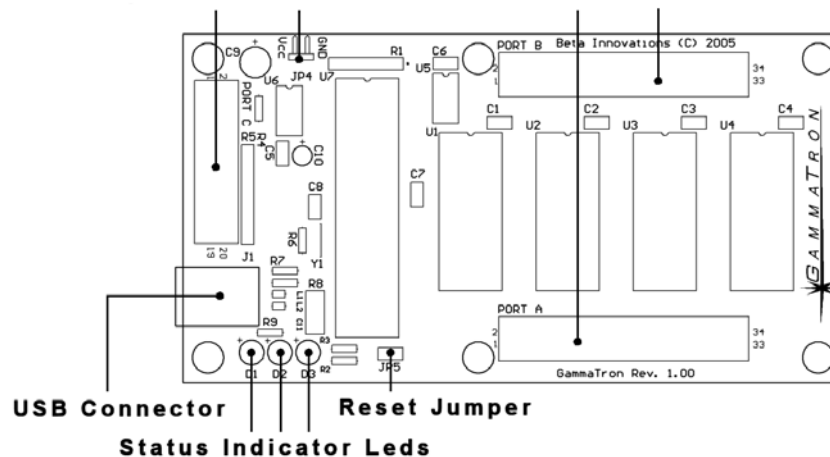The GammaTron™ USB module has been designed to provide hardware input such as switches, rotary encoders, digital circuitry and configuration ease and flexibility through a straightforward and user-friendly Windows visual tool.

When used with switches, the multiplexed inputs prevent phantom signals or "ghosting" and do not require individual diodes such as scan matrix designs simplifying wiring considerably.

GammaTron™ devices use only high quality components and PCB resulting in increased device longevity and stability. Advanced design protects against short circuits and over current.
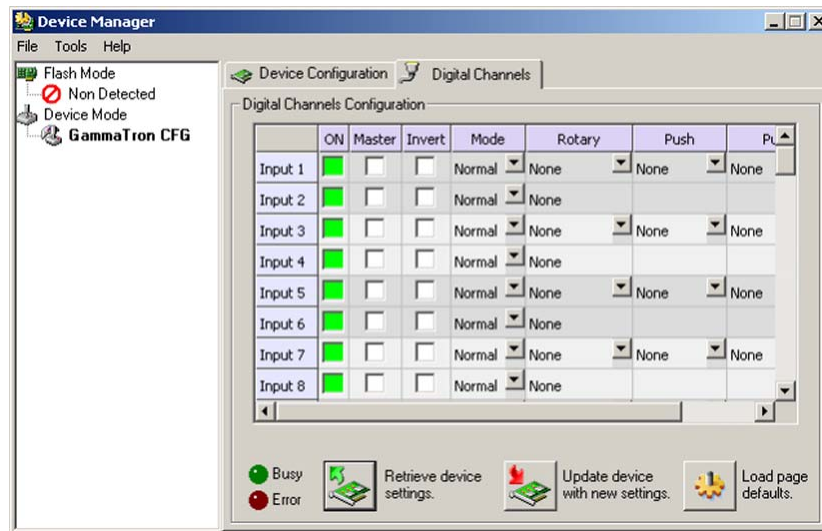

Features:

- Easy installation - The GammaTron™ 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.*

- 64 Digital Inputs - Supports a variety of input devices including common switches: push buttons, toggles, etc. Various modes supported including master switch, rotary and toggle.
  - Benefit: *direct digital inputs easily add functionality without the need for complicated diodes and multiplexed keyboard matrix circuits. The "active low" inputs keep noise down, allowing for long-running non-shielded wires reducing costs while adding reliability and simplicity.*

- Up to 32 rotary encoders supported with integrated switches - Gray Code with 1X, 2X and 4X decoding with Push-Pull, Hold & Turn or Toggle support for integrated switches.
  - 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.*
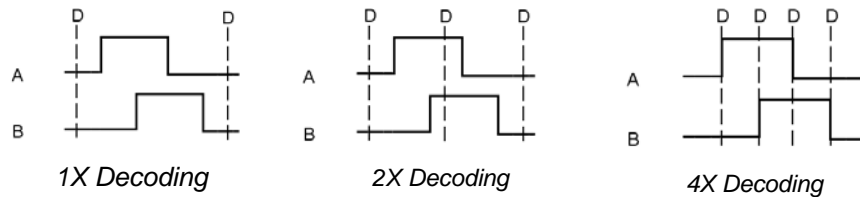
- Expansion Port – Provides expandable functionality. Currently supports 6x8 Scan Matrix (48 inputs) or the GT-64X input card adding an additional 64 inputs.
  - Benefit: *eliminates obsolescence and increases usability. Allows a gradual and cost-effective expansion of the system.*

- Short Circuit Protection - Up to 500 mA available on all ports for external circuitry eliminating the need for additional power supplies. Monitoring circuitry prevents component damage.
  - Benefit: *eliminates the risk of system damage caused by overloads and short circuits. Wire your circuit with the confidence that potential mistakes will not result in costly damages.*

- Flash Loader Mode - Incorporates a Flash Loader for easy firmware updates via USB.
  - Benefit: *online firmware version checking provides easy, fast and painless updates, keeping the firmware up-to-date and down-time to minimum.*

- Windows configuration tool – All GammaTron™ 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 Configuration Tool specifications:

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

- Digital Channels:
  - Channel activation/deactivation
  - Master switch
  - Invert input
  - Input Modes: Normal, Toggle, Rotary
  - Rotary Decoding: Gray code 1X, 2X or 4X decoding
  - Push switch input & Pull switch input
  - Rotary switches hold or toggle mode

1X Decoding   *2X Decoding*   *4X Decoding*

- Expansion Port:
  - Port activation/deactivation
  - 6x8 Scan Matrix
  - GT-64X Expansion Card

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