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Laboratoire Européen pour la Physique des Particules
European Laboratory for Particle Physics

GBT-SCA PACKAGING

V1.4

Author:

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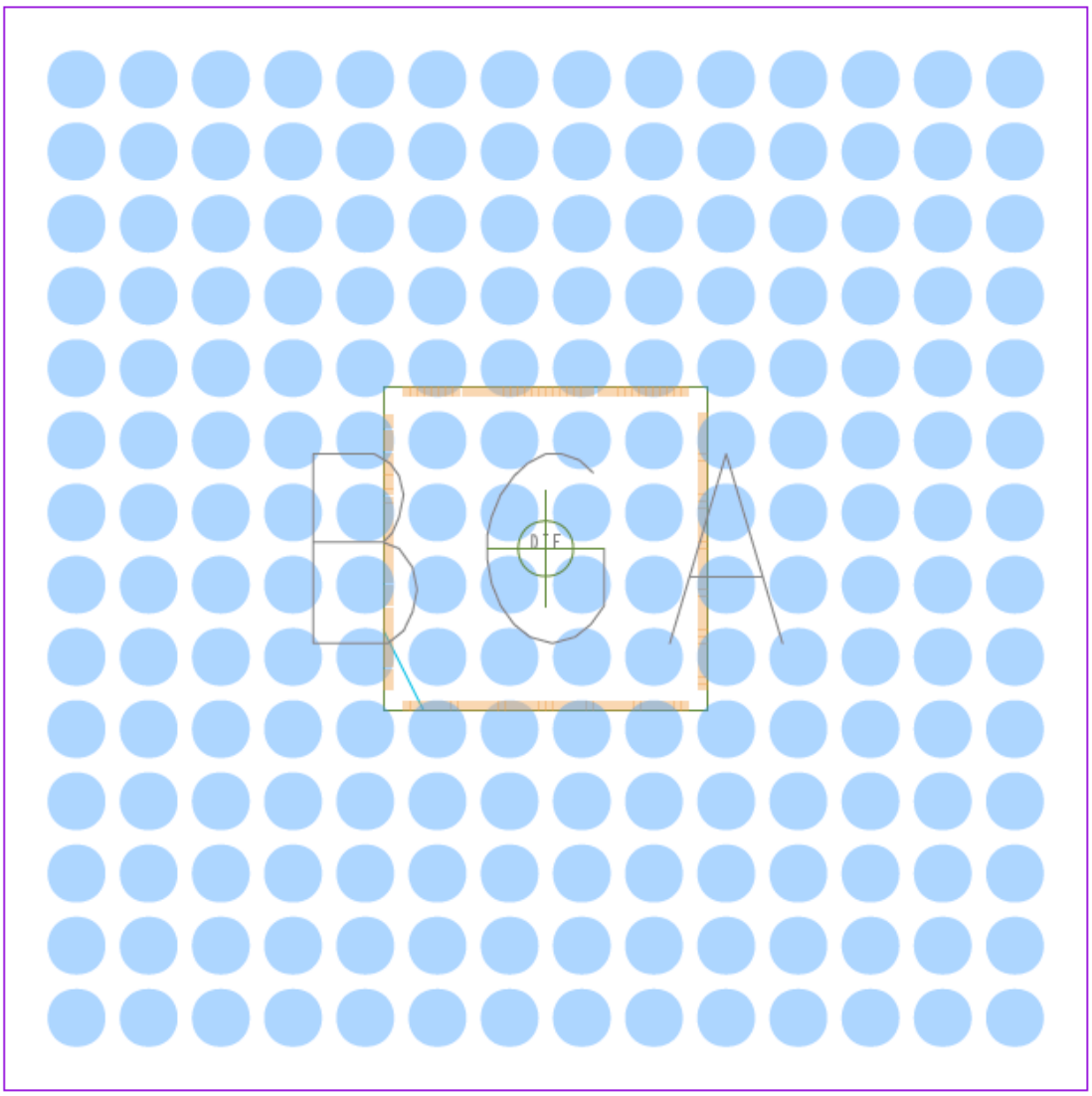
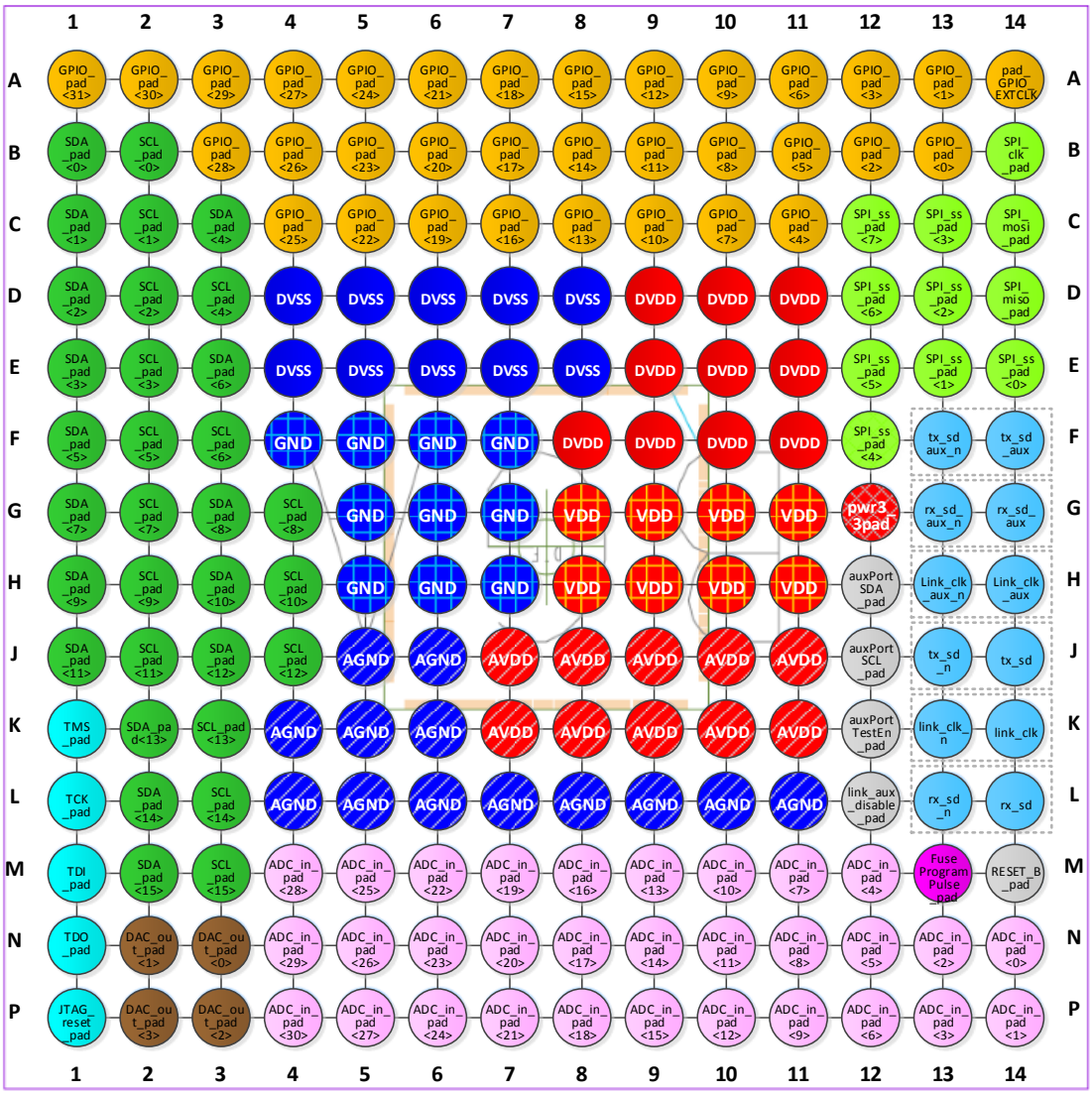
Document History

