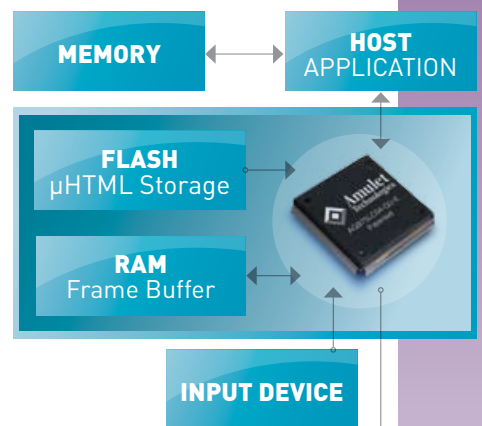# COLOR CHIP :.   AGB75LC04-QU-E & AGB75LC04-BG-E

HIGHLY INTEGRATED GEM GRAPHICAL OS CHIP™ FOR COLOR DISPLAYS

Amulet's GUI processor for color displays enables OEMs and design firms to take their products to the next level by implementing interactive, color-rich GUIs designed with GEMstudio™, Amulet's new GUI design tool. The Graphical OS Chip™ includes all of the hardware and software required to turn a color LCD and touch panel into a user interface. Amulet's solution is perfect for many embedded system applications, including Appliances, Consumer Electronics, Industrial Controls, Medical Equipment and Office Automation.

.: Integrated LCD Controller Supports Passive and Active Displays up to 24 Bits per Pixel

.: High-Speed USB, TWI, UART, and SPI Interfaces

.: Power Management Controller for Low Power Operation

.: Directly Connects to 4- and 5-wire Resistive Touch Panels

.: Up to 39 General Purpose IO Lines

.: Drag-and-Drop WYSIWYG GUI Creation Using GEMstudio™

.: PNG, GIF, and JPEG Image, and GIF Animation Support

.: Built-In Royalty-FREE Graphical Operating System

.: Inexpensive Development Tools

.: PC Based UI Simulator

.: Supports Unicode – Foreign Language Character Sets

.: Font Converter – Built-In

MEMORY ⟷ **HOST** APPLICATION

FLASH µHTML Storage

RAM Frame Buffer

INPUT DEVICE

Amulet Technologies
Empowering Flat Panel Displays

AGB75LC04-XX-X – Electrical and Environmental Specifications:
208 pin: AGB75LC04-QU-E / 225 pin: AGB75LC04-BG-E

Recommended Operating Conditions	
Power supply V_{cc}	3.0V to 3.6V, 3.3V nominal
Power supply V_{core}	1.08V to 1.32V, 1.2V nominal
Environmental Specifications	
Operating temperature	-40°C to +85°C
Storage temperature	-60°C to +150°C
DC Specifications	
V_{core} Supply current	22mA @ 1.2V
RoHS Compliant Package Options	
208-PQFP	28x28x3.4mm, 0.5 mm pin pitch
225-ball LFBGA	13x13x1.4mm, 0.8 mm ball pitch

The advanced power management controller has a very slow clock operating mode and software programmable power optimization capabilities. Along with a reset controller and shutdown controller, this gives both chips several low-power options.

The accelerated graphic memory architecture allows for concurrent access to 3 individual memory subsystems for simultaneous program execution, LCD refresh, and frame buffer rendering.

System Parameters:

LCDs supported	Up to 12" active (TFT) or passive and 24-bit color
Interfaces supported	High-Speed USB, UART, TWI and SPI
Number of GPIO	39 Dedicated pins on the LFBGA and up to 5 on the PQFP package
Integrated Touch Panel Decoder	4- or 5-wire, calibration, noise filtering
SDRAM	32-bit parallel interface
Flash	AT45 Series Data Flash or Compatible Serial Data Flash Recommended

GEM Graphical OS Chip™ Starter Kit

The GEMstarter-kit™ (STK-480272C) is the easiest way to jump-start your GUI design and go straight to production. It allows your team to experiment with the technology, as well as design and field-test your user interface at the same time the application is being developed. The kit provides everything you need to create and drive a color display, including a 480x272 TFT display, an integrated touch panel and controller board, a GUI design tool (CD or downloadable), a 5 VDC power supply, stylus and USB interface cable.

Alternatively, any LCD Evaluator Kit can also be used to experiment with Amulet's GEM Graphical OS Chip™.

Visit www.AmuletTechnologies.com/products/lcdevaluator.html for more information.

Amulet Technologies
Empowering Flat Panel Displays
www.amulettechnologies.com

Want More Information?
Products are available through Amulet franchised distributors. Contact us to find out more…or visit us on the web at www.AmuletTechnologies.com.

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