

Game, simulator, gift - development of logical thinking.

The game is designed to develop logical thinking in children, and can also be used as a Kit - as a board for learning programming in the C language and working with microcontrollers from Microchip Corporation.

The game can be a gift for a child to learn logical thinking, and a gift for an engineer, developer, electronics engineer, programmer on the desktop for minutes of rest and training logical thinking.

The game is a touch panel with light indication of the status and operating mode. The game can be controlled directly from the panel by touching the touch buttons or using the serial port of the computer with a simple command system.

Functional Diagram.SchDoc
Functional Diagram

Assembly.SchDoc
Assembly

Additional Documents.SchDoc
Additional documents

Table Of Contents.SchDoc
Table Of Contents

ProjName - Назва проекту. Project name.

ProjVersion - Помочна версія проекту. The current version of the project.

BoaName - Скорочена назва друкованої плати. Shortened the name of the printed board.

BoaVersion - Помочна версія друкованої плати. The current version of the printed board.

Checked - Ім'я та прізвище перевірюючого проекту. The first and last name of the inspection project.

Designer - Дизайнер проекту друкованої плати. Designer of the PCB project.

Project - Код проекту НЕЗМІНЮВАТИ! The project code is not changed!

ПРОЕКТУВАЛЬНІ МІРКУВАННЯ
DESIGN CONSIDERATIONS

ПРИМІТКА ДИЗАЙНУ:
приклад тексту для нотаток з налагодження проєкту.

DESIGN NOTE:
Example text for debug notes.

Зразки для копіювання.
Samples to copy.

Project - 2024-LogicGates4-00B1-PCB-R04

ПРИМІТКА ДИЗАЙНУ
Приклад тексту для нотаток з налагодження проєкту.

DESIGN NOTE
Example text for debug notes.

ПРИМІТКА ДИЗАЙНУ
Приклад тексту для інформаційних нотаток дизайну.

DESIGN NOTE
Example text for informational design notes.

ПРИМІТКА ДИЗАЙНУ
Приклад тексту для критичних приміток щодо дизайну.

DESIGN NOTE
Example text for critical design notes.

ПРИМІТКА ДО МАКЕТУ ДП
Приклад тексту для застережливих приміток щодо макету друкованої плати.

LAYOUT NOTE
Example text for cautionary design notes.

ПРИМІТКА ДИЗАЙНУ:
Приклад тексту для застережливих приміток щодо дизайну.

DESIGN NOTE
Example text for cautionary design notes.

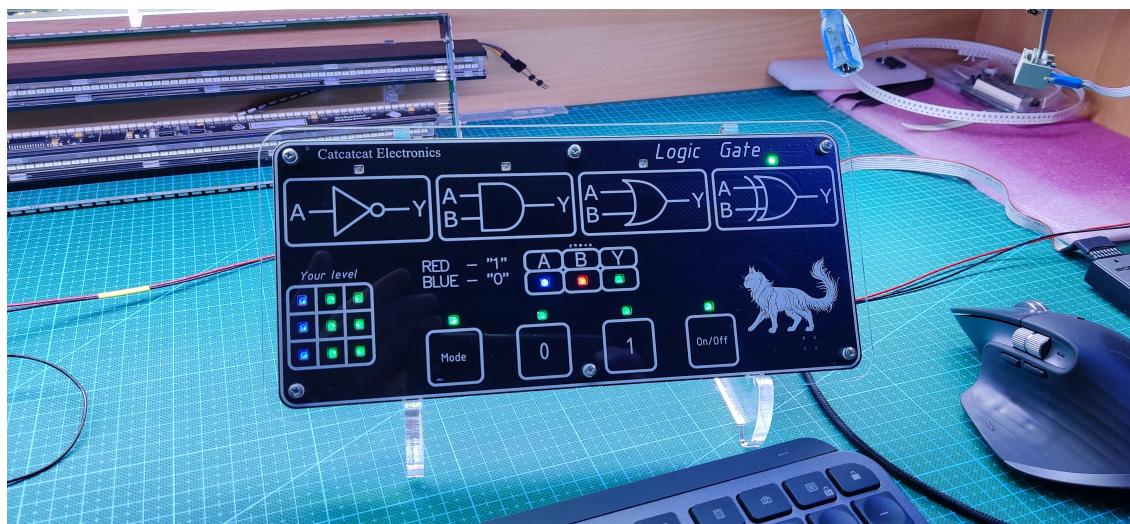
ПРИМІТКА ДИЗАЙНУ:
Приклад тексту для критичних приміток щодо дизайну.

DESIGN NOTE:
Example text for critical design notes.

ПРИМІТКА ДО МАКЕТУ ДП:
Приклад тексту для критичних вказівок щодо макету друкованої плати.

LAYOUT NOTE:
Example text for critical layout guidelines.