- Package Type: LFBGA
  Low Profile Fine Pitch BGA (Chip Scale Package)
- Ball Pitch: 0.8 mm
- Size: 12 x 12 mm
- Height: 1.2-1.7 mm
- Pin count: 196



Top view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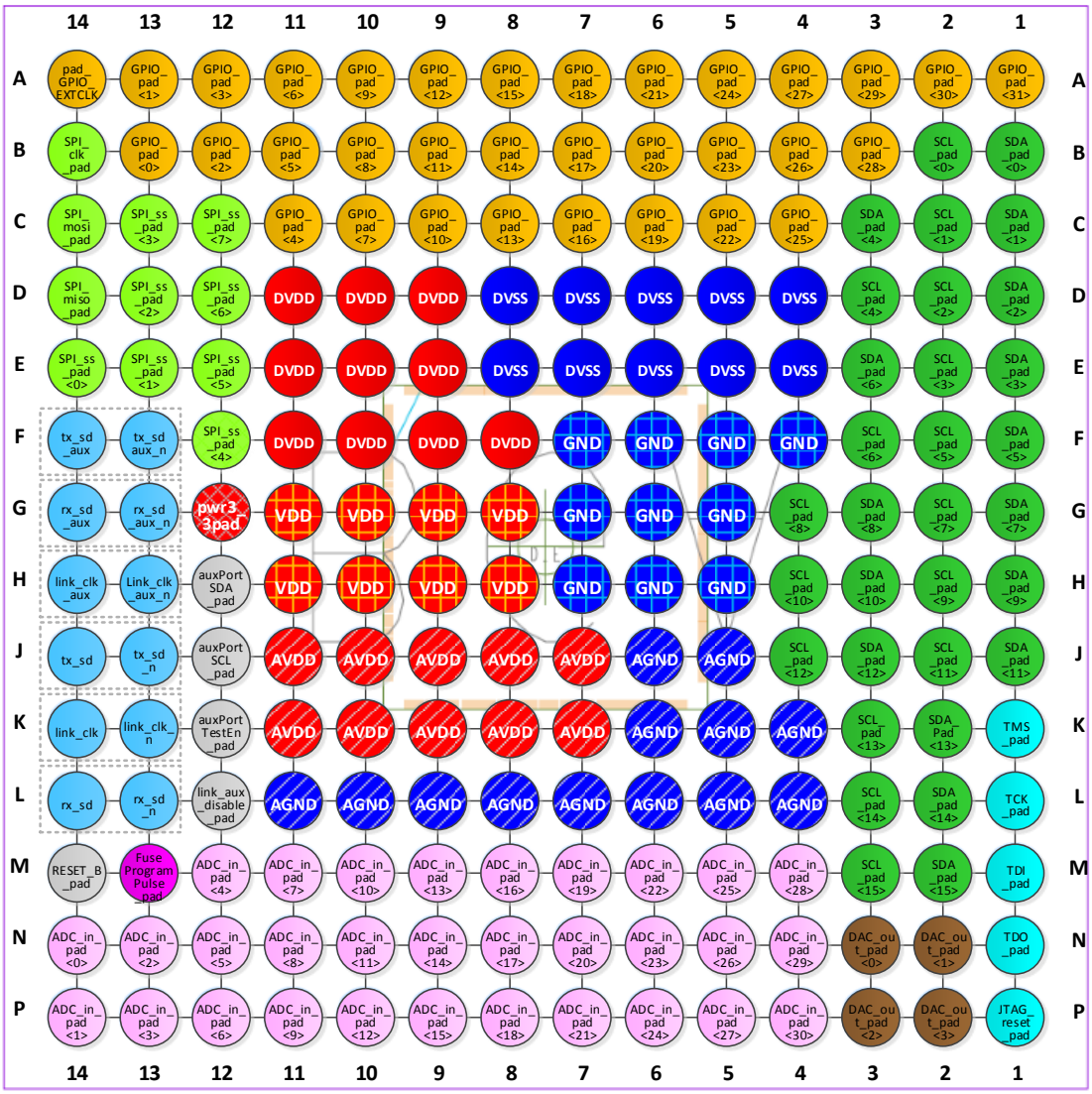
D SDA_pad<2> SCL_pad<2> SCL_pad<4> DVSS DVSS DVSS DVSS DVSS DVDD DVDD DVDD SPI_ss_pad<6> SPI_ss_pad<2> SPI_miso_pad D
E SDA_pad<3> SCL_pad<3> SDA_pad<6> DVSS DVSS DVSS DVSS DVSS DVDD DVDD DVDD SPI_ss_pad<5> SPI_ss_pad<1> SPI_ss_pad<0> E
F SDA_pad<5> SCL_pad<5> SCL_pad<6> GND GND GND GND DVDD DVDD DVDD DVDD SPI_ss_pad<4> tx_sd_aux_n tx_sd_aux F
G SDA_pad<7> SCL_pad<7> SDA_pad<8> SCL_pad<8> GND GND GND VDD VDD VDD VDD pwr3_3pad rx_sd_aux_n rx_sd_aux G
H SDA_pad<9> SCL_pad<9> SDA_pad<10> SCL_pad<10> GND GND GND VDD VDD VDD VDD auxPort SDA_pad Link_clk_aux_n Link_clk_aux H
J SDA_pad<11> SCL_pad<11> SDA_pad<12> SCL_pad<12> AGND AGND AVDD AVDD AVDD AVDD AVDD auxPort SCL_pad tx_sd_n tx_sd J
K TMS_pad SDA_pad<13> SCL_pad<13> AGND AGND AGND AVDD AVDD AVDD AVDD AVDD auxPort TestEn_pad link_clk_n link_clk K
L TCK_pad SDA_pad<14> SCL_pad<14> AGND AGND AGND AGND AGND AGND AGND AGND link_aux_disable_pad rx_sd_n rx_sd L
M TDI_pad SDA_pad<15> SCL_pad<15> ADC_in_pad<28> ADC_in_pad<25> ADC_in_pad<22> ADC_in_pad<19> ADC_in_pad<16> ADC_in_pad<13> ADC_in_pad<10> ADC_in_pad<7> ADC_in_pad<4> Fuse Program Pulse_pad RESET_B_pad M
N TDO_pad DAC_out_pad<1> DAC_out_pad<0> ADC_in_pad<29> ADC_in_pad<26> ADC_in_pad<23> ADC_in_pad<20> ADC_in_pad<17> ADC_in_pad<14> ADC_in_pad<11> ADC_in_pad<8> ADC_in_pad<5> ADC_in_pad<2> ADC_in_pad<0> N
P JTAG_reset_pad DAC_out_pad<3> DAC_out_pad<2> ADC_in_pad<30> ADC_in_pad<27> ADC_in_pad<24> ADC_in_pad<21> ADC_in_pad<18> ADC_in_pad<15> ADC_in_pad<12> ADC_in_pad<9> ADC_in_pad<6> ADC_in_pad<3> ADC_in_pad<1> P
1 2 3 4 5 6 7 8 9 10 11 12 13 14

