iCode Duo 5200 Ultimate SE H1

Bring your original Atari 5200 controllers to life on modern devices — from PCs and Macs to Nintendo Switch, MiSTer FPGA, and beyond. The Duo 5200 Ultimate SE is a compact, screen-free adapter with two native Atari 5200 controller ports, configured entirely through the free iCodeHub web app.

iCode Duo 5200 Ultimate SE

No drivers needed. Just plug in and play.

Visit iCodeHub at **https://hub.icode.com** to configure your device — manage presets, set your button and keypad mappings, choose your emulation mode, and get the most out of your 5200 controllers!

For help and assistance: https://www.icode.com/support

Getting Started

Step 1. Plug the Duo 5200 Ultimate SE H1 into any USB port using the USB-C cable. No drivers needed — your device is recognized as a standard USB gamepad.

Step 2. Connect your Atari 5200 controller to either port. Port 1 is on the left, Port 2 on the right. Both ports work simultaneously, so two players can each use a full 5200 controller at once.

Step 3. Start playing! The default preset works with the 5200 Hand Controller right out of the box — analog stick, Fire A, Fire B, Start, Pause, Reset, and the full 12-key keypad.

Step 4. Open **iCodeHub** in your browser to configure everything. Because the SE has no on-screen menu, iCodeHub is where you set your presets, button and keypad mappings, sensitivity, emulation mode, and more — no software to install.

Know Your Device

Your Duo 5200 Ultimate SE H1 is a streamlined, screen-free adapter. It has two native Atari 5200 controller ports, a USB-C port on the bottom, and two programmable buttons — **Black** and **White**. There is no display and no on-device menu: all setup is done through the iCodeHub web app.

Configured Through iCodeHub

The SE has no on-device menu, so the free **iCodeHub** web app is where you configure everything. Connect the adapter, open iCodeHub in Chrome or Edge, click Connect, and sign in. From there you can:

- Choose the **device type** and settings for each port
- Remap the **fire buttons**, the **12-key keypad** (plus Start, Pause, Reset), and the two device buttons
- Adjust **stick sensitivity and acceleration**
- Set the **USB emulation mode** and **port mode**
- Turn on **mouse or keyboard emulation**
- Manage and name your **10 presets**, automatically backed up to the Cloud Vault

Your settings are saved on the adapter and remembered across power cycles — set it up once and it just works.

Supported Controllers

The Duo 5200 Ultimate SE is built specifically for the Atari 5200. Because the console is always Atari 5200, there's nothing to select — just set the port options in iCodeHub.

Hand Controller (CX-52) — the standard Atari 5200 controller: analog stick, dual fire buttons (Fire A and Fire B), Start, Pause, Reset, and the full 12-key keypad. The analog stick runs through the jitter-free pipeline for smooth, drift-free movement, with adjustable sensitivity and acceleration. Both ports can run a full Hand Controller at once — keypad included — for true two-player 5200. Fire A and Fire B are read independently, and every keypad key plus Start/Pause/Reset can be mapped to any gamepad button, directional action, or keyboard key.

The Two Device Buttons

The adapter has two buttons — **Black** and **White**. They're fully programmable: in iCodeHub, map each to any gamepad button (Start, Select, Coin, triggers, and more) or keyboard action, with up to 3 simultaneous functions each, and optional rapid fire.

The buttons also double as on-device controls that work without a computer:

- **Black + White** (held while plugging in the USB cable) — enter firmware-update mode.
- **Black** (held while plugging in the USB cable) — step to the next USB emulation mode.

USB Emulation Modes

If your platform isn't recognizing the adapter, try a different USB emulation mode. Change it in iCodeHub, or on the device by holding **Black** while plugging in to step to the next mode. Keep trying until you find the one that works for your platform:

Mode	Best For
Standard	Windows, Linux, emulators
Classic	Retro gaming platforms
Nintendo	Nintendo Switch
Legacy	Older basic HID systems
iOS	iPhone, iPad

Mouse & Keyboard Emulation

The 5200 analog stick can operate as a USB mouse, and any button can be mapped to keyboard keys. Turn these on and adjust their settings in **iCodeHub** under the USB and mouse options — including mouse sensitivity from Very Low (1×) up to Very High (8×). Changing mouse or keyboard modes may require the device to reboot since the USB descriptors need to change.

Presets

Your Duo 5200 Ultimate SE H1 stores **10 presets**. Each preset remembers your entire setup — device settings for both ports, all button and keypad mappings, rapid fire settings, USB emulation mode, port mode, and mouse/keyboard settings.

Preset 0 is always available. To unlock presets 1–9, register your device with iCodeHub. Manage, name, and switch between presets in the app, with automatic backup to your Cloud Vault.

Unlock the Full Potential — iCodeHub Web App

Since the Duo 5200 Ultimate SE has no on-device menu, the **iCodeHub** web app is the home for everything. This is where you manage all 10 presets with custom names, fine-tune stick sensitivity and acceleration, remap every button and keypad key with multi-action slots and rapid fire, enable mouse and keyboard emulation, set your emulation and port modes, and back up your configurations to the Cloud Vault.

The best part? There's nothing to install. iCodeHub runs right in your browser. Just open it in **Chrome** or **Edge**, click Connect, select your device, and sign in.

Visit: **https://hub.icode.com**

Firmware Updates

Via iCodeHub (Recommended)

Plug your adapter into USB, open your browser, and go to **https://hub.icode.com**. The app will let you know if an update is available — just follow the on-screen instructions.

Important: Your settings and presets are not preserved during updates. Save them to your iCodeHub Vault before updating, and reload them afterward.

On-Device Firmware Update

Hold **Black + White** while plugging in the adapter to enter firmware-update mode. The device appears as a USB drive, and iCodeHub device recovery can then install the firmware.

Troubleshooting

Your controller isn't detected. Make sure it's firmly plugged into the 5200 port. In iCodeHub, check that the port's device type is set correctly. Try the other port.

Your host device doesn't recognize the adapter. Try a different USB cable or port. Change the USB emulation mode in iCodeHub — or hold **Black** while plugging in to step through the modes. Standard works for most platforms, but some require Classic, Nintendo, Legacy, or iOS.

Buttons aren't responding. In iCodeHub, check the mappings for the two device buttons and for the controller's fire buttons and keypad. If something seems wrong, reset the adapter to defaults in iCodeHub to start fresh.

Mouse or keyboard not working on your host. In iCodeHub, make sure Mouse or Keyboard is set to On (not Off or Standby). Your host may need a reboot after the USB descriptors change. Try disconnecting and reconnecting the adapter.

You see two gamepad devices on your host. That's normal — the Duo 5200 SE presents two USB gamepads (one per port). If you only want one, set Ports Active to Port 1 Only or Port 2 Only in iCodeHub.

Platform Compatibility

Your adapter works with any device that supports USB HID gamepads:

PC — Windows, macOS, Linux **Mobile** — iOS, Android **FPGA** — MiSTer FPGA **Consoles** — Nintendo Switch, Steam Deck **SBC Retro** — RetroPie, Batocera, RetroArch, EmuElec, Recalbox

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Specifications

Spec	Detail
Processor	RP2350B dual-core, 200 MHz
Controller Ports	2× native Atari 5200
USB	USB-C, USB 2.0 Full Speed
USB HID Devices	Up to 4 (2 pads+mouse+kbd)
Display	None — configured via iCodeHub
Device Buttons	2 (Black, White)
Storage	On-board flash (LittleFS)
Power	USB bus-powered
Console	Atari 5200
Presets	10 device / 100 cloud

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