Project appearance



Designed for: Catcatcat Etsy	
Project Title: LogicGates4	Project ID: 2024-LogicGates4-00B1-PCB-R04
Project Version: 00B1	Lead Project: Lead_Catcatcat
PCB Name: PCB	Engineer SCH: SCH_Catcatcat
PCB Revision: 04	Engineer PCB: PCB_Catcatcat
Sheet Title: Logic_Gates_4.PrjPcb	Inspection PRJ: Ins_Catcatcat
Assembly Variant: [No Variations]	
Date: Sat, 1, 11, 25 Time: 9:37:03 AM	Sheet 1 of 10
File: ProjectDescription.SchDoc	Size: A3
Development company Catcatcat Electronics Ukraine, Dnipro, Avenue Mira catcatcat.electronics@gmail.com +380 50 575-98-63 Note	



Additional Documents

Links to additional project documents.

Document's name/Назва документу (Document link)

[Project Home Page](#)

[Customer requirement, technical assignment](#)

[Project architecture](#)

[Github Logic Gates](#)

[Catcatcat electronics WEB](#)

[Text/link](#)

Note: Links to additional technical documents used in the project.

Designed for: Catcatcat Etsy	
Project Title: LogicGates4	Project ID: 2024-LogicGates4-00B1-PCB-R04
Project Version: 00B1	Lead Project: Lead_Catcatcat
PCB Name: PCB	Engineer SCH: SCH_Catcatcat
PCB Revision: 04	Engineer PCB: PCB_Catcatcat
Sheet Title: Additional Documents	Inspection PRJ: Ins_Catcatcat
Assembly Variant: [No Variations]	
Date: Sat, 1, 11, 25 Time: 9:37:03 AM	Sheet 2 of 10 Size: A3
File: Additional Documents.SchDoc	Note +380 50 575-98-63 catcatcat.electronics@gmail.com



Assembly

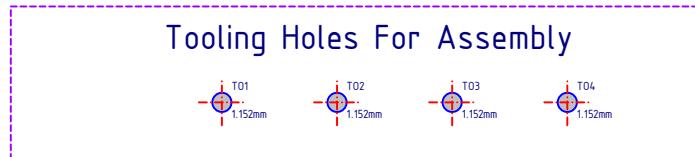
Board Assembly Components

A



Place of marking of the PCB manufacturer

JLCJLCJLCJLC



Round Nut M2.5mm



Symbols for marking on a printed circuit board.



Додати або видалити компоненти друкованої плати

Add or remove PCB components

Designed for: Catecat Etsy

Project Title: LogicGates4

Project ID: 2024-LogicGates4-00B1-PCB-R04

Project Version: 00B1

Lead Project: Lead Catecat

PCB Name: PCB

Engineering SCH: SCH Catecat

PCB Revision: 04

Engineering PCB: PCB Catecat

Sheet Title: Assembly

Inspection PRJ: Ins Catecat

Assembly Variant: [No Variations]

File: Assembly.SchDoc

Development company:
Catecat Electronics
Ukraine, Dnipro, Avenue Mira
catecat.electronics@gmail.com
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Note:



Table Of Contents

List of project sheets.

TABLE OF CONTENTS

Sheet NO:	Sheet name	Notes
1	ProjectDescription.SchDoc	Brief description of the project and purpose of notes.
2	Additional Documents.SchDoc	Links to documents used and project development notes.
3	Assembly.SchDoc	Standard components used in the PCB assembly process.
4	Table Of Contents.SchDoc	Document with a brief description of the purpose of the sheets.
5	Functional Diagram.SchDoc	Project block diagram with common components.
6	Power	Power Management Module.
7	MCU	Microcontroller module.
8	Sound	Interactive tactile and audio feedback module.
9	Display	Interactive light feedback module.
10	Touch Sensors	Capacitive touch buttons.
11	****	****
12	****	****
13	****	****
14	****	****
15	****	****
16	****	****
17	****	****
18	****	****
19	****	****
20	****	****
21	****	****
22	****	****

