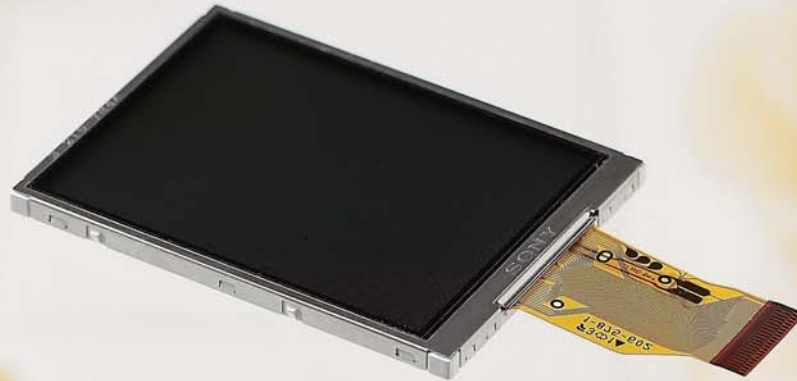


ACX392AKM

Transmissive 6.3 cm (2.5-Type) 154k-Dot System Display with LED Backlight for Digital Still Cameras Features Narrow Frame and 8-Bit DAC



The ACX392AKM is a built-in driver 6.3 cm active matrix transmissive color LCD module that uses low-temperature polycrystalline silicon transistors. This is an integrated drive circuit LCD panel that integrates an 8-bit DAC circuit using system on glass technology. It includes all the required drive circuits and requires no external ICs.

The ACX392AKM adopts a direct interface system that supports direct connection to a DSP, and at the same time as reducing the number of peripheral components, it also contributes to reduced power consumption.

- Direct interface (8-bit RGB serial) built into the panel
- Integrated drive circuit LCD panel implemented using system on glass technology
- Number of display dots: 640 × 240, diagonal 6.3 cm (2.5-type) display
- Contrast: 400:1
- Low power consumption: 124 mW (typical)
- RGB delta array for smooth images
- Up/down and/or right/left inversion function
- Built-in backlight module with a total thickness of 2.847 mm

Direct Interface Support

The ACX392AKM is an integrated drive circuit LCD panel implemented using system on glass technology. It includes all the required drive circuits and requires no external ICs and

supports direct connection to a DSP to achieve a significant reduction in peripheral components.

Increased Resolution

By increasing the pixel count from 480 × 240 to 640 × 240 in the same display size as existing panels, the ACX392AKM can now display 320 × 240 input signals as an integer multiple thus resolving the problem of distorted characters.

8-Bit RGB Serial Data Transfer

Existing system displays use a 6-bit DAC plus FRC drive to achieve a simulated 7-bit equivalent bit depth. In this product, Sony has developed new circuits that achieve full 8-bit × RGB (16.77 million colors) display to contribute to improved picture quality.

Integrated LED Backlight Module

The ACX392AKM includes a dedicated backlight, which contributes to increased flexibility in end product design.

The included LED backlight achieves a power consumption level of 64 mW at a luminance of 250 cd/m², allowing the ACX392AKM to

achieve a 124 mW level as an integrated module.

Image Coverage: 100%

With digital still cameras, it is necessary to verify all pixels that were (or will be) captured without any pixels being left out of the displayed image. This panel supports an image coverage of 100%.

Up/Down and/or Right/Left Inversion Function

Since there are now digital still cameras that allow the monitor to be rotated, the ACX392AKM provides up/down and/or right/left inversion function that can be controlled with just serial signals. This provides a high degree of flexibility for end product designs.

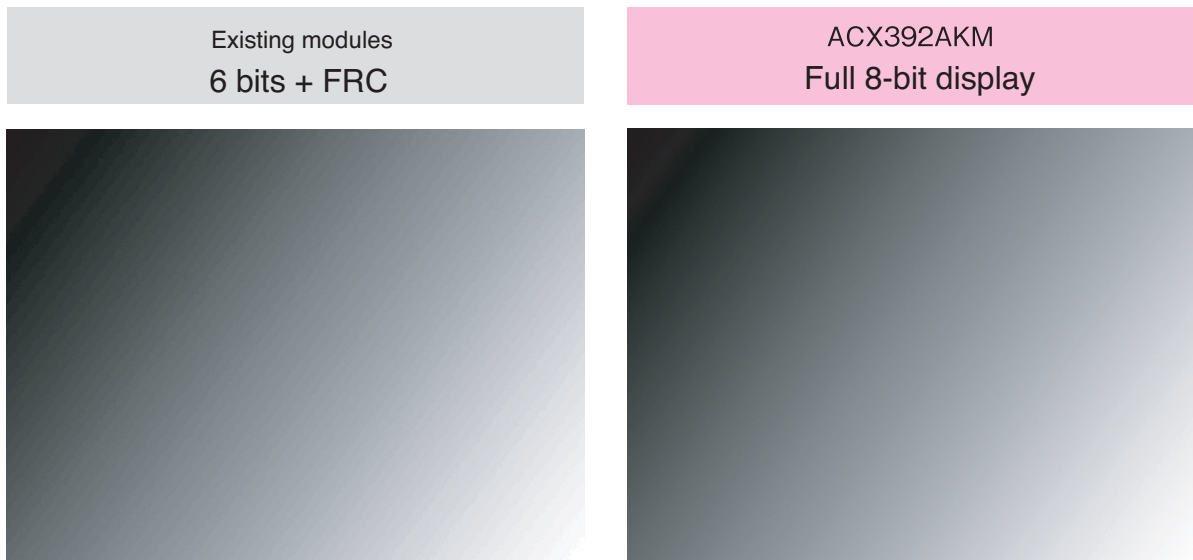
V O I C E

By developing new RC DAC and sample-and-hold circuits, we were able to achieve a full 8-bit 154k-dot display with the same frame width as the existing 6-bit 115k-dot system displays.

Table 1 System Display Evolution

Item	From 12/2005	From 12/2006	From 11/2007	From 12/2007
Product name	ACX350AKM	ACX358AKQ	ACX385AKM	ACX392AKM
Screen size	2.5 type			
Glass size	57.35 x 42.14			
Required input supply voltages	3V, 8.5V	3.2 V, 5 V	3 V	3 V
Number of pixels	354 x 240	480 x 240	480 x 240	640 x 240
Bit depth	5 bits + FRC 1 bit	6 bits + FRC 1 bit	7 bits + FRC 1 bit	8 bits

Figure 1 Full 8-Bit Display



This allows smoother images to be displayed.

Table 2 Main Specifications

Item	ACX392AKM
Number of pixels	640 x 240
Diagonal size	6.3 cm (2.5 type)
Display mode	Transmissive display
Interface	Serial RGB interface: 8 bits
Brightness	250 cd/m ²
Contrast	400:1
Power consumption (including backlight)	124 mW

Figure 2 Block Diagram

