,M13,K13,K11,N10,L10,N11,L13,N12,M10,K12,K10
VCCO0/VCCX	F9,B6,D10,H10,H9,H11
VCCO1	B17,H14,H12,D13,H13
VCCO2	J15,K15,L15,F21,K19
VCCO3	M15,P15,N15,N19,U21
VCCO4	R14,R13,R12,AA17,W13
VCCO5	R11,AA6,R9,R10,W10
VCCO6	N8,P8,U2
VCCO7	K4,M8,L8,N4
VCCO8	K8,F2,J8
VSS	A1,A14,AB22,P22,L11,V18,AB1,R15,V5,A22,L9,J11,B2,13,M11,L12,J9,J12,E18,N14,E5,A9,N9,M12,J13,H15,AB4,P1,M14,J14,H8,R8,P10,J1,AA2,P11,M9,L14,K14,J22,10,P12,B21,P14,G9,AA21,K9,AB9,P9

3.1.21 View of PG484 EV Pins Distribution

Figure 3-21 GW2AN-18X PG484 EV View of Pins Distribution

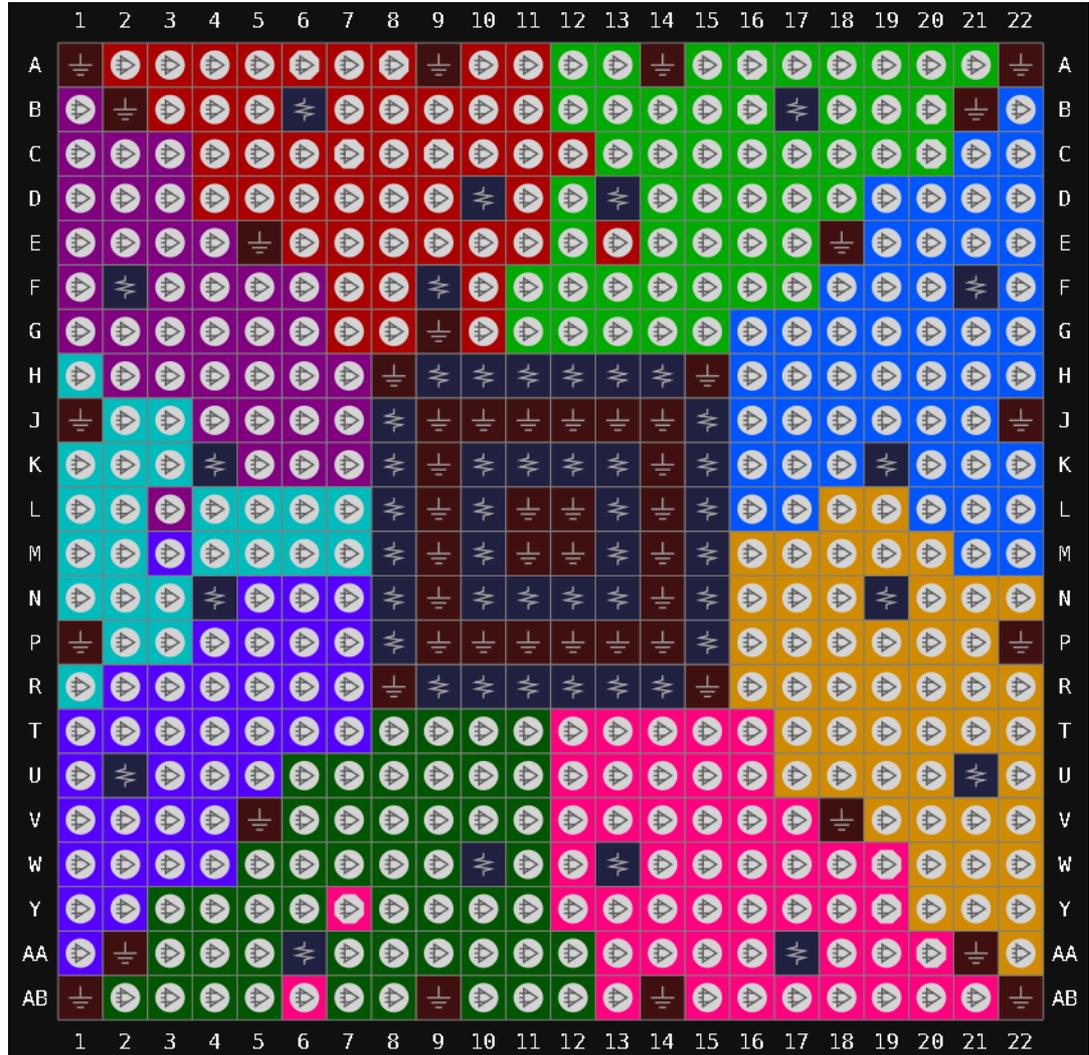


Table 3-21 Other Pins in GW2AN-18X PG484 EV

VCC	N13,M13,K13,K11,N10,L10,N11,L13,N12,M10,K12,K10
VCC0/VCCX	F9,B6,D10,H10,H9,H11
VCC01	B17,H14,H12,D13,H13
VCC02	J15,K15,L15,F21,K19
VCC03	M15,P15,N15,N19,U21
VCC04	R14,R13,R12,AA17,W13
VCC05	R11,AA6,R9,R10,W10
VCC06	N8,P8,U2
VCC07	K4,M8,L8,N4
VCC08	K8,F2,J8
VSS	A1,A14,AB22,P22,L11,V18,AB1,R15,V5,A22,L9,J11,B2, P13,M11,L12,J9,J12,E18,N14,E5,A9,N9,M12,J13,H15, AB14,P1,M14,J14,H8,R8,P10,J1,AA2,P11,M9,L14,K14, J22,J10,P12,B21,P14,G9,AA21,K9,AB9,P9

3.2 View of GW2AN-9X Pins Distribution

3.2.1 View of UG400 UV Pins Distribution

Figure 3-22 GW2AN-9X UG400 UV View of Pins Distribution

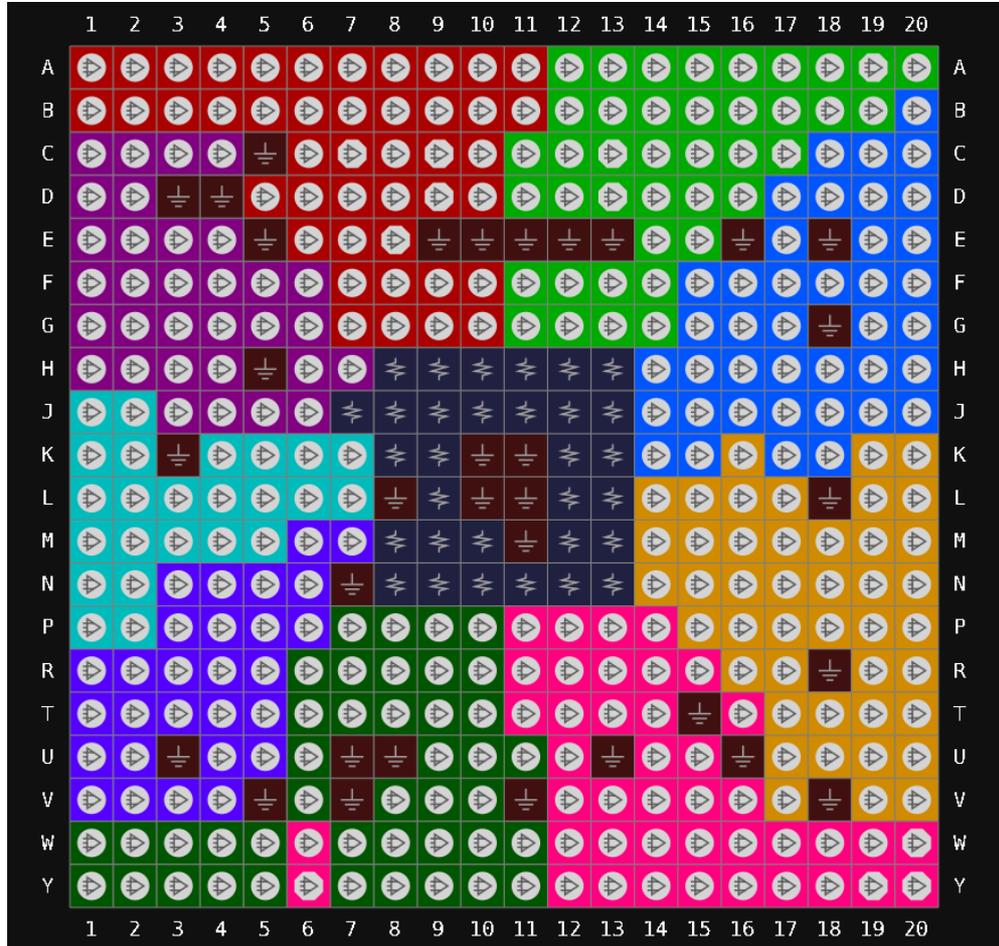


Table 3-22 Other Pins in GW2AN-9X UG400 UV

VCC/VCCX	L9,J9,H12,L12,J10,M10,J11,M12,K12,H13
VCCO0	H8,H10,H9
VCCO1	H11,J12
VCCO2	J13,K13
VCCO3	L13,M13,N13
VCCO4	N11,N12
VCCO5	N9,N10,N8
VCCO6	M8,M9
VCCO7	K8,K9
VCCO8	J7,J8
VSS	C5,D3,E13,U8,E11,D4,V5,K11,E18,V7,U13,T15,L18,H5 ,K3,E5,V11,M11,K10,E12,V18,N7,L8,L10,E9,U16,U3,R 18,L11,G18,E10,U7,E16