Bottom view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D SPI_miso_pad SPI_ss_pad<2> SPI_ss_pad<6> DVDD DVDD DVDD DVSS DVSS DVSS DVSS DVSS SCL_pad<4> SCL_pad<2> SDA_pad<2>
E SPI_ss_pad<0> SPI_ss_pad<1> SPI_ss_pad<5> DVDD DVDD DVDD DVSS DVSS DVSS DVSS DVSS SDA_pad<6> SCL_pad<3> SDA_pad<3>
F tx_sd_aux tx_sd_aux_n SPI_ss_pad<4> DVDD DVDD DVDD DVDD GND GND GND GND SCL_pad<6> SCL_pad<5> SDA_pad<5>
G rx_sd_aux rx_sd_aux_n pwr3_3pad VDD VDD VDD VDD GND GND GND SCL_pad<8> SDA_pad<8> SCL_pad<7> SDA_pad<7>
H link_clk_aux Link_clk_aux_n auxPort SDA_pad VDD VDD VDD VDD GND GND GND SCL_pad<10> SDA_pad<10> SCL_pad<9> SDA_pad<9>
J tx_sd tx_sd_n auxPort SCL_pad AVDD AVDD AVDD AVDD AVDD AGND AGND SCL_pad<12> SDA_pad<12> SCL_pad<11> SDA_pad<11>
K link_clk link_clk_n auxPort TestEn_pad AVDD AVDD AVDD AVDD AVDD AGND AGND AGND SCL_pad<13> SDA_Pad<13> TMS_pad
L rx_sd rx_sd_n link_aux disable_pad AGND AGND AGND AGND AGND AGND AGND AGND SCL_pad<14> SDA_pad<14> TCK_pad
M RESET_B_pad Fuse Program Pulse_pad ADC_in_pad<4> ADC_in_pad<7> ADC_in_pad<10> ADC_in_pad<13> ADC_in_pad<16> ADC_in_pad<19> ADC_in_pad<22> ADC_in_pad<25> ADC_in_pad<28> SCL_pad<15> SDA_pad<15> TDI_pad
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P ADC_in_pad<1> ADC_in_pad<3> ADC_in_pad<6> ADC_in_pad<9> ADC_in_pad<12> ADC_in_pad<15> ADC_in_pad<18> ADC_in_pad<21> ADC_in_pad<24> ADC_in_pad<27> ADC_in_pad<30> DAC_out_pad<2> DAC_out_pad<3> JTAG_reset_pad
14 13 12 11 10 9 8 7 6 5 4 3 2 1

Pad Name	Pad X	Pad Y	Pad	Pad Openings X:Y	Ball Position	Direction	Description
pad_GPIO_EXTCLK	66.105	266.5	5891.86	95.0300:62.0000	A-14	OUT	General purpose I/O - strobe
DVSS	66.105	351.31	5891.86	95.0300:62.0000	multiple	-	Perifery Ground
auxPortSDA_pad	66.105	436.12	5891.86	95.0300:62.0000	H-12	INOUT	Auxiliary I2C Port - SDA pad
auxPortSCL_pad	66.105	520.93	5891.86	95.0300:62.0000	J-12	IN	Auxiliary I2C Port - SCA pad
auxPortTestEn_pad	66.105	605.74	5891.86	95.0300:62.0000	K-12	IN	Auxiliary I2C Port - Enable Pad
DVDD	66.105	690.55	5891.86	95.0300:62.0000	multiple	-	Perifery Power
SPI_clk_pad	66.105	775.36	5891.86	95.0300:62.0000	B-14	OUT	SPI bus - SCLK pad
SPI_mosi_pad	66.105	860.17	5891.86	95.0300:62.0000	C-14	OUT	SPI bus - MOSI pad
SPI_miso_pad	66.105	944.98	5891.86	95.0300:62.0000	D-14	IN	SPI bus - MISO pad
SPI_ss_pad<7>	66.105	1029.79	5891.86	95.0300:62.0000	C-12	OUT	SPI bus - Slave Select n0 pad
SPI_ss_pad<6>	66.105	1114.6	5891.86	95.0300:62.0000	D-12	OUT	SPI bus - Slave Select n1 pad
SPI_ss_pad<5>	66.105	1199.4	5891.86	95.0300:62.0000	E-12	OUT	SPI bus - Slave Select n2 pad
SPI_ss_pad<4>	66.105	1284.2	5891.86	95.0300:62.0000	F-12	OUT	SPI bus - Slave Select n3 pad
SPI_ss_pad<3>	66.105	1369	5891.86	95.0300:62.0000	C-13	OUT	SPI bus - Slave Select n4 pad
SPI_ss_pad<2>	66.105	1453.8	5891.86	95.0300:62.0000	D-13	OUT	SPI bus - Slave Select n5 pad
SPI_ss_pad<1>	66.105	1538.6	5891.86	95.0300:62.0000	E-13	OUT	SPI bus - Slave Select n6 pad
SPI_ss_pad<0>	66.105	1623.4	5891.86	95.0300:62.0000	E-14	OUT	SPI bus - Slave Select n7 pad
tx_sd_aux_n	66.105	1708.2	5891.86	95.0300:62.0000	F-13	OUT	Auxiliary E-Port - Transmit Pad (-)
tx_sd_aux	66.105	1781.2	5891.86	95.0300:62.0000	F-14	OUT	Auxiliary E-Port - Transmit Pad (+)
rx_sd_aux_n	66.105	1866	5891.86	95.0300:62.0000	G-13	IN	Auxiliary E-Port - Receive Pad (-)
rx_sd_aux	66.105	1939	5891.86	95.0300:62.0000	G-14	IN	Auxiliary E-Port - Receive Pad (+)
link_clk_aux_n	66.105	2023.8	5891.86	95.0300:62.0000	H-13	IN	Auxiliary E-Port - Clock Pad (-)

