

8	7	6	5	4	3	2	1		
NOTES: UNLESS OTHERWISE SPECIFIED						REVISIONS			
						REV	DESCRIPTION	DATE	APPROVED
F	<div>1. MAT'L: Copper clad plated sheet per MIL-P-13949/4, Type GFM,<div>A. Copper Weight:<div>a) Outer Layers 1.5 OZ.</div>b) Inner Plane Layers 1 OZ.</div>c) Inner Signal Layers 1 OZ.</div> <div>B. Laminate using Pre-Preg Material Per MIL-P-13949/12, Type PC-GF. Tg minimum 170 deg C.</div>								

2. Overall Board thickness to be .093 +/- .009.

3. Unless otherwise specified all hole dimensions apply after plating. All plated through holes to have a minimum of .001 copper.

4. All holes shall be located within .003 diameter of true position. Layer to layer registration shall be within .005. All holes surrounded by land shall have a minimum annular ring of .001. Tangency on holes with breakout is acceptable.

5. Conductor widths and spacing shall be within +/- 20% of artwork originals.

6. Apply solder mask (liquid photo imageable) over bare copper, solder mask to be per IPC-SM-84D, Type B, Class 3, Color: Transparent Green. All exposed conductive surfaces to be solder coated.

7. Ware or twist of board shall not exceed .0075 inch per inch.

Drill Chart

Qty	Size	Sym	Plated	Tolerance
2	0.026	+	Yes	+/-0.003
21	0.030	X	Yes	+/-0.003
16	0.039	□	Yes	+0/-0.039
124	0.047	◇	Yes	+0/-0.047
6	0.073	⊗	Yes	+0/-0.073
16	0.079	⊗	Yes	+0/-0.079

LAYER STACK-UP

SILKSCREEN (TOP)

SOLDERMASK (TOP)

LAYER 1 (Signal) 0.001 Cu (1.022 OZ)

Core 0.013

LAYER 2 (Signal) 0.001 Cu (1.022 OZ)

SOLDERMASK (BOTTOM)

SILKSCREEN (BOTTOM)

DRILL PATTERN

 F || E | E |
D	D						
C	C						
B	B						
A	A						
DRAWN DATE ENGINEER DATE CHECKED DATE APPROVED DATE ISSUED DATE TITLE SIZEC CAGE CODE DWG NO REV A SCALE 1 : 1 SHEET 1 OF 1							
8	7	6	5	4	3	2	1

8

7

6

5

4

3

2

1

NOTES: UNLESS OTHERWISE SPECIFIED

1. This is a static sensitive assembly- use static eliminating measures during assembly and handling.

2. Manufacture to IPC 610A workmanship standards.

3. Trim component leads within .062 from solder side of PWA with exception of indicated area, which must be trimmed to .010 +/- .010

4. Apply part number and serial number labels in areas shown.

5. Install item 19 (120-1032-001 heat sink as follows:

A. Clean bottom surface of heat sink and mounting

B. Apply sufficient amount of Item 21 (120-1031-001), epoxy tube, to bottom of heat sink.

C. Apply Item 21, activator tube to mounting surface of Pentium Module

D. Mount heat sink onto Pentium Module and allow to sit for 30 seconds.

6. Discard nylon washer supplied with Item 16 (120-9958-002)

Parts List

Item No	Qty	Ref Des	Part Name	Description
	1	S?	100SP1T1B4M2QE	Switch
	1	J?	117340351	Connector
	1	MK?	CMA4544PFW	Microphone
	2	U1, U?	MODULE_DM-OLED	0.96" 128 X 64 MONOCHROME GRAPHIC OLED DISPLAY MODULE - I2C
1	1	PCB	PCB	
	2	J1, J?1	PDIP-32	NINA-W102, RP2040 Arduino Nano RP2040 Connect with Headers series ARM® Cortex®-M
	2	R1, R?	QFN50P400X400X9	Integrated Circuit
	1	LS1	SPKR_AST-03008M	SPEAKER .15W 8OHM 72DB 1400HZ

U?

U1

LS1

J?

Top-side View

J1

J?1

SCK-PB5-17-13
3v3
15-AREF
ADC-PC0-23-A0
ADC-PC1-24-A1
ADC-PC2-25-A2
ADC-PC3-26-A3
SDA-ADC-PC4-27-A4
SCL- ADC-PC5-28-A5
ADC-15-A7
5V
PC6-29-RST
GND
VIN

12-16-PB4-MISO
11-15-PB3-MOSI
10-14-PB2
9-13-PB1
8-12-PB0
7-11-PD7
6-10-PD6
5-9-PD5
4-2-PD4
3-1-PD3
2-32-PD2
GND
RST-29-PC6
RX-30-PD0-RX
TX-31-PD1-TX

Bottom-side View

REV

DESCRIPTION

DATE

APPROVED

REV

DESCRIPTION

DATE

APPROVED

Item No

Qty

Ref Des

Part Name

Description

U?

U1

LS1

J?

Top-side View

J1

J?1

SCK-PB5-17-13
3v3
15-AREF
ADC-PC0-23-A0
ADC-PC1-24-A1
ADC-PC2-25-A2
ADC-PC3-26-A3
SDA-ADC-PC4-27-A4
SCL- ADC-PC5-28-A5
ADC-15-A7
5V
PC6-29-RST
GND
VIN

12-16-PB4-MISO
11-15-PB3-MOSI
10-14-PB2
9-13-PB1
8-12-PB0
7-11-PD7
6-10-PD6
5-9-PD5
4-2-PD4
3-1-PD3
2-32-PD2
GND
RST-29-PC6
RX-30-PD0-RX
TX-31-PD1-TX

Bottom-side View

DRAWN

DATE

TITLE

ENGINEER

DATE

TITLE

CHECKED

DATE

TITLE

APPROVED

DATE

SIZE

CAGE CODE

DWG NO

REV

ISSUED

DATE

SCALE 1 : 1

SHEET 1 OF 1

8

7

6

5

4

3

2

1

F

E

D

C

B

A

F

E

D

C

B

A