3.2.2 View of UG400 LV Pins Distribution

Figure 3-23 GW2AN-9X UG400 LV View of Pins Distribution

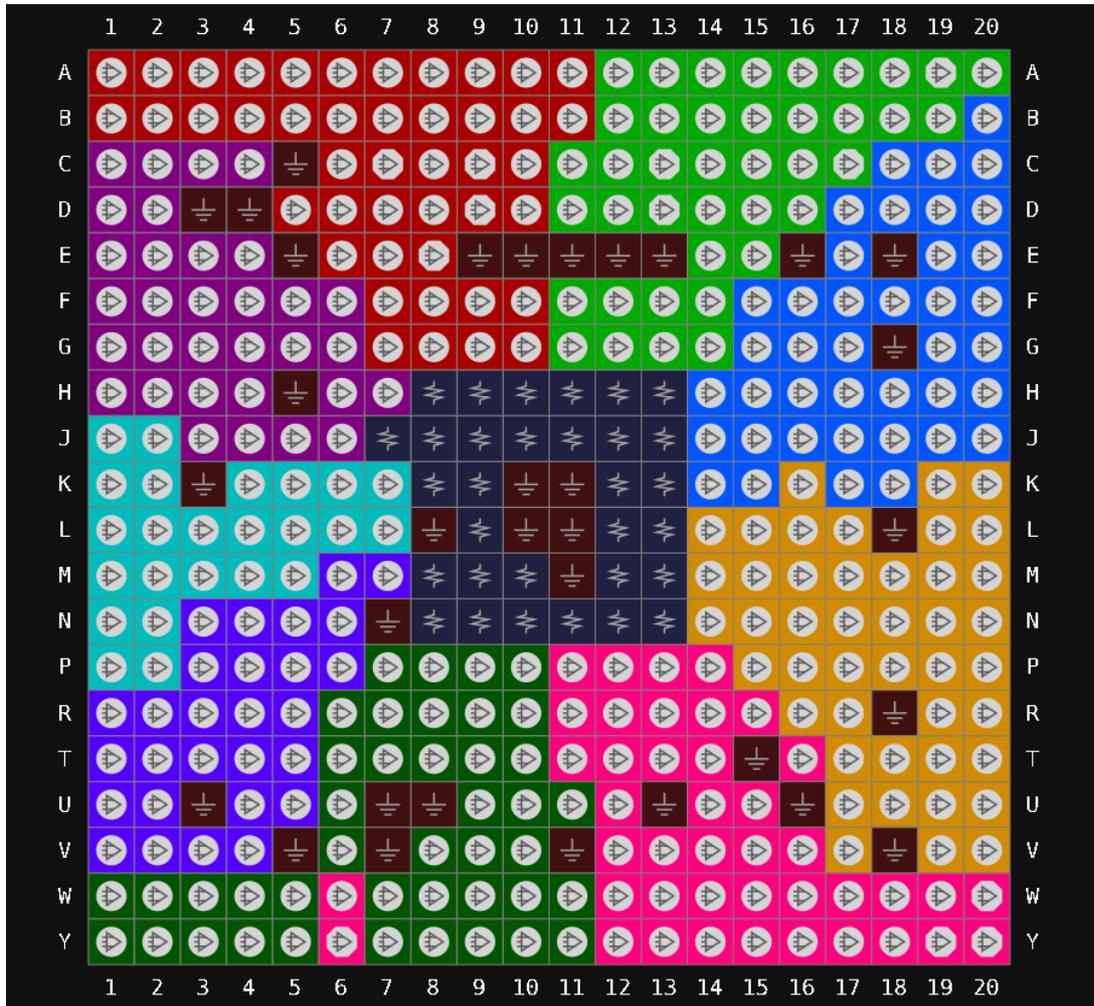


Table 3-23 Other Pins in GW2AN-9X UG400 LV

VCC	L9,J9,H12,L12,J10,M10,J11,M12,K12,H13
VCCO0/VCCX	H8,H10,H9
VCCO1	H11,J12
VCCO2	J13,K13
VCCO3	L13,M13,N13
VCCO4	N11,N12
VCCO5	N9,N10,N8
VCCO6	M8,M9
VCCO7	K8,K9
VCCO8	J7,J8
VSS	C5,D3,E13,U8,E11,D4,V5,K11,E18,V7,U13,T15,L18,H5, K3,E5,V11,M11,K10,E12,V18,N7,L8,L10,E9,U16,U3,R 18,L11,G18,E10,U7,E16

3.2.3 View of UG400 EV Pins Distribution

Figure 3-24 GW2AN-9X UG400 EV View of Pins Distribution

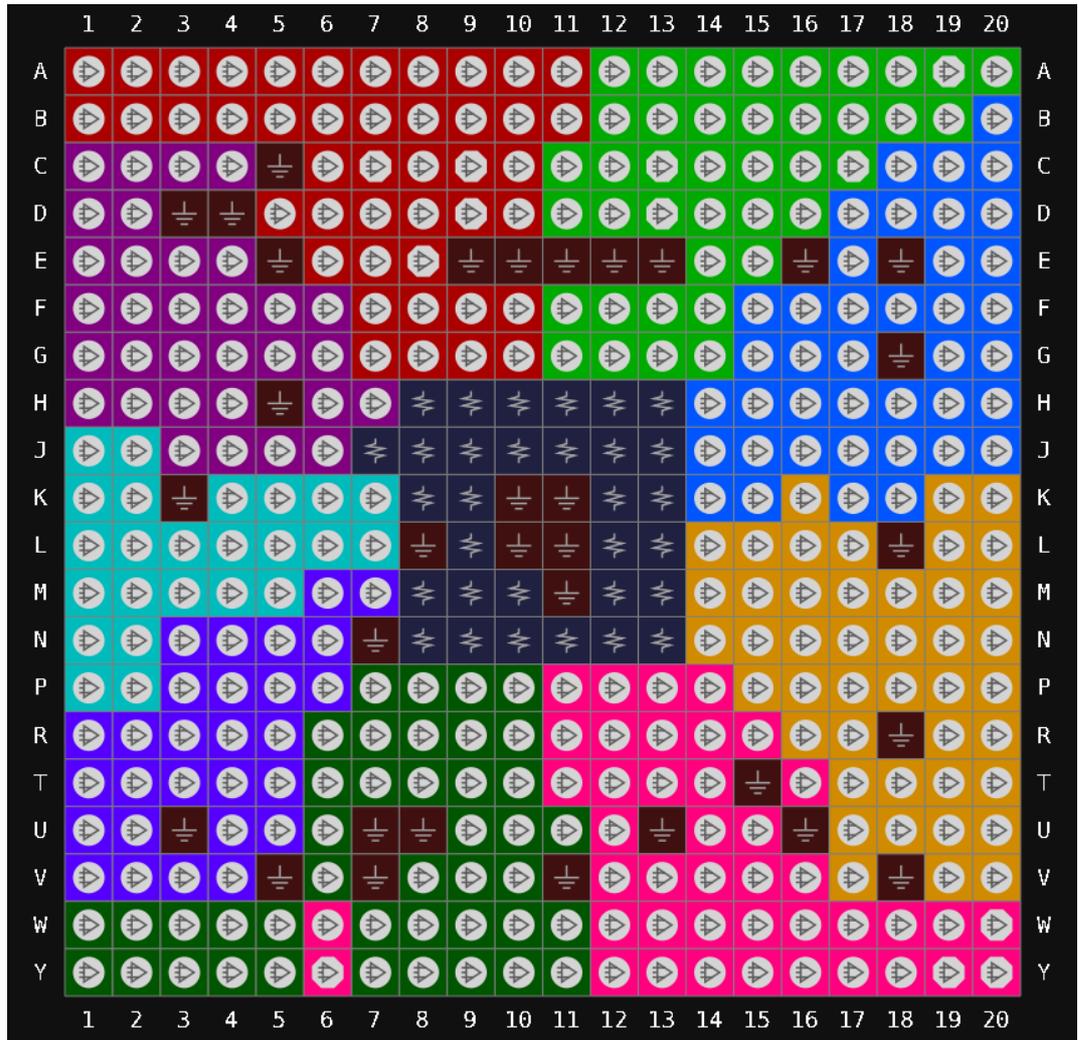


Table 3-24 Other Pins in GW2AN-9X UG400 EV

VCC	L9,J9,H12,L12,J10,M10,J11,M12,K12,H13
VCCO0/VCCX	H8,H10,H9
VCCO1	H11,J12
VCCO2	J13,K13
VCCO3	L13,M13,N13
VCCO4	N11,N12
VCCO5	N9,N10,N8
VCCO6	M8,M9
VCCO7	K8,K9
VCCO8	J7,J8
VSS	C5,D3,E13,U8,E11,D4,V5,K11,E18,V7,U13,T15,L18,H5, K3,E5,V11,M11,K10,E12,V18,N7,L8,L10,E9,U16,U3,R 18,L11,G18,E10,U7,E16