link_clk_aux	66.105	2096.8	5891.86	95.0300:62.0000	H-14	IN	Auxiliary E-Port - Clock Pad (+)
link_aux_disable_pad	66.105	2181.6	5891.86	95.0300:62.0000	L-12	IN	Auxiliary E-Port - Disable Pad
tx_sd_n	66.105	2266.4	5891.86	95.0300:62.0000	J-13	OUT	Primary E-Port - Transmit Pad (-)
tx_sd	66.105	2339.4	5891.86	95.0300:62.0000	J-14	OUT	Primary E-Port - Transmit Pad (+)
link_clk_n	66.105	2424.21	5891.86	95.0300:62.0000	K-13	IN	Primary E-Port - Clock Pad (-)
link_clk	66.105	2497.21	5891.86	95.0300:62.0000	K-14	IN	Primary E-Port - Clock Pad (-)
rx_sd_n	66.105	2582.02	5891.86	95.0300:62.0000	L-13	IN	Primary E-Port - Receive Pad (-)
rx_sd	66.105	2655.02	5891.86	95.0300:62.0000	L-14	IN	Primary E-Port - Receive Pad (+)
GND	66.105	2739.83	5891.86	95.0300:62.0000	multiple	-	Digital Ground
VDD	66.105	2824.64	5891.86	95.0300:62.0000	multiple	-	Digital Power
DVSS	66.105	2909.45	5891.86	95.0300:62.0000	multiple	-	Perifery Ground
DVDD	66.105	2994.26	5891.86	95.0300:62.0000	multiple	-	Perifery Power
FuseProgramPulse_pad	66.105	3079.07	5891.86	95.0300:62.0000	M-13	IN	E-Fuses Program Pulse Pad
pwr3_3pad	66.105	3163.88	5891.86	95.0300:62.0000	G-12	-	Efuse Program power 3.3V
RESET_B_pad	66.105	3248.69	5891.86	95.0300:62.0000	M-14	IN	Global reset pad - Active Low
ADC_in_pad<0>	266.5	3533.895	5891.86	62.0000:95.0300	N-14	IN	Analog Input n0
ADC_in_pad<1>	343.9	3533.895	5891.86	62.0000:95.0300	P-14	IN	Analog Input n1
ADC_in_pad<2>	421.29	3533.895	5891.86	62.0000:95.0300	N-13	IN	Analog Input n2
ADC_in_pad<3>	498.68	3533.895	5891.86	62.0000:95.0300	P-13	IN	Analog Input n3
ADC_in_pad<4>	576.07	3533.895	5891.86	62.0000:95.0300	M-12	IN	Analog Input n4
ADC_in_pad<5>	653.46	3533.895	5891.86	62.0000:95.0300	N-12	IN	Analog Input n5
ADC_in_pad<6>	730.85	3533.895	5891.86	62.0000:95.0300	P-12	IN	Analog Input n6
ADC_in_pad<7>	808.24	3533.895	5891.86	62.0000:95.0300	M-11	IN	Analog Input n7

AGND	910.02	3533.895	5891.86	62.0000:95.0300	multiple	-	Analog Ground
AVDD	987.41	3533.895	5891.86	62.0000:95.0300	multiple	-	Analog Power
ADC_in_pad<8>	1064.8	3533.895	5891.86	62.0000:95.0300	N-11	IN	Analog Input n8
ADC_in_pad<9>	1142.19	3533.895	5891.86	62.0000:95.0300	P-11	IN	Analog Input n9
ADC_in_pad<10>	1219.58	3533.895	5891.86	62.0000:95.0300	M-10	IN	Analog Input n10
ADC_in_pad<11>	1296.97	3533.895	5891.86	62.0000:95.0300	N-10	IN	Analog Input n11
ADC_in_pad<12>	1374.36	3533.895	5891.86	62.0000:95.0300	P-10	IN	Analog Input n12
ADC_in_pad<13>	1451.75	3533.895	5891.86	62.0000:95.0300	M-9	IN	Analog Input n13
ADC_in_pad<14>	1529.14	3533.895	5891.86	62.0000:95.0300	N-9	IN	Analog Input n14
ADC_in_pad<15>	1606.53	3533.895	5891.86	62.0000:95.0300	P-9	IN	Analog Input n15
ADC_in_pad<16>	1683.92	3533.895	5891.86	62.0000:95.0300	M-8	IN	Analog Input n16
ADC_in_pad<17>	1761.31	3533.895	5891.86	62.0000:95.0300	N-8	IN	Analog Input n17
ADC_in_pad<18>	1838.7	3533.895	5891.86	62.0000:95.0300	P-8	IN	Analog Input n18
ADC_in_pad<19>	1916.09	3533.895	5891.86	62.0000:95.0300	M-7	IN	Analog Input n19
ADC_in_pad<20>	1993.48	3533.895	5891.86	62.0000:95.0300	N-7	IN	Analog Input n20
ADC_in_pad<21>	2070.87	3533.895	5891.86	62.0000:95.0300	P-7	IN	Analog Input n21
ADC_in_pad<22>	2148.26	3533.895	5891.86	62.0000:95.0300	M-6	IN	Analog Input n22
ADC_in_pad<23>	2225.65	3533.895	5891.86	62.0000:95.0300	N-6	IN	Analog Input n23
ADC_in_pad<24>	2303.04	3533.895	5891.86	62.0000:95.0300	P-6	IN	Analog Input n24
AGND	2404.82	3533.895	5891.86	62.0000:95.0300	multiple	-	Analog Ground
AVDD	2482.21	3533.895	5891.86	62.0000:95.0300	multiple	-	Analog Power
ADC_in_pad<25>	2559.6	3533.895	5891.86	62.0000:95.0300	M-5	IN	Analog Input n25
ADC_in_pad<26>	2636.99	3533.895	5891.86	62.0000:95.0300	N-5	IN	Analog Input n26

