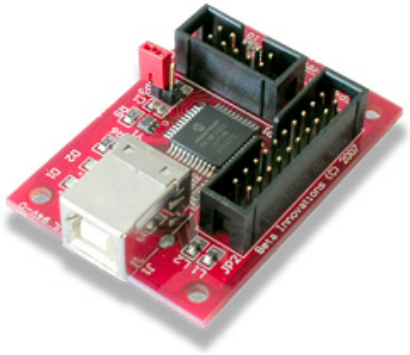


The Plasma-MM2™ USB adapter features 12-bit resolution on analog channels and fully software configurable.

Designed to provide human interface through a multitude of inputs such as throttle quads, yokes, rudder pedals, racing wheels, and configuration ease and flexibility through a straightforward and user-friendly Windows visual tool.

Full Speed USB HID compliant device, Plasma-MM2™ utilizes default drivers included with most operating systems and is DirectX compatible. Appears like a standard USB joystick to any PC.

Plasma-MM2™ devices use only high quality components and PCB resulting in an increased device longevity and stability.

Specifications:

- The Plasma-MM2™ device is a Full Speed USB HID compliant device, which employs default drivers supplied by most OS and powered by the USB Bus.
  - Benefit: *fully Plug & Play easy installation with no performance impact on the OS. No need for external power supply, reducing overall cost.*

- Analog Axis Input - 12-bit resolution (4095 steps) on all axis inputs. Supports a variety of input devices including, potentiometers, Hall-Effect sensors, and pressure transducers or force sensors for precise control.
  - Benefit: *compatibility with an extremely wide range of analog input components. This allows the builder to select the most appropriate input device: from Hall-Effect for extremely high precision and reliability down to simple potentiometers.*

- Digital Filtering Algorithm - Features a proprietary per channel adjustable *Recursive Moving Delta Sigma* filtering algorithm.
  - Benefit: *total elimination of input component noise, spike and jitter which is the result of potentiometer "age" or external interferences which cannot be reliably and efficiently eliminated with passive methods. The digital filter is the only reliable method which provides a noise-free and stable output throughout a wide bandwidth. (critical for sensitive control inputs such as joysticks and racing wheels)*

- Hardware Calibration / Tweaking - Calibration values are store on chip including trim and deadzone settings.
  - Benefit: *elimination of 3rd party calibration / tweaking software utilities. No need to re-calibrate in Windows when connecting module to new USB port or different PC's. Once calibration data is stored in hardware, the module becomes a true plug-n-play device ready to be used on any PC.*

- Button Inputs - 16 button inputs (Direct Input mode) or 64 buttons (Scan Matrix mode). Supports a variety of input devices including common switches: push buttons, toggles, etc. Various modes supported including master switch, pulsed, toggle and rotary.
  - Benefit: *multi-mode digital inputs easily add functionality. The active low inputs keep noise down, allowing for long-running non-shielded wires reducing costs while adding reliability and simplicity.*

- Rotary Encoder support - button inputs can be reconfigured for support of up to 8 rotary encoders.

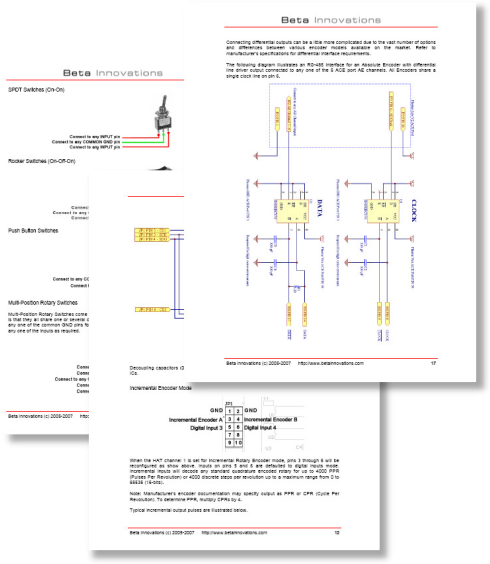
- Benefit: *added flexibility in input definition. No need for additional rotary decoder circuits. Just define the digital inputs as needed and you have a fully decoded and filtered input for multiple-type rotary encoders.*

- POV HAT Support - Digital 8-way POV HAT inputs configurable as 4 additional buttons.
  - Benefit: *it is possible to emulate any type of joystick and/or fine-tune functions to specific games/applications.*

- Flash Loader Mode - Incorporates a Flash Loader for easy firmware update via USB.
  - Benefit: *online firmware version checking provides Quick and Easy updates via USB. No need to buy a new module when new features become available.*

- SDK – All Plasma-Lite™ V2 functions can be easily accessed through custom applications. Samples are provided in various programming languages and fully documented.
  - Benefit: *allows developers complete flexibility and control through custom interfaces*.

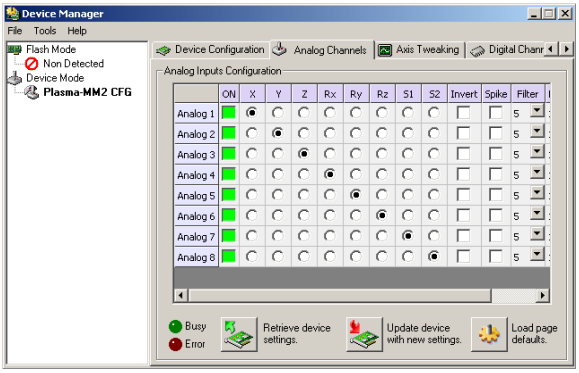
- Detailed User Manual – provides schematics and examples for all supported features through clear diagrams and easy to understand descriptions.
  - Benefit: *thorough documentation written with both the novice and advanced users in mind eliminating all wiring guesswork*.



- Windows configuration tool – All Plasma-MM2™ functions are easily configurable through a fully visual interface.
  - Benefit: *eliminates input "programming" errors and facilitates maintenance and fast customization. No need to learn new "programming languages" and maintain cryptic configuration files*.

Device Manager Windows Configuration Tool specifications:

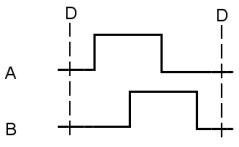
The Device Manager Windows configuration Tools uses a fully point-and-click, GUI environment that enable the configuration and control of all Plasma-MM2™ functions:



- Analog Channels:
  - Channel activation/deactivation
  - Axis mapping
  - Axis reversal
  - Spike filter
  - Digital filter level
  - Axis resolution

- Axis Tweaking:
  - Channel activation/deactivation
  - Min Trim
  - Deadzone
  - Max Trim
  - Axis Combining
  - Hardware Calibration (Automatic or Manual)

- Digital Channels:
  - Channel activation/deactivation
  - Master switch
  - Input Modes: Normal, Toggle, Pulse, Momentary, Rotary
  - Pulse width
  - Rotary Decoding:



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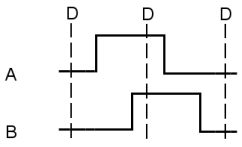

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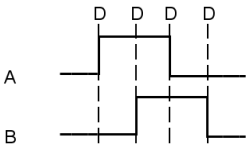

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- HAT Channel:
  - Channel activation/deactivation
  - Digital buttons input mode

Visit us at www.betainnovations.com and discover our new expansion modules and accessories.