3.2.4 View of UG484 UV Pins Distribution

Figure 3-25 GW2AN-9X UG484 UV View of Pins Distribution

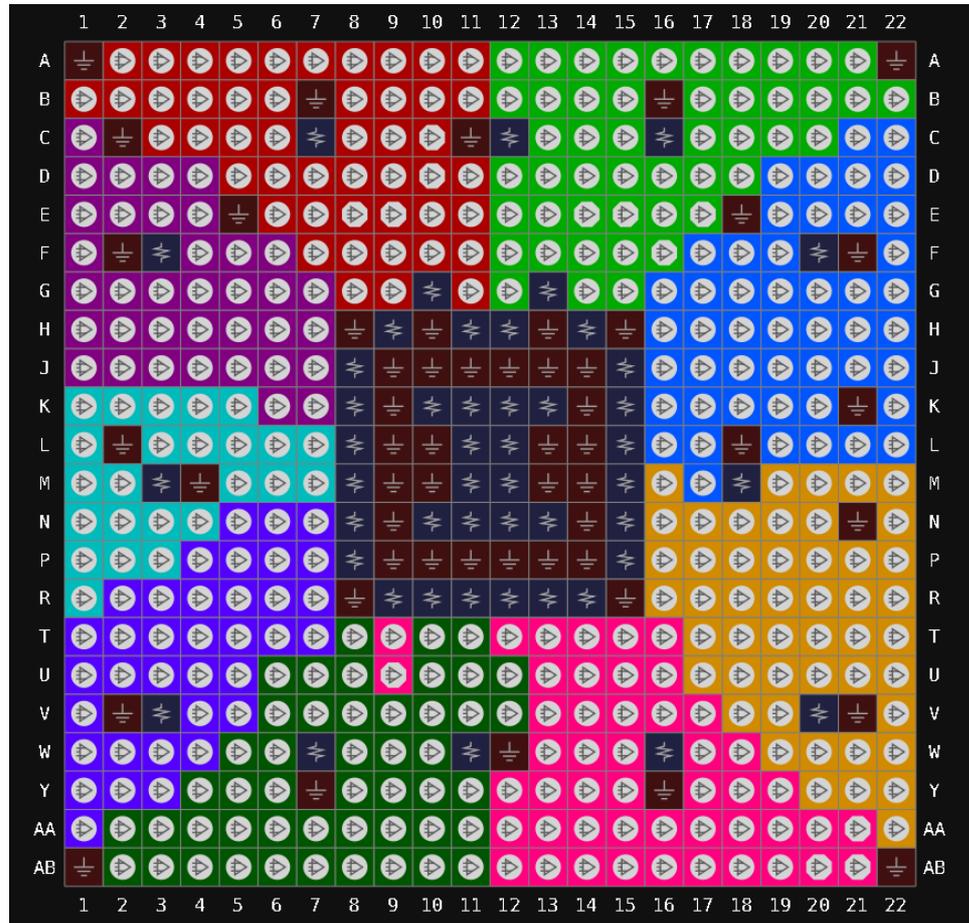


Table 3-25 Other Pins in GW2AN-9X UG484 UV

VCC/VCCX	K10,K11,K12,K13,L11,L12,M11,M12,N10,N11,N12,N13
VCC0	C7,G10,H11,H9
VCC01	C12,C16,G13,H12,H14
VCC02	F20,J15,K15,L15
VCC03	M15,M18,N15,P15,V20
VCC04	R12,R13,R14,W16
VCC05	R10,R11,R9,W11,W7
VCC06	N8,P8,V3
VCC07	L8,M3,M8
VCC08	F3,J8,K8
VSS	A1,A22,AB1,AB22,B16,B7,C11,C2,E18,E5,F2,F21,H10,H13,H15,H8,J10,J11,J12,J13,J14,J9,K14,K21,K9,L10,L13,L14,L18,L2,L9,M10,M13,M14,M4,M9,N14,N21,N9,P10,P11,P12,P13,P14,P9,R15,R8,V2,V21,W12,Y16,Y7

3.2.5 View of UG484 LV Pins Distribution

Figure 3-26 GW2AN-9X UG484 LV View of Pins Distribution

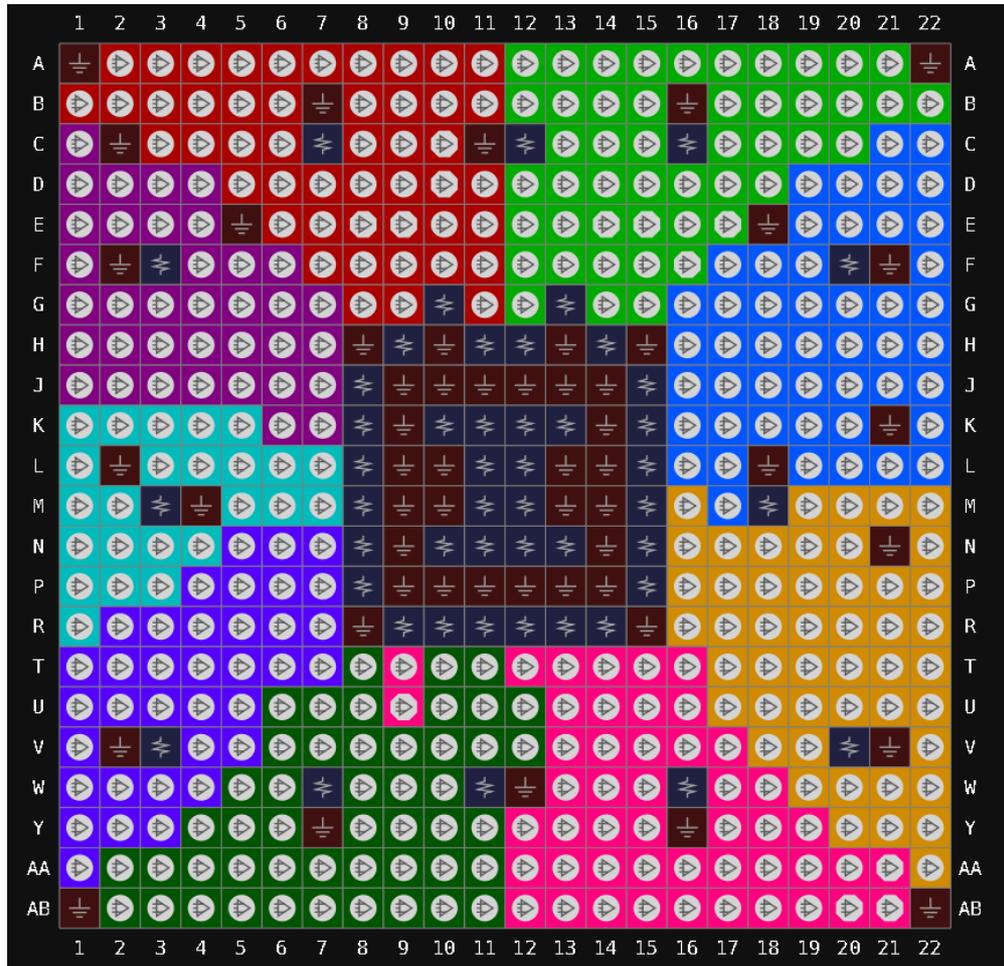


Table 3-26 Other Pins in GW2AN-9X UG484 LV

VCC	K10,K11,K12,K13,L11,L12,M11,M12,N10,N11,N12,N13
VCCO0/VCCX	C7,G10,H11,H9
VCCO1	C12,C16,G13,H12,H14
VCCO2	F20,J15,K15,L15
VCCO3	M15,M18,N15,P15,V20
VCCO4	R12,R13,R14,W16
VCCO5	R10,R11,R9,W11,W7
VCCO6	N8,P8,V3
VCCO7	L8,M3,M8
VCCO8	F3,J8,K8
VSS	A1,A22,AB1,AB22,B16,B7,C11,C2,E18,E5,F2,F21,H10,H13,H15,H8,J10,J11,J12,J13,J14,J9,K14,K21,K9,L10,L13,L14,L18,L2,L9,M10,M13,M14,M4,M9,N14,N21,N9,P10,P11,P12,P13,P14,P9,R15,R8,V2,V21,W12,Y16,Y7