Designed for: **Catcatcat Etsy**

Project Title: LogicGates4	Project ID: 2024-LogicGates4-00B1-PCB-R04	Development company <i>Catcatcat Electronics</i> Ukraine, Dnipro, Avenue Mira catcatcat_electronics@gmail.com +380 50 575-98-63 <i>Note</i>
Project Version: 00B1	Lead Project: Catcatcat	
PCB Name: PCB	Engineer SCH: Catcatcat	
PCB Revision: 04	Engineer PCB: PCB Catcatcat	
Sheet Title: Table Of Contents	Inspection PRJ: Ins Catcatcat	
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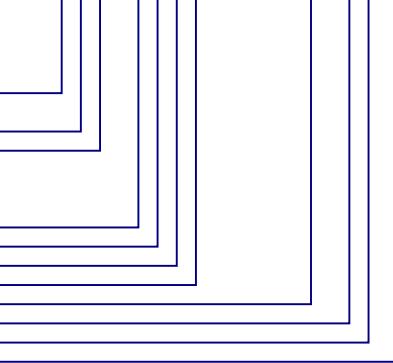
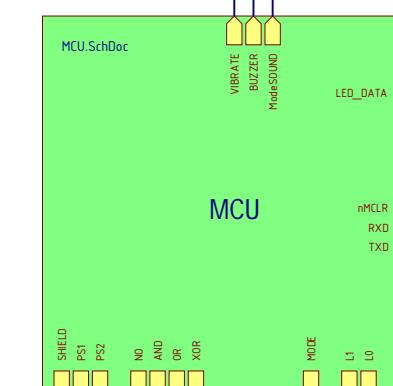
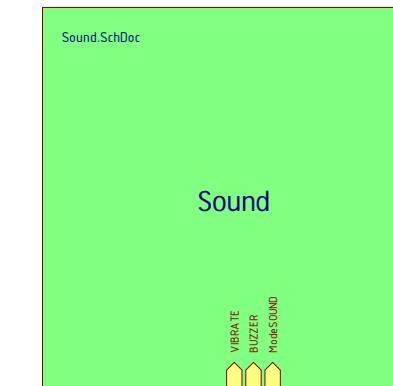
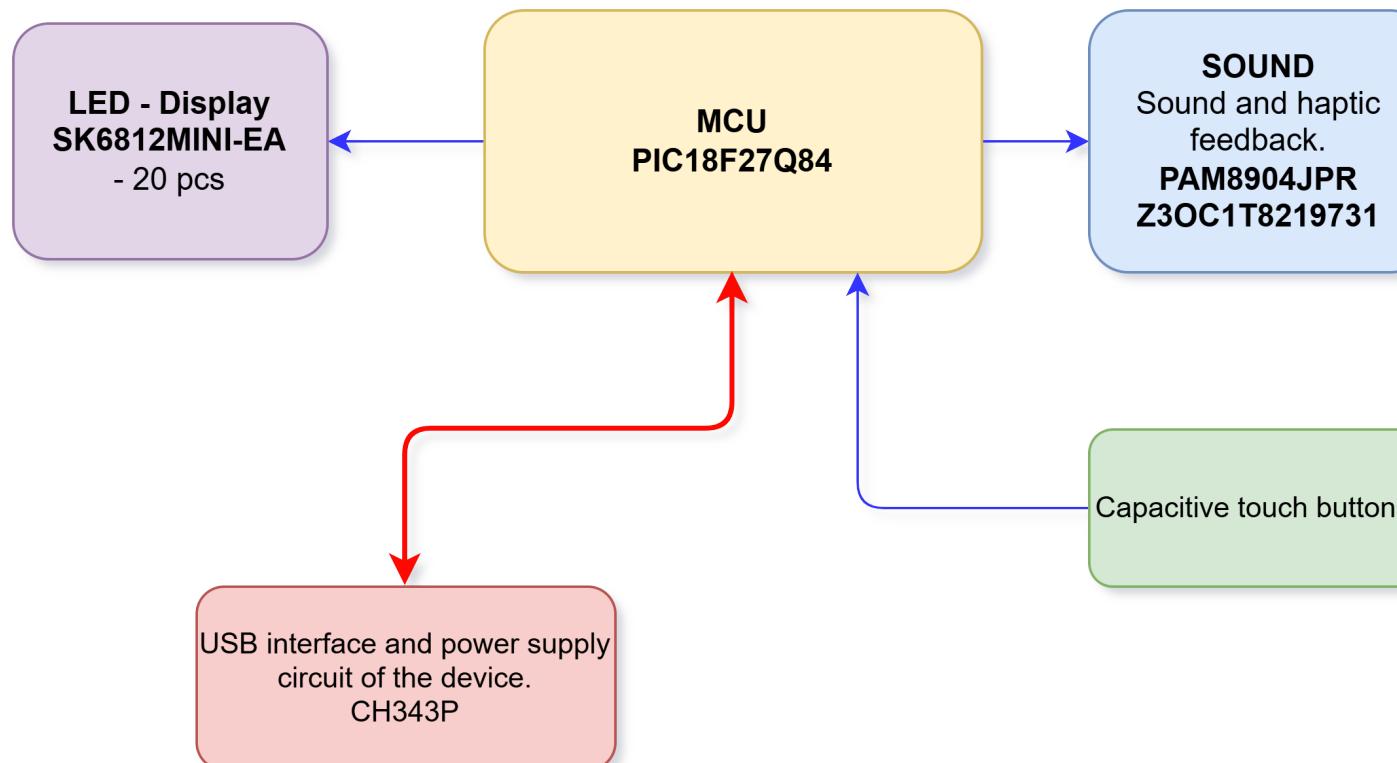


