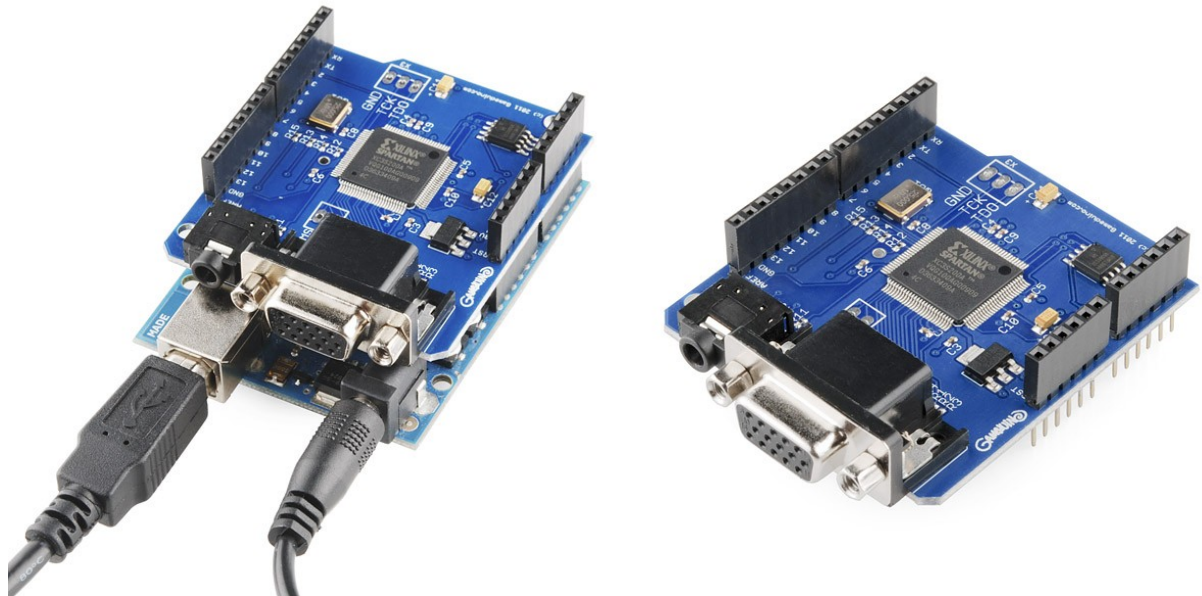


SparkFun

Gameduino

sku: DEV-10593



Description: Gameduino is a game adapter for Arduino (or anything else with an SPI interface) built as a single shield that stacks up on top of the Arduino and has plugs for a VGA monitor and stereo speakers. The sound and graphics are definitely old-school, but thanks to the latest FPGA technology, the sprite capabilities are a step above those in machines from the past. The adapter is controlled via SPI read/write operations, and looks to the CPU like a 32Kbyte RAM. (Unlike many 8-bit machines, there are no restrictions on when you can access this RAM). There is even a handy reference poster (which you can download below) showing how the whole system works.

Features:

- Video output is 400x300 pixels in 512 colors
- All color processed internally at 15-bit precision
- Compatible with any standard VGA monitor (800x600 @ 72Hz)
- Background Graphics
 - 512x512 pixel character background
 - 256 characters, each with independent 4 color palette
 - pixel-smooth X-Y wraparound scroll
- Foreground Graphics
 - each sprite is 16x16 pixels with per-pixel transparency
 - each sprite can use 256, 16 or 4 colors
 - four-way rotate and flip
 - 96 sprites per scan-line, 1536 texels per line
 - pixel-perfect sprite collision detection
- Audio output is a stereo 12-bit frequency synthesizer
- 64 Independent Voices 10-8000 Hz
- Per-Voice Sine Wave or White Noise
- Sample Playback Channel

Documents:

- [Example Code and Library](#)
- [Reference Poster](#)
- [Gameduino Web Site](#)
- [Gameduino FAQ Forum](#)