3.2.6 View of UG484 EV Pins Distribution

Figure 3-27 GW2AN-9X UG484 EV View of Pins Distribution

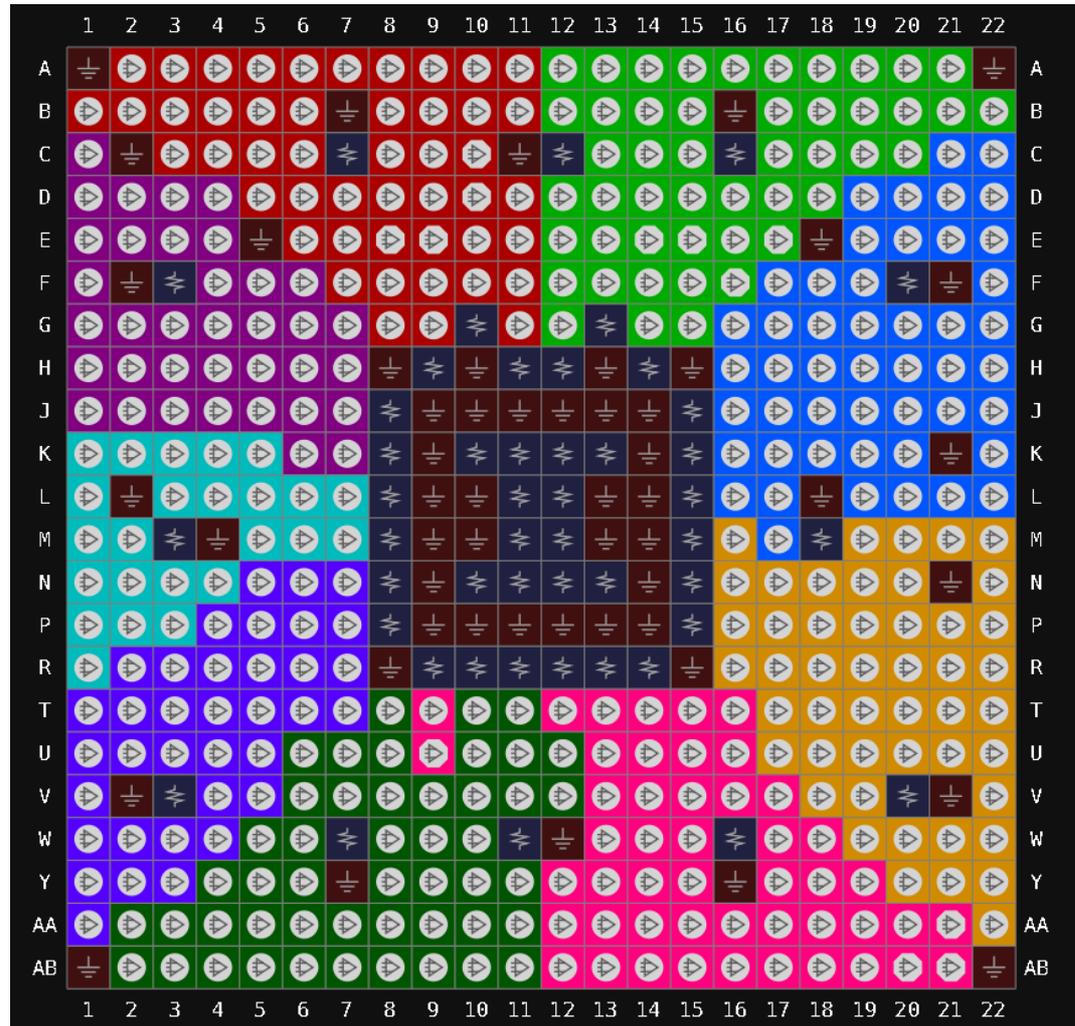


Table 3-27 Other Pins in GW2AN-9X UG484 EV

VCC	K10,K11,K12,K13,L11,L12,M11,M12,N10,N11,N12,N13
VCC00/VCCX	C7,G10,H11,H9
VCC01	C12,C16,G13,H12,H14
VCC02	F20,J15,K15,L15
VCC03	M15,M18,N15,P15,V20
VCC04	R12,R13,R14,W16
VCC05	R10,R11,R9,W11,W7
VCC06	N8,P8,V3
VCC07	L8,M3,M8
VCC08	F3,J8,K8
VSS	A1,A22,AB1,AB22,B16,B7,C11,C2,E18,E5,F2,F21,H10,H13,H15,H8,J10,J11,J12,J13,J14,J9,K14,K21,K9,L10,L13,L14,L18,L2,L9,M10,M13,M14,M4,M9,N14,N21,N9,P10,P11,P12,P13,P14,P9,R15,R8,V2,V21,W12,Y16,Y7

3.2.7 View of UG256 UV Pins Distribution

Figure 3-28 GW2AN-9X UG256 UV View of Pins Distribution



Table 3-28 Other Pins in GW2AN-9X UG256 UV

VCC/VCCX	T16,G7,A16,K10,K7,T1,G10,A1
VCC00	G8,D5
VCC01	D12,G9
VCC02	E13,H10
VCC03	M13,J10
VCC04	N12,K9
VCC05	N5,K8
VCC06	M4
VCC07	H7,J7
VCC08	E4
VSS	M12,M5,B2,R15,N13,H8,C3,L11,H9,D4,D13,N4,J8,E5, R2,J9,E12,F6,P14,L6,F11,C14,P3,B15

3.2.8 View of UG256 LV Pins Distribution

Figure 3-29 GW2AN-9X UG256 LV View of Pins Distribution



Table 3-29 Other Pins in GW2AN-9X UG256 LV

VCC	T16,G7,A16,K10,K7,T1,G10,A1
VCCO0/VCCX	G8,D5
VCCO1	D12,G9
VCCO2	E13,H10
VCCO3	M13,J10
VCCO4	N12,K9
VCCO5	N5,K8
VCCO6	M4
VCCO7	H7,J7
VCCO8	E4
VSS	M12,M5,B2,R15,N13,H8,C3,L11,H9,D4,D13,N4,J8,E5, R2,J9,E12,F6,P14,L6,F11,C14,P3,B15

3.2.9 View of UG256 EV Pins Distribution

Figure 3-30 GW2AN-9X UG256 EV View of Pins Distribution



Table 3-30 Other Pins in GW2AN-9XUG256 EV

VCC	T16,G7,A16,K10,K7,T1,G10,A1
VCCO0/VCCX	G8,D5
VCCO1	D12,G9
VCCO2	E13,H10
VCCO3	M13,J10
VCCO4	N12,K9
VCCO5	N5,K8
VCCO6	M4
VCCO7	H7,J7
VCCO8	E4
VSS	M12,M5,B2,R15,N13,H8,C3,L11,H9,D4,D13,N4,J8,E5, R2,J9,E12,F6,P14,L6,F11,C14,P3,B15

3.2.10 View of PG256 UV Pins Distribution

Figure 3-31 GW2AN-9X PG256 UV View of Pins Distribution



Table 3-311 Other Pins in GW2AN-9X PG256 UV

VCC/VCCX	T16,G7,A16,K10,K7,T1,G10,A1
VCC00	G8,D5
VCC01	D12,G9
VCC02	E13,H10
VCC03	M13,J10
VCC04	N12,K9
VCC05	N5,K8
VCC06	M4
VCC07	H7,J7
VCC08	E4
VSS	M12,M5,B2,R15,N13,H8,C3,L11,H9,D4,D13,N4,J8,E5, R2,J9,E12,F6,P14,L6,F11,C14,P3,B15

3.2.11 View of PG256 LV Pins Distribution

Figure 3-32 GW2AN-9X PG256 LV View of Pins Distribution



Table 3-32 Other Pins in GW2AN-9X PG256 LV

VCC	T16,G7,A16,K10,K7,T1,G10,A1
VCC00/VCCX	G8,D5
VCC01	D12,G9
VCC02	E13,H10
VCC03	M13,J10
VCC04	N12,K9
VCC05	N5,K8
VCC06	M4
VCC07	H7,J7
VCC08	E4
VSS	M12,M5,B2,R15,N13,H8,C3,L11,H9,D4,D13,N4,J8,E5, R2,J9,E12,F6,P14,L6,F11,C14,P3,B15

3.2.12 View of PG256 EV Pins Distribution

Figure 3-33 GW2AN-9X PG256 EV View of Pins Distribution



Table 3-33 Other Pins in GW2AN-9X PG256 EV

VCC	T16,G7,A16,K10,K7,T1,G10,A1
VCC0/VCCX	G8,D5
VCC01	D12,G9
VCC02	E13,H10
VCC03	M13,J10
VCC04	N12,K9
VCC05	N5,K8
VCC06	M4
VCC07	H7,J7
VCC08	E4
VSS	M12,M5,B2,R15,N13,H8,C3,L11,H9,D4,D13,N4,J8,E5, R2,J9,E12,F6,P14,L6,F11,C14,P3,B15

3.2.13 View of UG324 UV Pins Distribution

Figure 3-34 GW2AN-9X UG324 UV View of Pins Distribution



Table 3-34 Other Pins in GW2AN-9X UG324 UV

VCC/VCCX	L10,H10,H8,L11,H11,M12,L8,L9,H9,G12
VCC00	G8,G9
VCC01	G10,G11
VCC02	H12,J11
VCC03	K11,L12
VCC04	M11,M10
VCC05	M8,M9
VCC06	L7,M7
VCC07	J8,K8
VCC08	G7,H7
VSS	A1,A18,K9,J9,B2,N6,U2,U17,B17,V1,J10,V18,F6,N13,F13,K10