Functional Diagram

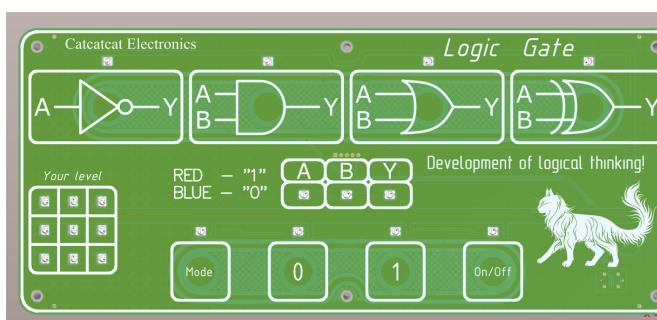
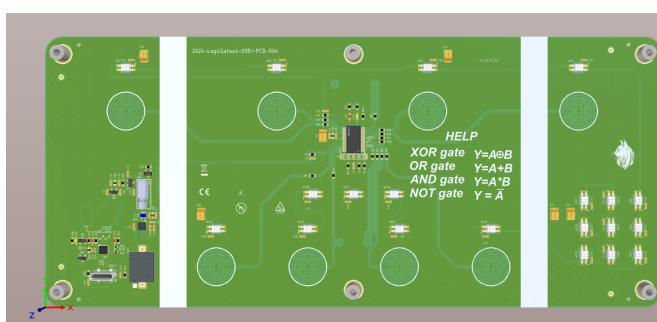
Project flowchart.

Catcatcat Electronics

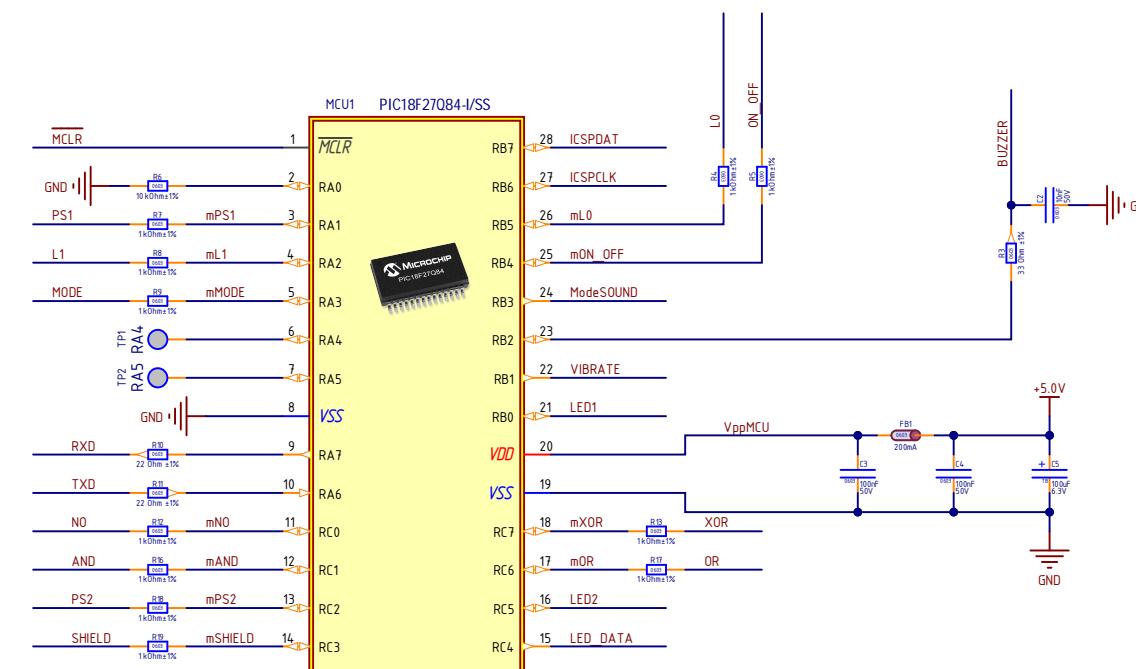
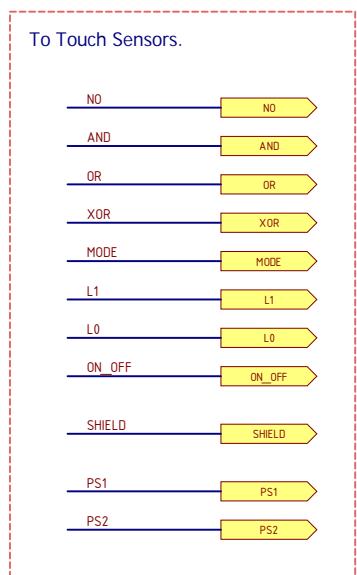
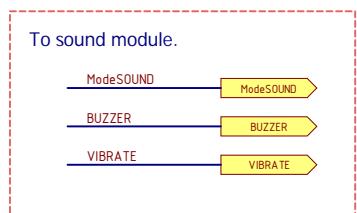
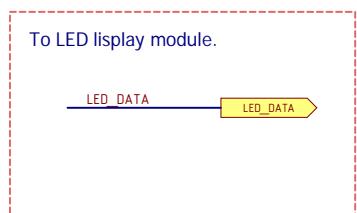
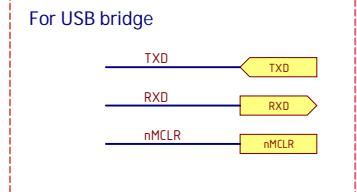
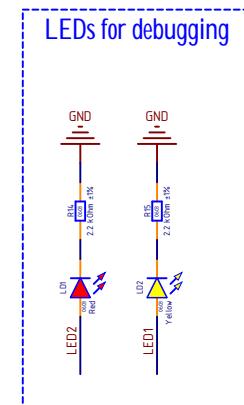
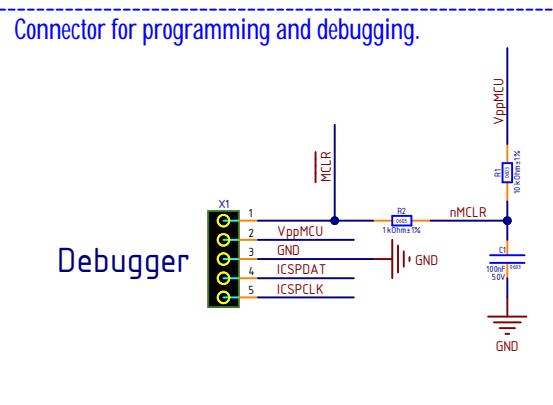
Design, development, small-scale production.



