

Title (en)

Method and circuit for controlling the backlighting system of a display apparatus

Title (de)

Verfahren und Schaltung zur Steuerung einer Hintergrundbeleuchtungssystem einer Anzeigevorrichtung

Title (fr)

Procédé et circuit de contrôle d'un système de rétroéclairage pour un appareil d'affichage

Publication

EP 1863008 A3 20090701 (EN)

Application

EP 07108548 A 20070521

Priority

- EP 06290910 A 20060602
- EP 07108548 A 20070521

Abstract (en)

[origin: EP1863008A2] In a display device images are reproduced by controlling the amount of light provided by a light source by means of light modulators for individual pixels. Subsequent images are synchronised to each other by synchronisation signals (VB) regularly occurring at intervals corresponding to first time periods. The backlight is controlled to emit light during fractions of second time periods or whole second time periods which are equal to or shorter than first time periods. Several of the second time periods may be nested and evenly distributed within the first time period. The signals for driving the backlight are preferably generated in synchronism with the horizontal pixel clock. Each of the fractions of second time periods or whole second time periods during which light is emitted is divided into a number of elementary steps, wherein each elementary step corresponds to a number of pixel clock periods. The number of elementary steps is chosen according to the desired ratio of control of the backlight or contrast ratio, e.g. 100 elementary steps for a contrast ratio of 1:100. During each of the second time periods the backlight is controlled to be on for a number of elementary steps corresponding to the desired contrast ratio.

IPC 8 full level

G09G 3/34 (2006.01)

CPC (source: EP)

G09G 3/3406 (2013.01); **G09G 2320/0247** (2013.01); **G09G 2320/064** (2013.01)

Citation (search report)

- [X] US 2005078081 A1 20050414 - ODA KYOICHIRO [JP], et al
- [X] EP 0685831 A1 19951206 - SHARP KK [JP]
- [X] US 2004160435 A1 20040819 - CUI YING [US], et al
- [X] US 5184117 A 19930202 - GAUTHIER LLOYD W [US]
- [A] EP 1489590 A1 20041222 - MATSUSHITA ELECTRIC IND CO LTD [JP]
- [A] US 2005052398 A1 20050310 - TAKAOKA HIRONORI [JP], et al
- [A] US 2003011559 A1 20030116 - ADACHI KATSUMI [JP], et al

Cited by

CN114724494A; WO2011087718A1; US8378961B2; US8547323B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

EP 1863008 A2 20071205; EP 1863008 A3 20090701; EP 1863008 B1 20180228

DOCDB simple family (application)

EP 07108548 A 20070521