3.2.14 View of UG324 LV Pins Distribution

Figure 3-35 GW2AN-9X UG324 LV View of Pins Distribution

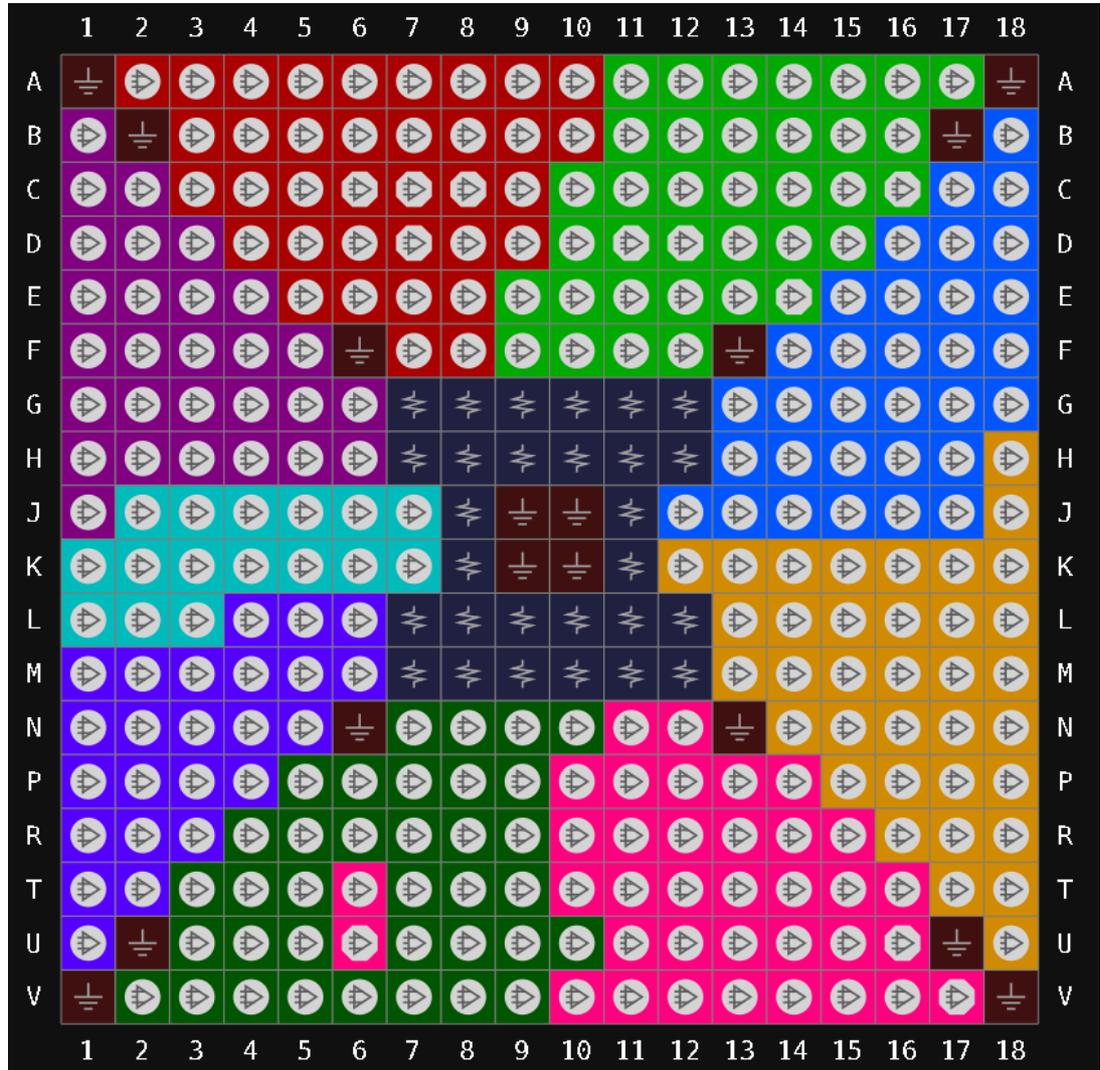


Table 3-35 Other Pins in GW2AN-9X UG324 LV

VCC	L10,H10,H8,L11,H11,M12,L8,L9,H9,G12
VCCO0/VCCX	G8,G9
VCCO1	G10,G11
VCCO2	H12,J11
VCCO3	K11,L12
VCCO4	M11,M10
VCCO5	M8,M9
VCCO6	L7,M7
VCCO7	J8,K8
VCCO8	G7,H7
VSS	A1,A18,K9,J9,B2,N6,U2,U17,B17,V1,J10,V18,F6,N13,F13,K10

3.2.15 View of UG324 EV Pins Distribution

Figure 3-36 GW2AN-9X UG324 EV View of Pins Distribution

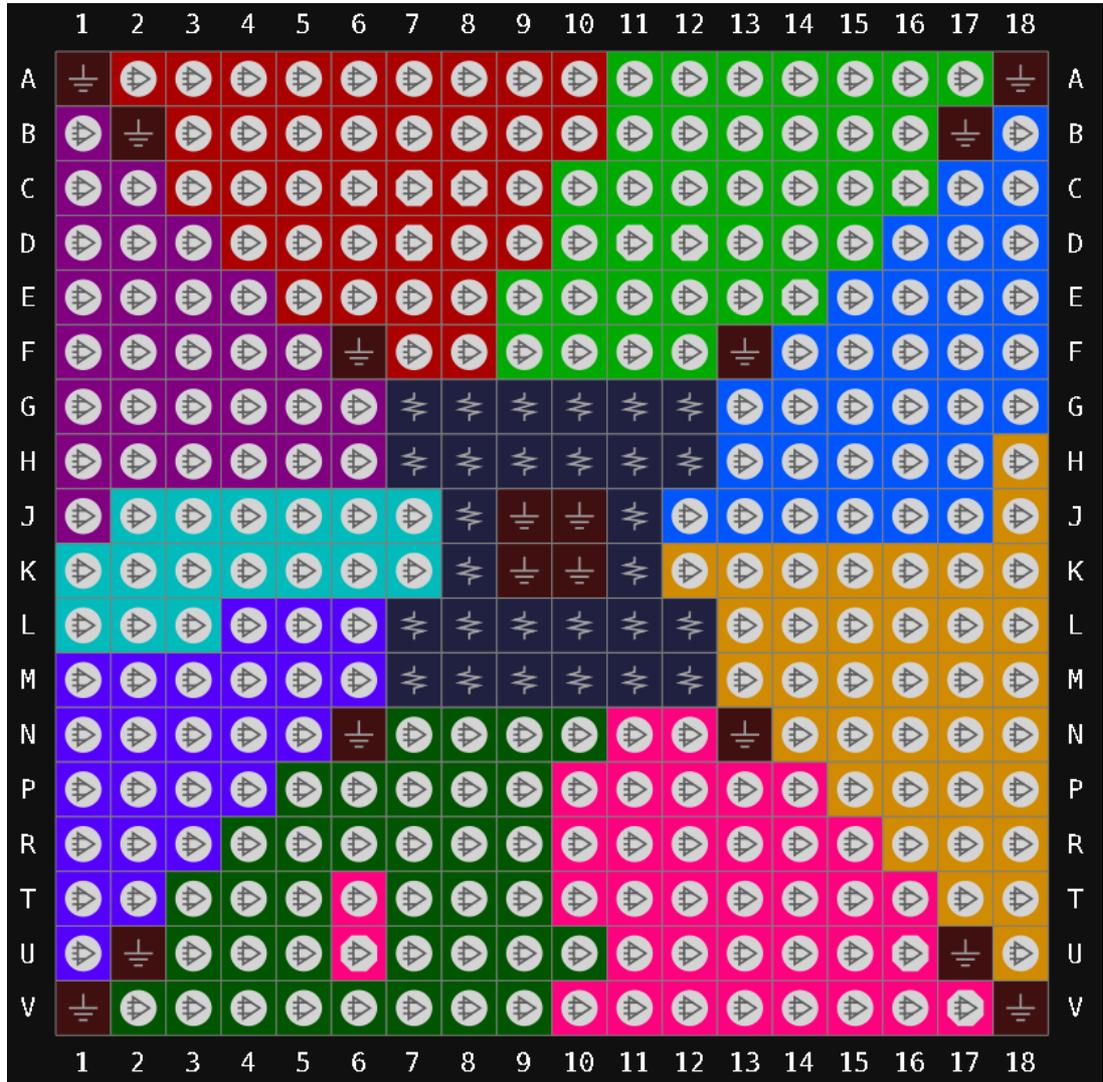


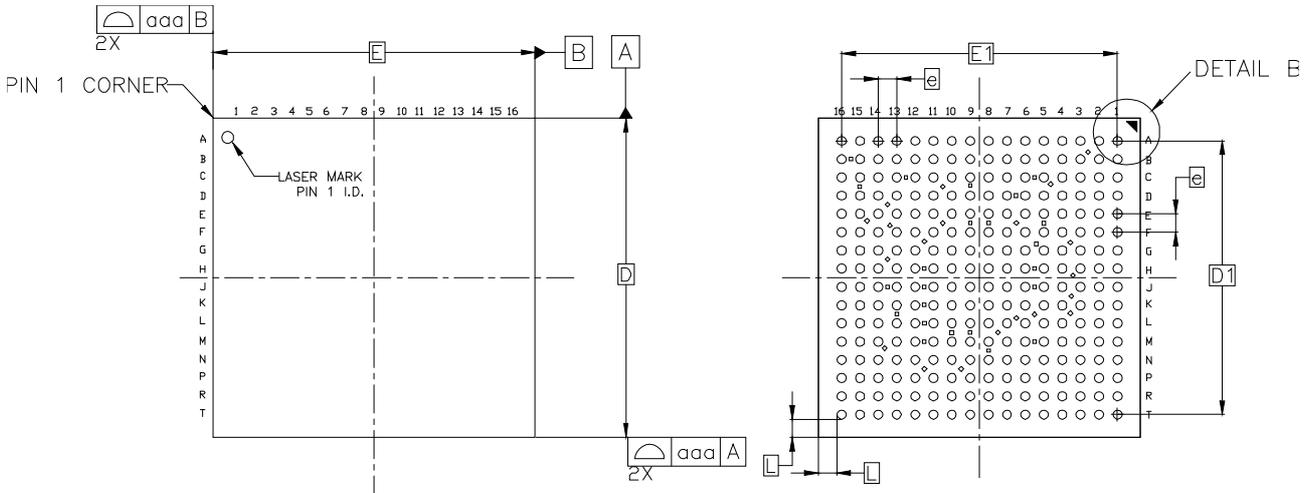
Table 3-36 Other Pins in GW2AN-9X UG324 EV

