



## **CFA635 family EOL**

As part of our continuous improvement process, the engineering services group at CrystalFontz America Inc. is announcing the End of Life (EOL) to our CFA635 family of modules. This end of life is scheduled to take place at the end of 2012 Q2.

The CFA635 is being replaced with the first of a new generation of intelligent modules from CrystalFontz America, Inc. This new module is the CFA735 family. It is fit, form, and function compatible with the CFA635 family with a number of enhancements / improvements.

### **Q4 2011**

- Pilot run of CFA735 family available
- CFA735 New product announcement

### **Q1 2012**

- Final shipments of CFA635 from partner factory

### **Q2 2012**

- CFA635 begins phase out and inventory draw down
- Last CFA635 orders accepted
- Production level shipments of CFA735 start

### **Q3 2012**

- CFA635 inventory purged
- CFA735 fully replaces CFA635

## **Why we are issuing an EOL for the CFA635?**

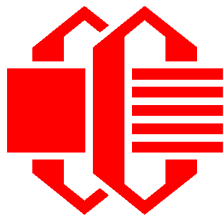
The CFA635 is a character based intelligent LCD module built around a Cypress PsoC<sup>®</sup> micro-controller and a Samsung S6A0073 LCD controller. Samsung announced the EOL of the S6A0073 at the end of 2007. When the announcement was made CrystalFontz America, Inc. started planning out the future path of the CFA635. A 'lifetime buy' of the controller was made, and work was begun on the next version of the CFA635.

During the initial investigation and design phase of the project, we looked at taking the CFA635 in one of two directions. The first option was to design and release a "v2.0" CFA635 based around a new character LCD controller. The second option was to take the CFA635 format and create a backwards compatible module with improved appearance and functionality based on a new platform. The CFA735 is the result of taking the second option, the first in a line of new generation Intelligent modules from CrystalFontz America Inc.

## **What are the similarities between the CFA635 and CFA735?**

The CFA735 family has been primarily designed to be a replacement for the CFA635. The CFA635 and CFA735 share:

- Physical dimensions
- Keypad
- Mounting points
- Supported interfaces
- Command structure
- Communication packet structure
- Features and functionality



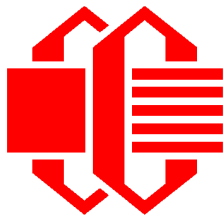
## What are the differences between the CFA635 and CFA735?

The CFA735 supports the functionality of the CFA635, allowing drop in replacement and continued product life cycle. There are differences between the CFA635 and the CFA735:

- The CFA635 is a 20 x 4 line character display and the CFA735 is a 244 by 68 graphic display with 16 level gray scale
- Micro-controller and display controller
  - The CFA635 is powered by a Cypress PsoC® micro-controller and a Samsung S6A0073 LCD controller
  - The CFA735 is powered by an STM32F® series ARM based Micro-controller and Sitronix ST7529 driver / controller
- The CFA735 has a slightly larger viewing area and active area. In “635 emulation mode”, there is no difference
- The CFA735 display backlight has more LEDs than CFA635. CFA735 LEDs require less current for the same brightness as seen on a CFA635
- CFA735 has a wider temperature range than a CFA635.
- Supported interfaces
  - The CFA635 requires different firmware for serial OR USB interface
  - The CFA735 supports serial AND USB interface with the same firmware

### CFA635 / CFA735 COMPARISON

Mechanical Specifications	CFA635 Family	CFA735 Family
Pixel Size	0.600 (W) x 0.650 (H) mm	0.300 (W) x 0.325 (H) mm
Pixel Pitch	0.65 (W) x 0.70 (H) mm	0.325 (W) x 0.350 (H) mm
Viewing Area	82.95 (W) x 27.5 (H) mm	83.10 (W) x 27.54 (H) mm
Active Area	77.95 (W) x 22.35 (H) mm	79.27 (W) x 23.78 (H) mm
LEDs in edge-lit LED Backlight	8 LEDs, 4 per side	12 LEDs, 6 per side
Connectors	Two connectors: <ul style="list-style-type: none"> <li>• H1 – 16 pin</li> <li>• H2 .- 18 pin</li> </ul>	One connector: <ul style="list-style-type: none"> <li>• H1 – 16 pin</li> </ul>
Electrical Specifications	CFA635 Family	CFA735 Family
Interfaces:	One interface per module	Two interfaces may be used simultaneously
	-KL = “Logic Level” Serial	-KR = “Logic Level” Serial and USB
	-KS = “Full Swing” RS-232 Serial	-KT = “Full Swing” RS-232 Serial and USB
	-KU = USB	-KR = “Logic Level” Serial and USB - or - -KT = “Full Swing” RS-232 Serial and USB
Absolute Maximum Ratings:		



Temperature Range	Standard: Operating temperature 0°C to 50°C Storage temperature -10°C to 60°C	Wide: Operating temperature -20°C to 70°C Storage temperature -30°C to 80°C
Additional Electrical Criteria:		
Backlight Control	PWM Frequency: 300 Hz nominal	Module has a DAC (Digital-to-Analog Converter) driver.
<b>Accessories</b>		
Bracket, SLED, and Overlay	For KU (USB) only	All interfaces supported
System Cooling Accessory Board	<a href="#">SCAB</a> and <a href="#">UBERSCAB</a>	SCAB support available

## CFA735 FAMILY FW 1v0 FIRMWARE COMMAND CHANGES

Command 0 (0x00): Ping Command	
<b>CFA735 Family</b>	valid data_length is 0 to 255
CFA635 Family	valid data_length is 0 to 16
Command 1 (0x01): Get Hardware & Firmware Version	
<b>CFA735 Family</b>	Example uses current CFA735 version numbers with extended data bytes available for manufacturing information.
CFA635 Family	Example used CFA635 version numbers.
Command 5 (0x05): Reset Functions	
<b>CFA735 Family</b>	Command offers a different set of choices: Reload Boot Settings, Reset Host, Power Off Host, CFA735 Soft Reboot, or CFA735 Soft Reboot and Settings Reset.
CFA635 Family	Reboot CFA635, Reset Host, or Power Off Host.
Command 28 (0x1C): Set ATX Power Switch Functionality	
<b>CFA735 Family</b>	Function 4: Added AUTO_POLARITY. Slight adjustment on description of pulse timing.
CFA635 Family	Function 4
Command 28 (0x1C): Set ATX Power Switch Functionality, Command 34 (0x22): Set or Set and Configure GPIO Pin, and Command 35 (0x23): Read GPIO Pin Levels and Configuration State	
<b>CFA735 Family</b>	Omitted "slow" mode. All GPIO transitions are considered "fast".
CFA635 Family	Distinction is made between "fast" and "slow" modes.