ADC_in_pad<27>	2714.38	3533.895	5891.86	62.0000:95.0300	P-5	IN	Analog Input n27
ADC_in_pad<28>	2791.77	3533.895	5891.86	62.0000:95.0300	M-4	IN	Analog Input n28
ADC_in_pad<29>	2869.16	3533.895	5891.86	62.0000:95.0300	N-4	IN	Analog Input n29
ADC_in_pad<30>	2946.55	3533.895	5891.86	62.0000:95.0300	P-4	IN	Analog Input n30
AGND	3023.94	3533.895	5891.86	62.0000:95.0300	multiple	-	Analog Ground
DAC_out_pad<0>	3101.33	3533.895	5891.86	62.0000:95.0300	N-3	OUT	Analog Output n0
DAC_out_pad<1>	3178.72	3533.895	5891.86	62.0000:95.0300	N-2	OUT	Analog Output n1
DAC_out_pad<2>	3256.11	3533.895	5891.86	62.0000:95.0300	P-3	OUT	Analog Output n2
DAC_out_pad<3>	3333.5	3533.895	5891.86	62.0000:95.0300	P-2	OUT	Analog Output n3
JTAG_reset_pad	3533.895	3258.69	5891.86	95.0300:62.0000	P-1	OUT	JTAG bus - ARESET pad
TDO_pad	3533.895	3183.88	5891.86	95.0300:62.0000	N-1	OUT	JTAG bus - TDO pad
TDI_pad	3533.895	3109.07	5891.86	95.0300:62.0000	M-1	IN	JTAG bus - TDI pad
TCK_pad	3533.895	3034.26	5891.86	95.0300:62.0000	L-1	OUT	JTAG bus - TCK pad
TMS_pad	3533.895	2959.45	5891.86	95.0300:62.0000	K-1	OUT	JTAG bus - TMS pad
DVDD	3533.895	2884.64	5891.86	95.0300:62.0000	multiple	-	Perifery Power
DVSS	3533.895	2809.83	5891.86	95.0300:62.0000	multiple	-	Perifery Ground
SCL_pad<15>	3533.895	2735.02	5891.86	95.0300:62.0000	M-3	OUT	I2C bus n15 - SCL line
GND	3533.895	2660.21	5891.86	95.0300:62.0000	multiple	-	Digital Ground
VDD	3533.895	2585.4	5891.86	95.0300:62.0000	multiple	-	Digital Power
SDA_pad<15>	3533.895	2510.6	5891.86	95.0300:62.0000	M-2	INOUT	I2C bus n15 - SDA line
SCL_pad<14>	3533.895	2435.8	5891.86	95.0300:62.0000	L-3	OUT	I2C bus n14 - SCL line
SDA_pad<14>	3533.895	2361	5891.86	95.0300:62.0000	L-2	INOUT	I2C bus n14 - SDA line
SCL_pad<13>	3533.895	2286.2	5891.86	95.0300:62.0000	K-3	OUT	I2C bus n13 - SCL line