VCC	L10,H10,H8,L11,H11,M12,L8,L9,H9,G12
VCCO0/VCCX	G8,G9
VCCO1	G10,G11
VCCO2	H12,J11
VCCO3	K11,L12
VCCO4	M11,M10
VCCO5	M8,M9
VCCO6	L7,M7
VCCO7	J8,K8
VCCO8	G7,H7
VSS	A1,A18,K9,J9,B2,N6,U2,U17,B17,V1,J10,V18,F6,N13,F13,K10

4 Package Diagrams

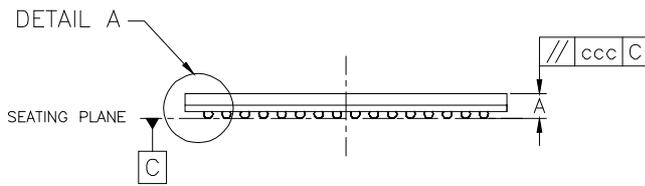
4.1 UG256 Package Outline (14mm x 14mm)

Figure 4-1 Package Outline UG256



TOP VIEW

BOTTOM VIEW

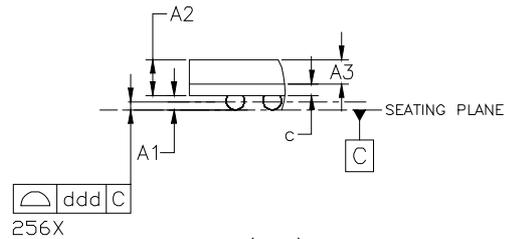


DETAIL A

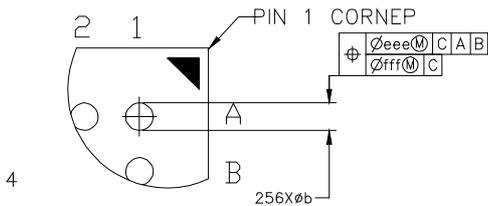
SEATING PLANE

C

SIDE VIEW



DETAIL A(2:1)

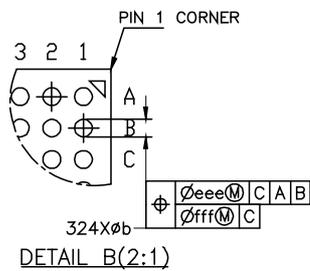
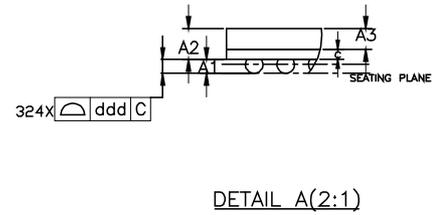
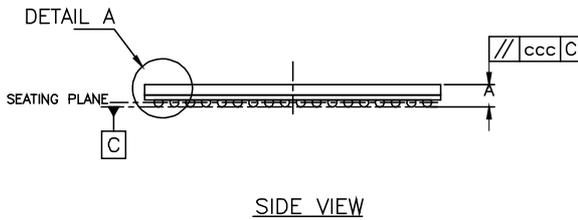
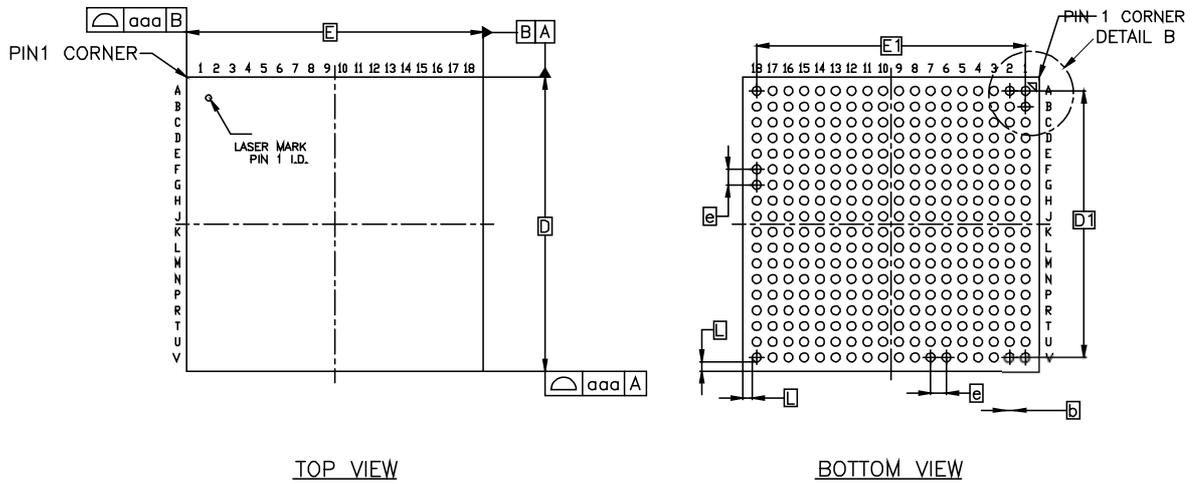


DETAIL B(3:1)

SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	--	--	1.18
A1	0.26	0.31	0.36
A2	0.74	0.79	0.84
A3	0.53 BASIC		
c	0.22	0.26	0.30
D	13.90	14.00	14.10
D1	12.00 BASIC		
E	13.90	14.00	14.10
E1	12.00 BASIC		
e	0.8 BASIC		
b	0.35	0.40	0.45
L	0.8 REF		
aaa	0.10		
ccc	0.20		
ddd	0.12		
eee	0.15		
fff	0.08		

4.2 UG324 Package Outline (15mm x 15mm)

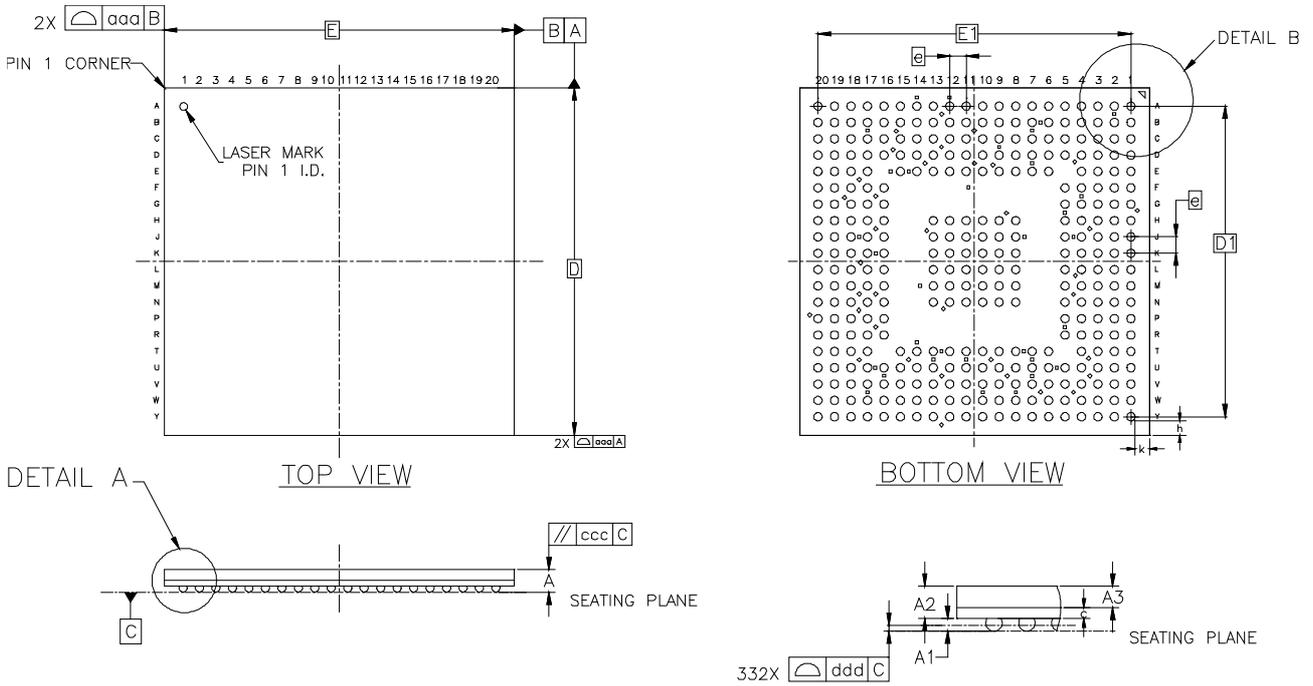
Figure 4-2 Package Outline UG324



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	1.06	1.14	1.22
A1	0.30	0.35	0.40
A2	0.74	0.79	0.84
c	0.23	0.26	0.29
A3	0.53 BASIC		
D	14.90	15.00	15.10
D1	13.60 BASIC		
E	14.90	15.00	15.10
E1	13.60 BASIC		
e	0.80 BASIC		
b	0.40	0.45	0.50
aaa	0.15		
ccc	0.12		
ddd	0.10		
eee	0.15		
fff	0.08		
L	0.475 REF		

