1.8 Inch GRBL Offline CNC Controller Board – Reliable Standalone CNC Control Solution

The **1.8 Inch GRBL Offline CNC Controller Board** is a compact, efficient, and user-friendly control device designed to make operating CNC machines easier and more flexible. Built for **offline CNC control**, this controller allows you to run G-code files directly from an SD card without keeping a computer connected during machining. It is an excellent upgrade or replacement controller for hobbyists, DIY makers, students, and professionals working with **CNC routers, laser engravers, and milling machines** powered by **GRBL firmware**.

Standalone Offline CNC Control

One of the biggest advantages of this **GRBL Offline CNC Controller** is its ability to operate completely **offline**. Once your G-code files are transferred to the SD card, the CNC machine can be controlled independently—no PC connection is required during operation. This improves reliability, reduces cable clutter, and protects your system from accidental disconnections or software interruptions.

The controller can **read up to 600 G-code files at a time**, making it easy to store multiple projects and switch between them quickly. This feature is especially useful in workshop environments where efficiency and convenience matter.

Easy File Transfer and SD Card Support

File management is simple and flexible. You can connect the controller to a computer via **USB** to transfer files directly or load G-code files onto the **SD card**, which reads files from the **root directory**. This dual file-transfer option ensures compatibility with different workflows and user preferences.

The included **SD card module** ensures smooth file access and stable data reading, allowing you to run engraving or cutting tasks without delays.

Full Compatibility with GRBL Firmware

This offline controller is **compatible with all versions of GRBL**, including **GRBL 1.1 firmware**, making it suitable for a wide range of CNC control boards. Whether you're upgrading an existing setup or building a new CNC machine, this controller integrates seamlessly.

The **adjustable baud rate** provides flexibility in communication settings, ensuring stable operation across different CNC systems and configurations.

Intuitive Button Controls for Axis Movement

The controller features clearly labeled buttons that allow **manual control of CNC axes**, making machine setup, calibration, and positioning simple and precise:

- **Press X+ / X-**: Move the X-axis left and right

- **Press Y+ / Y-**: Move the Y-axis forward and backward

- **Press Z+ / Z-**: Move the Z-axis up and down

This manual jogging functionality is ideal for setting work zero points, tool positioning, and testing movement before running a job.

Spindle Control and Quick Navigation

The controller also includes dedicated buttons for spindle operation:

- **Press SPIN**: Turn the spindle ON or OFF

- **Press SMOD**: Return or exit menus

These controls provide quick access to essential CNC functions, improving workflow efficiency and user safety.

Multi-Language Support

For added convenience, the controller supports **language switching**. Simply **press and hold Z+ for 5 seconds** to change the language to **English**, making it accessible to users worldwide.

Compact, Durable, and Lightweight Design

Designed with practicality in mind, the controller features a **compact form factor** with dimensions of **100 × 40 × 20 mm**. Its lightweight **plastic housing** provides durability while keeping the unit portable and easy to mount or handle.

The clean **white color** gives it a modern, professional look that fits well in any CNC setup.

Ideal Applications

The **1.8 Inch GRBL Offline CNC Controller Board** is perfect for:

- CNC routers

- Laser engraving machines

- DIY CNC projects

- Woodworking and PCB engraving

- Educational CNC training setups

- Hobby and small workshop CNC machines

Technical Specifications

- **Display Size:** 1.8 Inch

- **Compatibility:** All versions of GRBL

- **Operation Mode:** Offline CNC control

- **File Capacity:** Up to 600 G-code files

- **Storage:** SD card (root directory)

- **Material:** Plastic

- **Color:** White

- **Dimensions:** 100 × 40 × 20 mm

- **Baud Rate:** Adjustable

Package Includes

📦 **1 × GRBL Offline CNC Controller**
📦 **1 × IDC Flat Cable**
📦 **1 × SD Card Module**

Included Documentation & Software

- **GRBL 1.1 Firmware**

- **xLoader**

- **Candle 1.1.7 Software**

These tools help you configure, upload firmware, and manage CNC operations efficiently.

Why Choose the 1.8 Inch GRBL Offline CNC Controller Board?

The **1.8 Inch GRBL Offline CNC Controller Board** offers a perfect balance of **functionality, simplicity, and reliability**. Its offline operation, broad GRBL compatibility, intuitive controls, and compact design make it an essential accessory for anyone working with CNC machines. Whether you are a beginner or an experienced CNC user, this controller enhances productivity and ensures smooth, uninterrupted machining.

Upgrade your CNC setup today with this **high-quality GRBL offline controller** and enjoy greater control, flexibility, and convenience in every project.