LilyPad

User Manual

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Introduction

Congratulations on acquiring the **LilyPad** game console, a unique gaming system developed by students from **ALGOSUP**. This console represents a creative project that showcases the skills and dedication of its creators. Currently, it features a single game, **Frogger**, providing an engaging and nostalgic gaming experience.

This user manual will **guide you** through the **setup**, **operation**, and **maintenance** of your console, ensuring you can enjoy your time playing to the fullest. Designed for flexibility, the **LilyPad allows** you to **reprogram the system** to run your own custom games, which can be written in **Verilog**. With straightforward instructions, we aim to make your experience enjoyable, whether you're new to gaming or looking to experiment with game design and programming.

As you explore the capabilities of the LilyPad console, you will appreciate its innovative design that encourages **creativity** and **learning**. We hope you enjoy the process of reprogramming and **creating your games**, making the most of the unique opportunities this console offers.
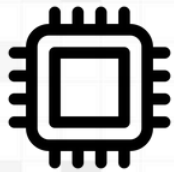
Happy gaming!

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Product Overview

FPGA Technology: Built on the Go-Board development board from Nandland for efficient performance.

VGA Connectivity: Enables seamless integration with various displays, to make the development easier.

7-Segment Displays: Provides real-time feedback, displaying information like score and game details.

Micro-USB Power: Convenient input for powering the console and uploading custom games, providing flexibility for both use and programming.
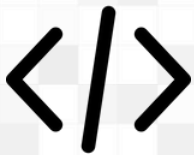
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Product Overview

Two Controllers: Connected via a **120cm** cable to permit a **multiplayer** gameplay.

Reprogrammable: Allows **custom** games to be programmed in **Verilog** and uploaded directly to the **LilyPad** for gameplay.

3D Printed: Customizable design for the console, enabling **easy replacement** of parts to **enhance functionality** and **aesthetics**.
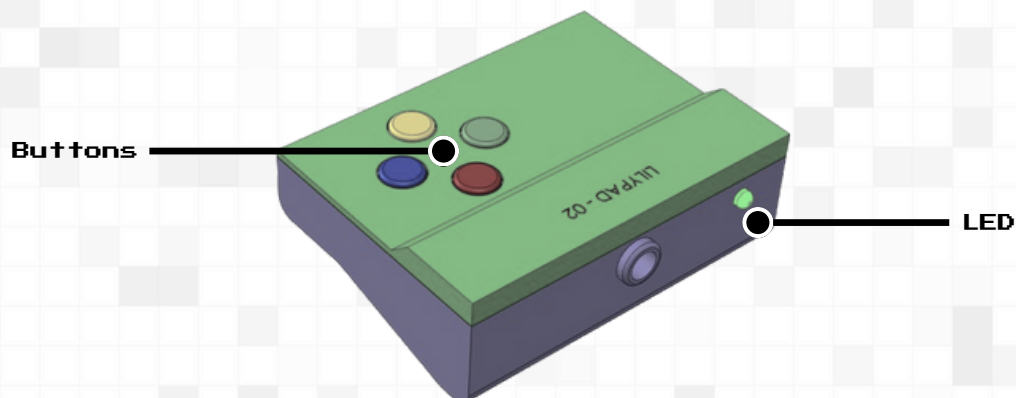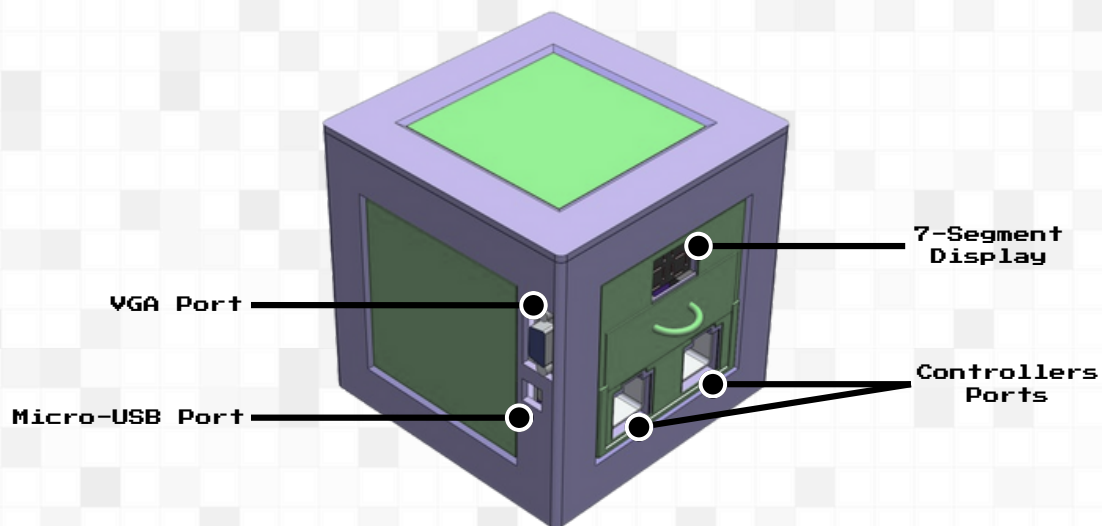
Retro Design: Combines nostalgic aesthetics with a custom design, reflecting the **influence of classic consoles** in its creation.

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Console & Controller

VGA Port

Micro-USB Port

7-Segment Display

Controllers Ports

Buttons

LED

LILYPAD-02

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Console Setup

1. **Power Up:** Insert the micro-USB power cable into the console and connect it to a power source.

2. **VGA Connection:** Attach the VGA cable to the console and your display device.

3. **Turn On the Display:** Power on your display device and select the appropriate VGA input.

4. **Connect the Controllers:** Plug the controller into the designated ports on the console.

5. **Start the Game:** Once everything is connected, you're ready to begin gameplay or reprogram the system.

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Troubleshooting

No Display on Screen:
- Check VGA Connection: Ensure the VGA cable is securely connected to both the console and the display.

- Power Supply: Verify the micro-USB power cable is properly connected and the power source is functioning.

- Input Source: Confirm the correct VGA input is selected on the display.

Controllers Not Responding:
- Secure Connection: Ensure the controller cables are fully inserted into the console ports.

- Check LED: If the controller's LED is not lit, the controller may not be receiving power. Try unplugging and reconnecting.

Unresponsive 7-Segment Displays:
- Restart Console: Power cycle the console by unplugging and reconnecting the micro-USB cable.

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Safety

Handle with Care:
Avoid **dropping** or mishandling the console and controllers to **prevent damage.**

Cables and Connections:
Be careful **not** to **tug or** sharply **bend** the VGA and controller cables. **Ensure** all **cables** are **securely connected** without forcing them into the ports.

Water Exposure:
Keep the console and controllers **away from liquids.** If exposed to water, disconnect the power and let the console dry completely before using it again.

Supervision:
Ensure young **children** are **supervised** when using the console, especially with cables and small parts.

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Contacts

If you experience **any issues** not covered in the manual or have **any questions**, please **add an issue to** our **GitHub** repository. We're here to help!

Additionally, **we invite you** to explore our GitHub repository, where you can **find** all the **information** about the LilyPad console. If you enjoy working with the console or have ideas for new features, **we encourage you to contribute!**

Don't forget to **give us a star** on GitHub to support our project and help others discover the LilyPad. Your contributions and feedback are greatly appreciated!

Sincerely,
LilyPad's Team

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