Designed for: Catcatcat Etsy	
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Project Version:	00B1
PCB Name:	PCB
PCB Revision:	04
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File:	Functional Diagram.SchDoc
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Lead Project:	Catcatcat
Engineer SCH:	Catcatcat
Engineer PCB:	Catcatcat
Inspection PRJ:	Catcatcat
Inspection Ins:	Catcatcat
Development company	
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Ukraine, Dnipro, Avenue Mira	
catcatcat_electronics@gmail.com	
+380 50 575-98-63	
Note	



Debugger



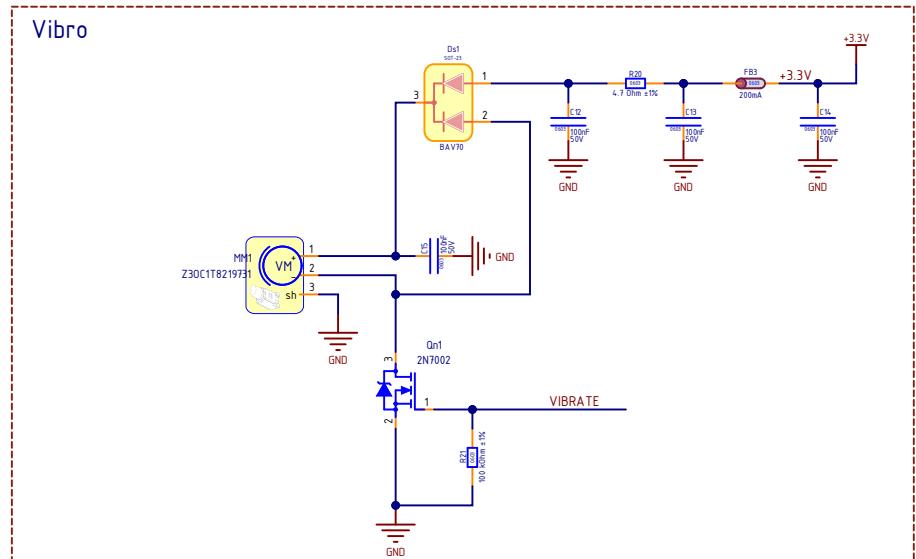
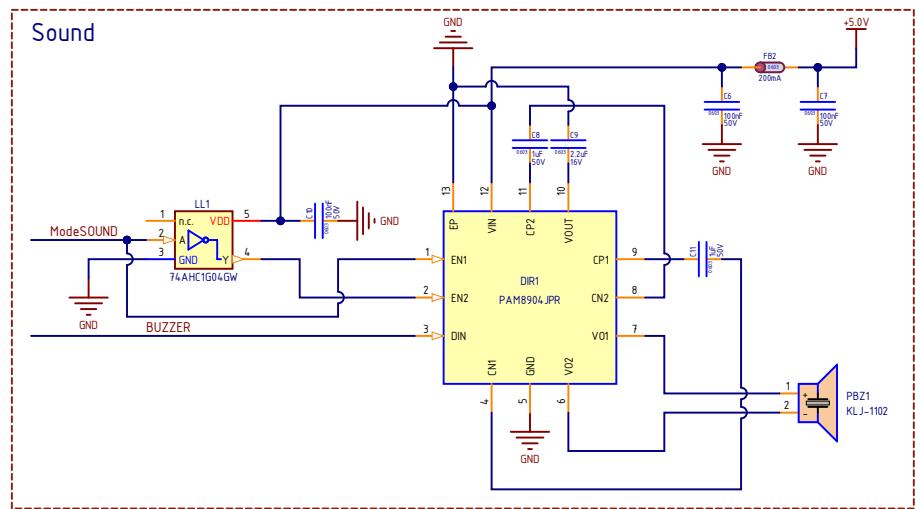
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Project Title:	LogicGates4	Project ID:	2024-LogicGates4-00B1-PCB-R04
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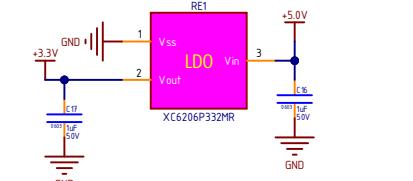