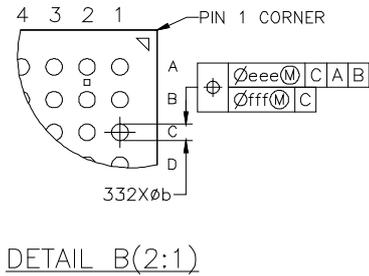
4.3 UG332 Package Outline (17mm x 17mm)

Figure 4-3 Package Outline UG332



332X

DETAIL A(2:1)

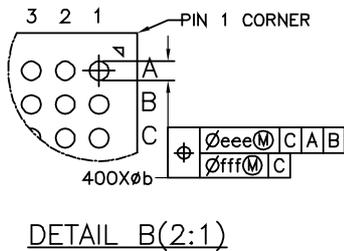
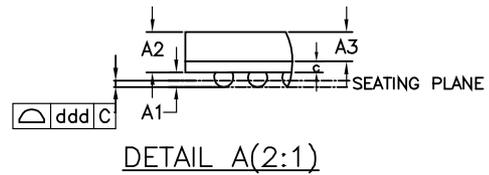
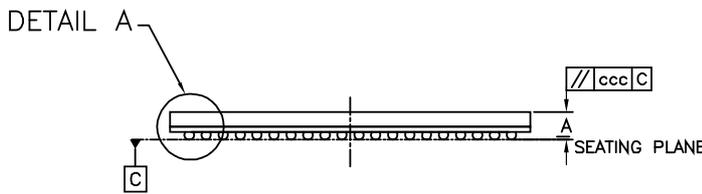
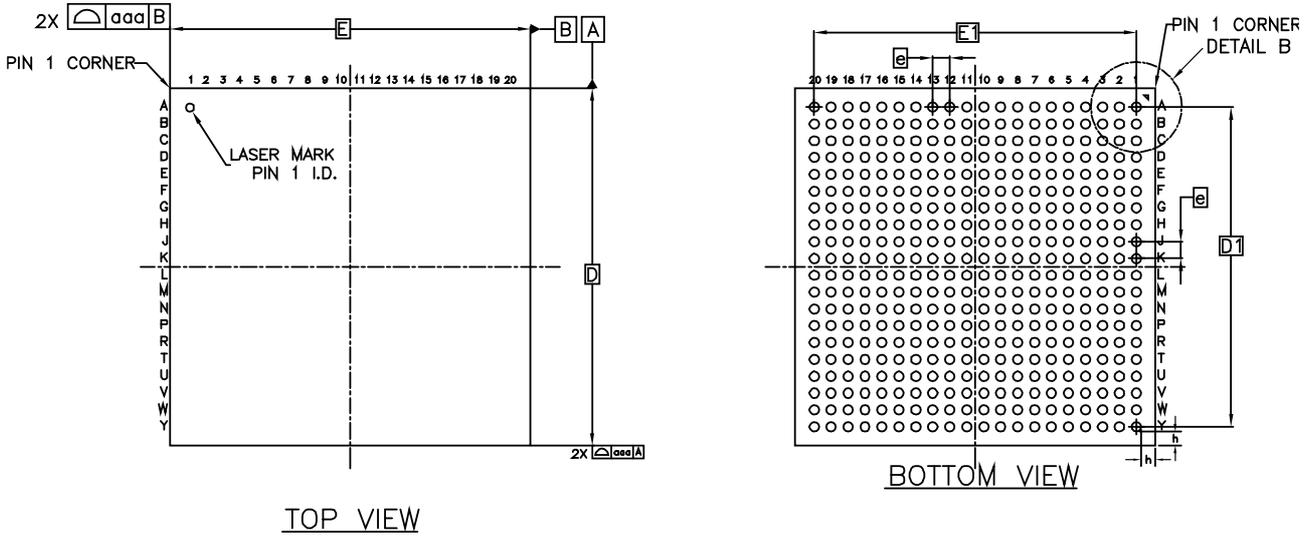


DETAIL B(2:1)

SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	---	---	1.18
A1	0.26	0.31	0.36
A2	0.74	0.79	0.84
c	0.22	0.26	0.30
A3	0.53 BASIC		
D	16.90	17.00	17.10
D1	15.20 BASIC		
E	16.90	17.00	17.10
E1	15.20 BASIC		
e	0.800 BASIC		
b	0.35	0.40	0.45
aaa	0.15		
ccc	0.15		
ddd	0.10		
eee	0.15		
fff	0.08		
h	0.700 REF		
k	0.700 REF		

4.4 UG400 Package Outline (17mm x 17mm)

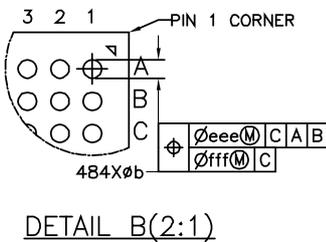
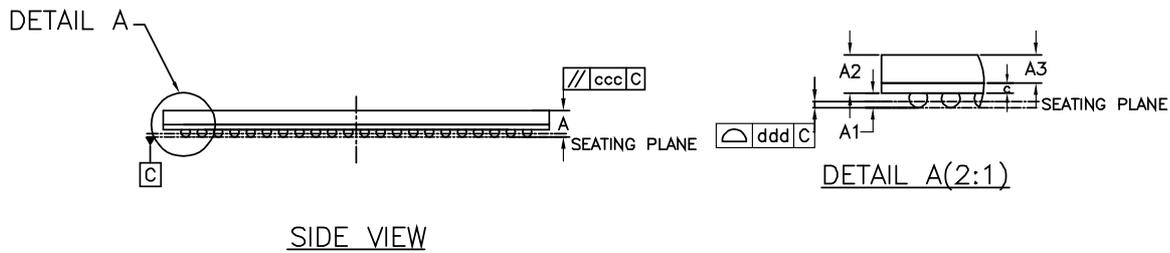
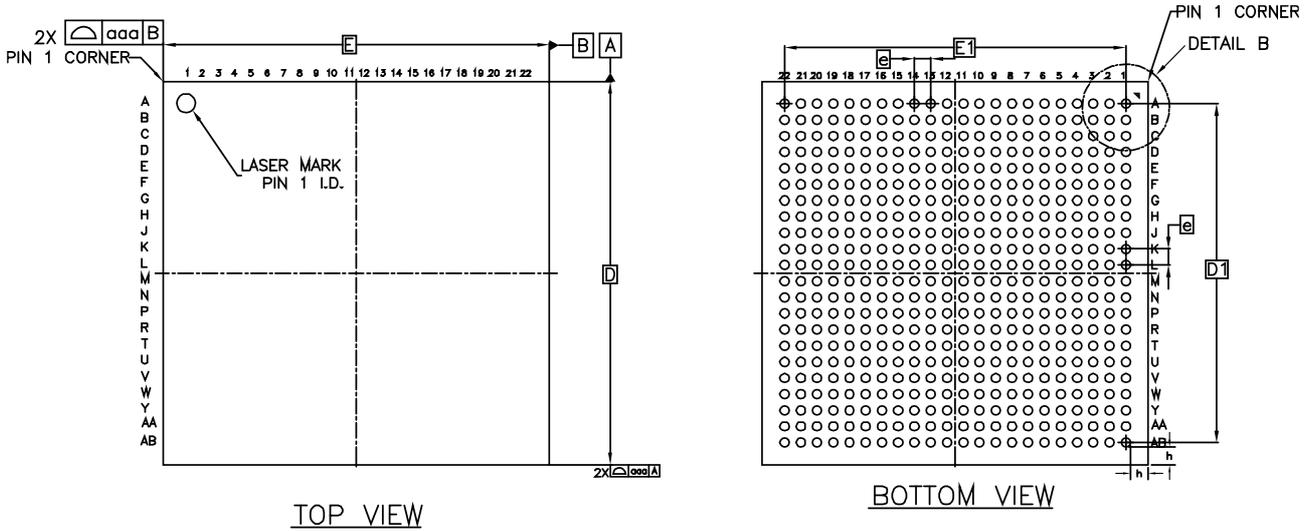
Figure 4-4 Package Outline UG400