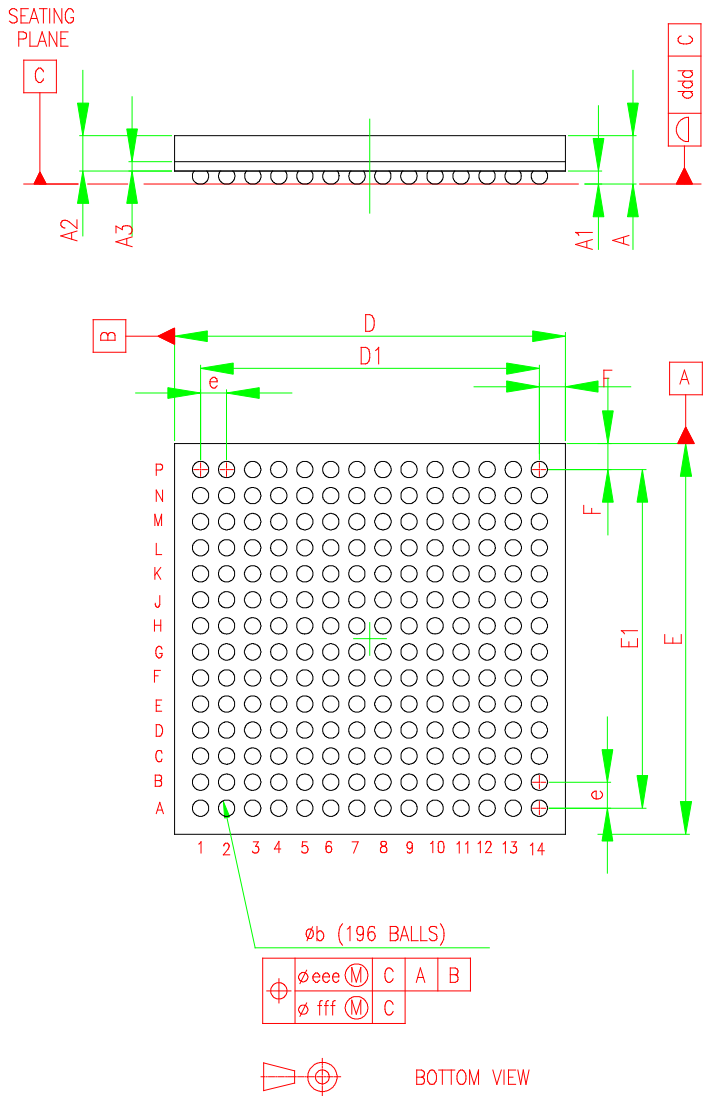
SDA_pad<13>	3533.895	2211.4	5891.86	95.0300:62.0000	K-2	INOUT	I2C bus n13 - SDA line
SCL_pad<12>	3533.895	2136.6	5891.86	95.0300:62.0000	J-4	OUT	I2C bus n12 - SCL line
SDA_pad<12>	3533.895	2061.8	5891.86	95.0300:62.0000	J-3	INOUT	I2C bus n12 - SDA line
SCL_pad<11>	3533.895	1987	5891.86	95.0300:62.0000	J-2	OUT	I2C bus n11 - SCL line
SDA_pad<11>	3533.895	1912.2	5891.86	95.0300:62.0000	J-1	INOUT	I2C bus n11 - SDA line
SCL_pad<10>	3533.895	1837.4	5891.86	95.0300:62.0000	H-4	OUT	I2C bus n10 - SCL line
SDA_pad<10>	3533.895	1762.6	5891.86	95.0300:62.0000	H-3	INOUT	I2C bus n10 - SDA line
SCL_pad<9>	3533.895	1687.8	5891.86	95.0300:62.0000	H-2	OUT	I2C bus n9 - SCL line
SDA_pad<9>	3533.895	1613	5891.86	95.0300:62.0000	H-1	INOUT	I2C bus n9 - SDA line
SCL_pad<8>	3533.895	1538.2	5891.86	95.0300:62.0000	G-4	OUT	I2C bus n8 - SCL line
SDA_pad<8>	3533.895	1463.4	5891.86	95.0300:62.0000	G-3	INOUT	I2C bus n8 - SDA line
SCL_pad<7>	3533.895	1388.6	5891.86	95.0300:62.0000	G-2	OUT	I2C bus n7 - SCL line
SDA_pad<7>	3533.895	1313.8	5891.86	95.0300:62.0000	G-1	INOUT	I2C bus n7 - SDA line
SCL_pad<6>	3533.895	1239	5891.86	95.0300:62.0000	F-3	OUT	I2C bus n6 - SCL line
SDA_pad<6>	3533.895	1164.2	5891.86	95.0300:62.0000	E-3	INOUT	I2C bus n6 - SDA line
SCL_pad<5>	3533.895	1089.4	5891.86	95.0300:62.0000	F-2	OUT	I2C bus n5 - SCL line
SDA_pad<5>	3533.895	1014.6	5891.86	95.0300:62.0000	F-1	INOUT	I2C bus n5 - SDA line
SCL_pad<4>	3533.895	939.79	5891.86	95.0300:62.0000	D-3	OUT	I2C bus n4 - SCL line
SDA_pad<4>	3533.895	864.98	5891.86	95.0300:62.0000	C-3	INOUT	I2C bus n4 - SDA line
SCL_pad<3>	3533.895	790.17	5891.86	95.0300:62.0000	E-2	OUT	I2C bus n3 - SCL line
SDA_pad<3>	3533.895	715.36	5891.86	95.0300:62.0000	E-1	INOUT	I2C bus n3 - SDA line
SCL_pad<2>	3533.895	640.55	5891.86	95.0300:62.0000	D-2	OUT	I2C bus n2 - SCL line
SDA_pad<2>	3533.895	565.74	5891.86	95.0300:62.0000	D-1	INOUT	I2C bus n2 - SDA line

