



News Release

For Immediate Release

\$499 GUI Design Tool Enables Smartphone-like Graphics in 8-, 16-, and 32-bit Embedded Systems

**Royalty-Free OS Eliminates Need for Pricy OSs and 32-bit MCUs. Production-ready GUIs in
as Little as Two Weeks.**

Embedded Systems Conference, Booth 947,

San Jose, CA – April 26, 2010 – [Amulet Technologies](http://www.amulettechnologies.com), a recognized leader in graphic user interface (GUI) solutions, announced today the availability of GEMstudio™, a drag-and-drop GUI development environment for creating high-end, color touchscreen human-machine-interfaces (HMI), with smartphone-like graphics, for 8-, 16-, and 32-bit bit embedded systems.

GEMstudio™ is a complete GUI development environment that can be used by both graphic designers and software engineers. It integrates tools for visual layout, interactive PC based simulation, and programming of the flash memory in the target embedded hardware. GEMstudio's WYSIWYG layout tool uses the same rendering engine as Amulet's royalty free graphical OS, so graphic designers can see, in real time, exactly how the design will look on the production hardware. At the push of a single button, GEMstudio™ will compile the entire GUI project, optimize and compress the images and fonts and run the GUI in the built-in PC based simulator. The simulator also uses the same rendering engine that is built into Amulet's royalty-free graphical OS . The interactive WYSIWYG simulator makes it quick and easy to perform user interface testing and visual proofing of the UI without needing the target hardware. Finally, GEMstudio™ can program the entire GUI directly into flash memory on the target embedded hardware.

Drag-and-drop Design – GUI control and system I/O functions are implemented by dragging “widgets” from a pull-down menu to the GUI design screen. There are eighteen widgets that include check boxes, bar graphs, buttons, sliders, dynamic images, function buttons, image bars, image

sequences, line plots, line graphs, linear gauges, lists, numeric fields, PWMs, radio button, scribble (for drawing or signatures), and string fields. Each widget has an extensive list of parameters ranging from font and color to system function calls or writing values to SRAM. All widgets may be customized.

Lower BOM cost. Before GEMstudio, the only viable means of implementing a high-end GUI was to license an operating system (OS) with a GUI stack and associated design tools. Running an OS requires the migration of the embedded control design to a 32-bit application processor with enough horsepower and memory to run it. Legacy 8- or 16-bit code must be completely re-written and debugged for the new processor and OS. The licenses and royalties for the OS and tools alone can cost as much as \$100,000 per product, plus a doubling or tripling in the BOM due to the high-end 32-bit MCU and very large memories required to store the footprint of the runtime environment and PC centric file formats. With GEMstudio, a high-end GUI can be added to a legacy or new 8- or 16-bit embedded system design without altering any of the embedded system hardware or software because a GEMstudio GUI executes on Amulet's GUI OS IC. Amulet's GUI OS IC operates independently of the embedded control system and connects to it in the same way as the legacy mechanical interface. With Amulet's GUI OS IC, there are no royalties, and no need to migrate the design to an expensive ARM9/11 based system.

Production-ready GUIs Match the Original Graphic Design – GEMstudio™ was designed to be used by the entire development team – this means everyone from the graphics artist, to the usability specialist, to the embedded programmer. Because the graphics artist can see exactly what will be produced on the GUI before the device hardware is available, the graphics can be finalized by the graphics designer and the embedded programmer will not need to modify the graphics just to make it fit into ROM. Because the usability specialist can have an interactive UI before the hardware is available, user testing an UI changes don't have to wait till crunch time at the end of the product development cycle. Finally, because GEMstudio™ doesn't force the embedded programmer into a complex OS, more time is available for the busy embedded developer to focus on getting the embedded device to work in the first place.

Amulet also provides USB-based evaluation boards, with an on-board GUI OS Chip, that support specific models from LCD display vendors, including Hantronix, Tianma and Shelly. GEMstudio can be used to compile the HMI onto the GUI OS chip on the board, which can then be sent to the marketing and usability teams for testing and refinement. Production volumes of the boards may be purchased for end-product deployment.

Pricing and Availability. GEMStudio is available now for \$499. Amulet's GEM Graphical OS Chip™ is available now and is priced at \$6.72 in quantities of 100k units. The chip includes the GUI OS, which is royalty-free. LCD Evaluator Kits are available for \$199, plus the price of the display. Production quantities of Amulet's GUI OS boards, GEMexpress™, are available now and are priced at \$69 in quantities of 5K units.

About Amulet Technologies

Founded in 1998, Amulet is a recognized industry leader in graphical user interface (GUI) solutions. Amulet's unique Graphical OS in Silicon™ and GEMstudio™ enable manufacturers to cost-effectively implement a visually appealing GUI into their products to enhance the end user's experience. Amulet's display solutions – which range from display controller chips to fully integrated modules – simplify the product development cycle by separating GUI development from the application's development. This approach dramatically reduces time to market and overall system costs. Come visit Amulet at ESC Silicon Valley, Booth 947, April 27th-29th for a live demo or on the web at www.amulettechnologies.com.

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