Sound

Interactive tactile and audio feedback module.



LDO for vibration drive.



Designed for: Catecat Etsy

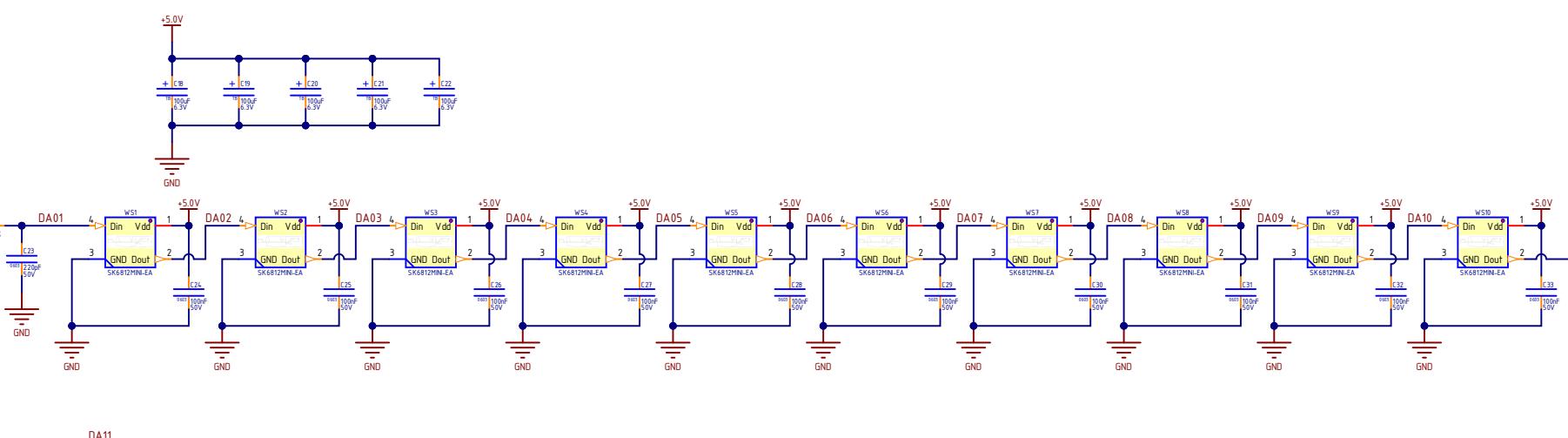
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Project Version: 00B1	Lead Project: Catecat
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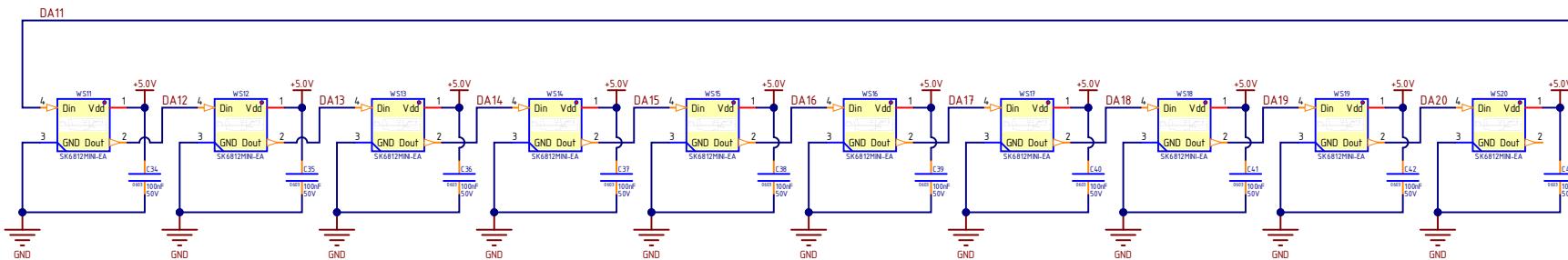
Display

Interactive lightfeedback module.