SCL_pad<1>	3533.895	490.93	5891.86	95.0300:62.0000	C-2	OUT	I2C bus n1 - SCL line
SDA_pad<1>	3533.895	416.12	5891.86	95.0300:62.0000	C-1	INOUT	I2C bus n1 - SDA line
SCL_pad<0>	3533.895	341.31	5891.86	95.0300:62.0000	B-2	OUT	I2C bus n0 - SCL line
SDA_pad<0>	3533.895	266.5	5891.86	95.0300:62.0000	B-1	INOUT	I2C bus n0 - SDA line
DVDD	3333.5	66.105	5891.86	62.0000:95.0300	multiple	-	Perifery Power
DVSS	3258.69	66.105	5891.86	62.0000:95.0300	multiple	-	Perifery Ground
GPIO_pad<31>	3183.88	66.105	5891.86	62.0000:95.0300	A-1	INOUT	General purpose I/O pad n31
GPIO_pad<30>	3109.07	66.105	5891.86	62.0000:95.0300	A-2	INOUT	General purpose I/O pad n30
GPIO_pad<29>	3034.26	66.105	5891.86	62.0000:95.0300	A-3	INOUT	General purpose I/O pad n29
VDD	2959.45	66.105	5891.86	62.0000:95.0300	multiple	-	Digital Power
GND	2884.64	66.105	5891.86	62.0000:95.0300	multiple	-	Digital Ground
GPIO_pad<28>	2809.83	66.105	5891.86	62.0000:95.0300	B-3	INOUT	General purpose I/O pad n28
GPIO_pad<27>	2735.02	66.105	5891.86	62.0000:95.0300	A-4	INOUT	General purpose I/O pad n27
GPIO_pad<26>	2660.21	66.105	5891.86	62.0000:95.0300	B-4	INOUT	General purpose I/O pad n26
GPIO_pad<25>	2585.4	66.105	5891.86	62.0000:95.0300	C-4	INOUT	General purpose I/O pad n25
GPIO_pad<24>	2510.6	66.105	5891.86	62.0000:95.0300	A-5	INOUT	General purpose I/O pad n24
GPIO_pad<23>	2435.8	66.105	5891.86	62.0000:95.0300	B-5	INOUT	General purpose I/O pad n23
GPIO_pad<22>	2361	66.105	5891.86	62.0000:95.0300	C-5	INOUT	General purpose I/O pad n22
GPIO_pad<21>	2286.2	66.105	5891.86	62.0000:95.0300	A-6	INOUT	General purpose I/O pad n21
GPIO_pad<20>	2211.4	66.105	5891.86	62.0000:95.0300	B-6	INOUT	General purpose I/O pad n20
GPIO_pad<19>	2136.6	66.105	5891.86	62.0000:95.0300	C-6	INOUT	General purpose I/O pad n19
GPIO_pad<18>	2061.8	66.105	5891.86	62.0000:95.0300	A-7	INOUT	General purpose I/O pad n18
GPIO_pad<17>	1987	66.105	5891.86	62.0000:95.0300	B-7	INOUT	General purpose I/O pad n17

DVDD	1912.2	66.105	5891.86	62.0000:95.0300	multiple	-	Perifery Power
DVSS	1837.4	66.105	5891.86	62.0000:95.0300	multiple	-	Perifery Ground
GPIO_pad<16>	1762.6	66.105	5891.86	62.0000:95.0300	C-7	INOUT	General purpose I/O pad n16
GPIO_pad<15>	1687.8	66.105	5891.86	62.0000:95.0300	A-8	INOUT	General purpose I/O pad n15
GPIO_pad<14>	1613	66.105	5891.86	62.0000:95.0300	B-8	INOUT	General purpose I/O pad n14
GPIO_pad<13>	1538.2	66.105	5891.86	62.0000:95.0300	C-8	INOUT	General purpose I/O pad n13
GPIO_pad<12>	1463.4	66.105	5891.86	62.0000:95.0300	A-9	INOUT	General purpose I/O pad n12
DVDD	1388.6	66.105	5891.86	62.0000:95.0300	multiple	-	Perifery Power
DVSS	1313.8	66.105	5891.86	62.0000:95.0300	multiple	-	Perifery Ground
GPIO_pad<11>	1239	66.105	5891.86	62.0000:95.0300	B-9	INOUT	General purpose I/O pad n11
GPIO_pad<10>	1164.2	66.105	5891.86	62.0000:95.0300	C-9	INOUT	General purpose I/O pad n10
GPIO_pad<9>	1089.4	66.105	5891.86	62.0000:95.0300	A-10	INOUT	General purpose I/O pad n9
GPIO_pad<8>	1014.6	66.105	5891.86	62.0000:95.0300	B-10	INOUT	General purpose I/O pad n8
GPIO_pad<7>	939.79	66.105	5891.86	62.0000:95.0300	C-10	INOUT	General purpose I/O pad n7
GPIO_pad<6>	864.98	66.105	5891.86	62.0000:95.0300	A-11	INOUT	General purpose I/O pad n6
GPIO_pad<5>	790.17	66.105	5891.86	62.0000:95.0300	B-11	INOUT	General purpose I/O pad n5
GPIO_pad<4>	715.36	66.105	5891.86	62.0000:95.0300	C-11	INOUT	General purpose I/O pad n4
GPIO_pad<3>	640.55	66.105	5891.86	62.0000:95.0300	A-12	INOUT	General purpose I/O pad n3
GPIO_pad<2>	565.74	66.105	5891.86	62.0000:95.0300	B-12	INOUT	General purpose I/O pad n2
GND	490.93	66.105	5891.86	62.0000:95.0300	multiple	-	Digital Ground
VDD	416.12	66.105	5891.86	62.0000:95.0300	multiple	-	Digital Power
GPIO_pad<1>	341.31	66.105	5891.86	62.0000:95.0300	A-13	INOUT	General purpose I/O pad n1
GPIO_pad<0>	266.5	66.105	5891.86	62.0000:95.0300	B-13	INOUT	General purpose I/O pad n0

PACKAGE OUTLINE

LFBGA 12x12x1.2 196 2R14x14 PITCH 0.8 BALL 0.5



DIMENSIONS

SYMBOL	MILLIMETER		
	MIN.	NOM.	MAX.
A			1.70
A1	0.27		
A2		1.08	
A3		0.28	
b	0.45	0.50	0.55
D	11.85	12.00	12.15
D1		10.40	
e		0.80	
E	11.85	12.00	12.15
E1		10.40	
F		0.80	
ddd			0.12
eee			0.15
fff			0.08