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	1.23	1.31	1.39
A1	0.30	0.35	0.40
A2	0.92	0.96	1.00
c	0.23	0.26	0.29
A3	0.70 BASIC		
D	16.90	17.00	17.10
D1	15.20 BASIC		
E	16.90	17.00	17.10
E1	15.20 BASIC		
e	0.80 BASIC		
b	0.40	0.45	0.50
aaa	0.15		
ccc	0.12		
ddd	0.15		
eee	0.15		
fff	0.08		
h	0.675 REF		

4.5 UG484 Package Outline (19mm x 19mm)

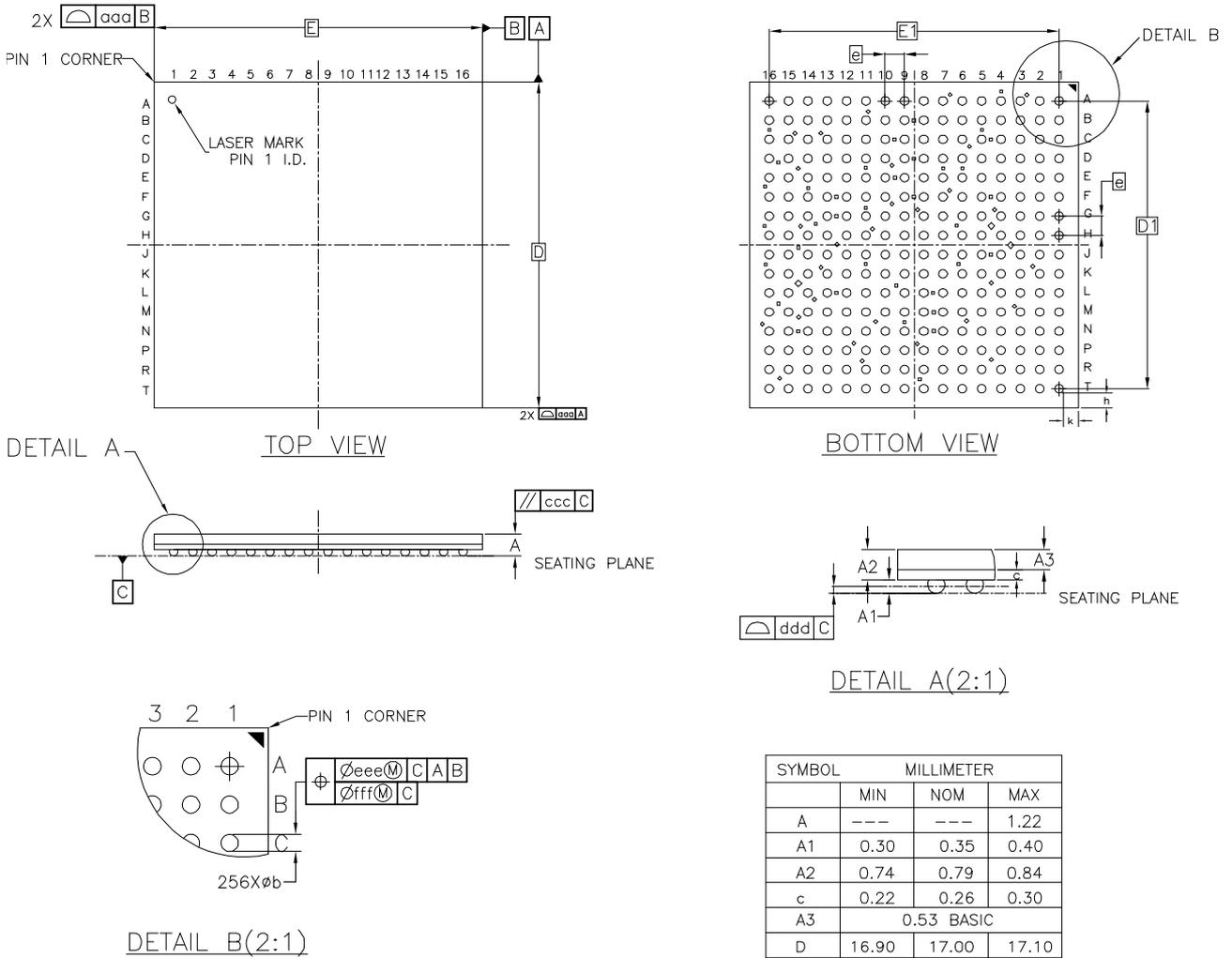
Figure 4-5 Package Outline UG484



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	1.23	1.31	1.39
A1	0.30	0.35	0.40
A2	0.92	0.96	1.00
c	0.23	0.26	0.29
A3	0.70 BASIC		
D	18.90	19.00	19.10
D1	16.80 BASIC		
E	18.90	19.00	19.10
E1	16.80 BASIC		
e	0.80 BASIC		
b	0.40	0.45	0.50
aaa	0.15		
ccc	0.12		
ddd	0.15		
eee	0.15		
fff	0.08		
h	0.875 REF		

4.6 PG256 Package Outline (17mm x 17mm)

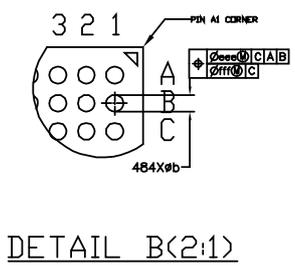
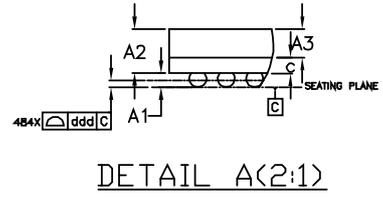
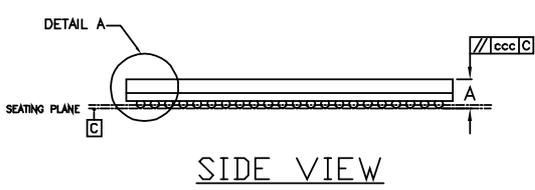
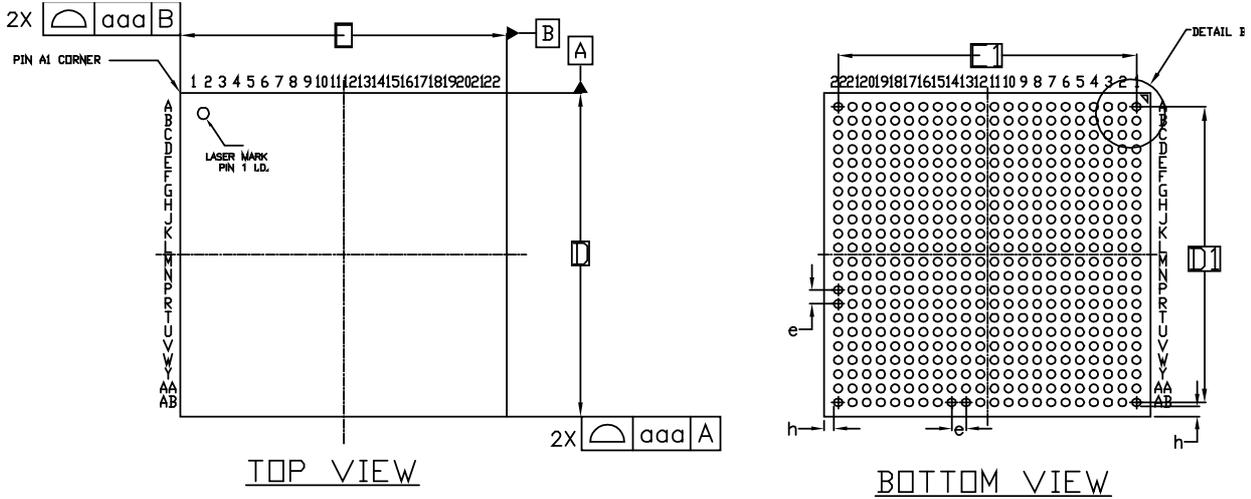
Figure 4-6 Package Outline PG256



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	---	---	1.22
A1	0.30	0.35	0.40
A2	0.74	0.79	0.84
c	0.22	0.26	0.30
A3	0.53 BASIC		
D	16.90	17.00	17.10
D1	15.00 BASIC		
E	16.90	17.00	17.10
E1	15.00 BASIC		
e	1.00 BASIC		
b	0.40	0.45	0.50
aaa	0.10		
ccc	0.20		
ddd	0.12		
eee	0.15		
fff	0.08		
h	0.775 REF		
k	0.775 REF		

4.7 PG484 Package Outline (23mm x 23mm)

Figure 4-7 Package Outline PG484



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	---	2.06	2.15
A1	0.45	0.50	0.55
A2	1.51	1.56	1.61
A3	1.00 BASIC		
c	0.52	0.56	0.60
D	22.90	23.00	23.10
D1	21.00 BASIC		
E	22.90	23.00	23.10
E1	21.00 BASIC		
e	1.00 BASIC		
b	0.55	0.60	0.65
h	0.70 REF		
aaa	0.20		
ccc	0.35		
ddd	0.15		
eee	0.25		
fff	0.10		