A



B



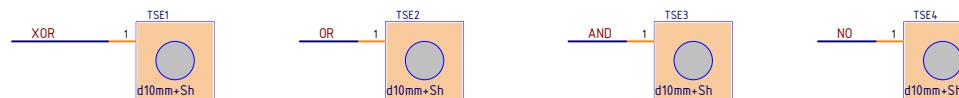
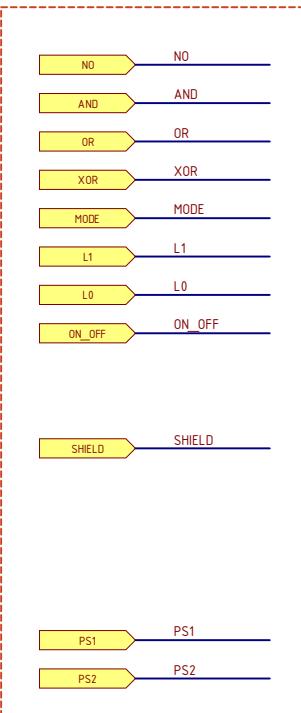
Designed for: **Catcatcat Etsy**

Project Title: LogicGates4-00B1-PCB-R04	Project ID: 2024-LogicGates4-00B1-PCB-R04	Development company
Project Version: 00B1	Lead Project: Catcatcat	<i>Catcatcat Electronics</i>
PCB Name: PCB	Engineer SCH: Catcatcat	<i>Ukraine, Dnipro, Avenue Mira</i>
PCB Revision: 04	Engineer PCB: PCB Catcatcat	<i>catcatcat.electronics@gmail.com</i>
Sheet Title: Display	Inspection PRJ: Ins Catcatcat	+380 50 575-98-63
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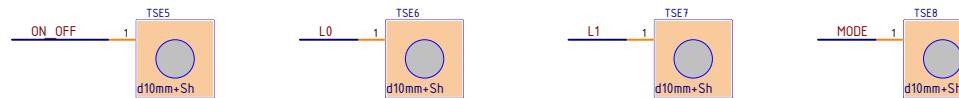


Touch Sensors

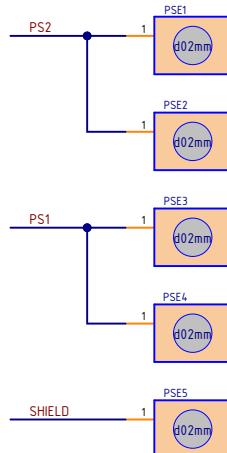
Capacitive touch buttons.



Operating mode, selection of logical response state, device shutdown button.



Proximity sensors and protective screen.



Designed for: Catecatat Etsy

Project Title: LogicGates4	Project ID: 2024-LogicGates4-00B1-PCB-R04	Development company
Project Version: 00B1	Lead Project: Lead Catecatat	Catecatat Electronics
PCB Name: PCB	Engineer SCH: SCH Catecatat	Ukraine, Dnipro, Avenue Mira
PCB Revision: 04	Engineer PCB: PCB Catecatat	catecatat.electronics@gmail.com
Sheet Title: Touch Sensors	Inspection PRJ: Ins Catecatat	+380 50 575-98-63
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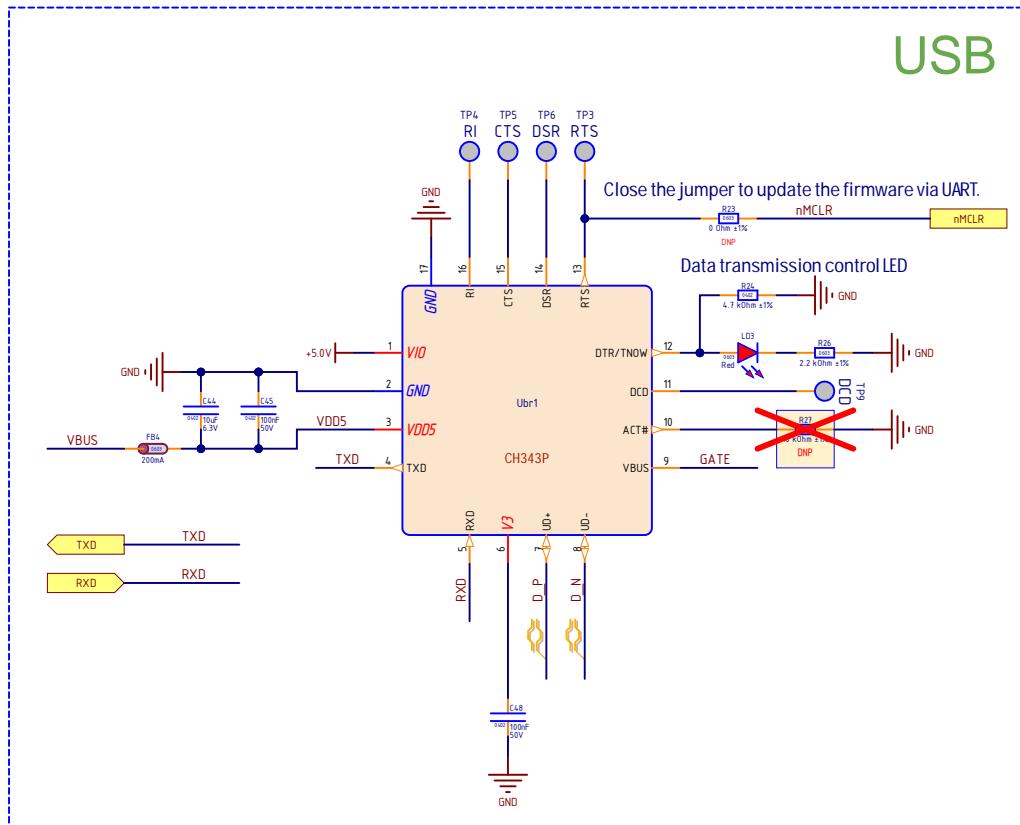
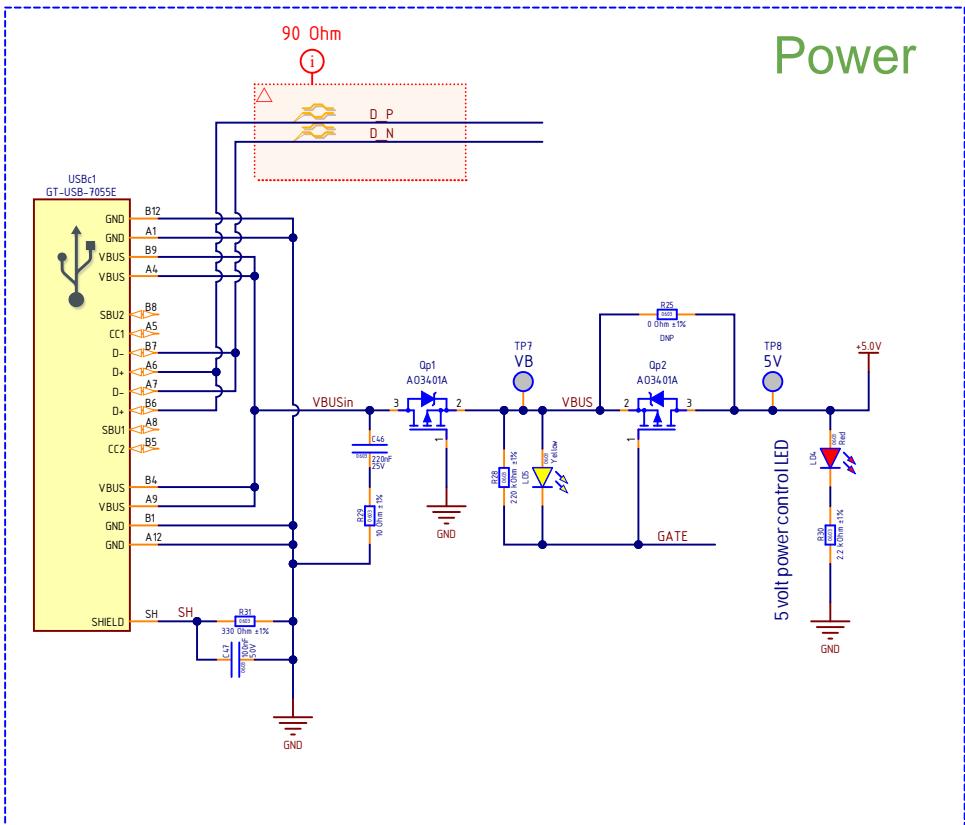


USB Power

Power, USB-bridge.

A

1



Designed for: **Catcatcat** [Etsy](#)

Project Title:	LogicGates4	Project ID:	2024-LogicGates4-00B1-PCB-R04
Project Version:	00B1	Lead Project:	Lead_Catcat
PCB Name:	PCB	Engineer SCD:	SCH_Catcat
PCB Revision:	04	Engineer PCB:	PCB_Catcat
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Date:	Sat, 1, 11, 25	Time:	9:37:04 AM
Sheet:	10	of	10
File:	USB_Power.SchDoc		



1

2

3

