Title (en)

DRIVING AND ENCODING OF A DIGITIAL LIQUID CRYSTAL ON SILICON (LCOS) DISPLAY

Title (de)

ANSTEUERUNG UND CODIERUNG EINES DIGITALEN FLÜSSIGKRISTALLS AUF EINER SILICIUM (LCOS)-ANZEIGE

Title (fr)

EXCITATION ET CODAGE D'UN DISPOSITIF D'AFFICHAGE NUMÉRIQUE À CRISTAUX LIQUIDES SUR SILICIUM (LCOS)

Publication

EP 4338149 A4 20240605 (EN)

Application

EP 21944505 A 20210607

Priority

CN 2021098745 W 20210607

Abstract (en)

[origin: WO2022256994A1] Described is a driver (300) for driving a pixel of a digital liquid crystal on silicon display, the driver comprising: a control circuit (301) comprising one or more transistors, the control circuit (301) configured to: clock an input binary signal for latching the state of the pixel for each frame; and form a logical control signal for the pixel in dependence on the input binary signal; a voltage scaling circuit (302) comprising one or more transistors, the voltage scaling circuit (302) configured to: receive the logical control signal from the control circuit (301); and form a pixel drive signal for driving the pixel in dependence on the logical control signal; wherein the size of the transistors in the voltage scaling circuit (302) is greater than the size of the transistors in the control circuit (301). By providing the transistors in the voltage scaling circuit (302) of greater size than the transistors in the control circuit (301) this may enable to overall size of the driver (300) to be reduced which may reduce the pixel pitch size.

IPC 8 full level

G09G 3/20 (2006.01); **G09G 3/00** (2006.01); **G09G 3/36** (2006.01)

CPC (source: EP)

G09G 3/002 (2013.01); **G09G 3/2014** (2013.01); **G09G 3/2022** (2013.01); **G09G 3/2033** (2013.01); **G09G 3/36** (2013.01); G09G 2300/0465 (2013.01); G09G 2300/0491 (2013.01); G09G 2300/0838 (2013.01); G09G 2300/0857 (2013.01); G09G 2300/0871 (2013.01); G09G 2310/0216 (2013.01); G09G 2310/0235 (2013.01); G09G 2310/068 (2013.01); G09G 2320/064 (2013.01); G09G 2360/18 (2013.01)

Citation (search report)

- [XAI] US 2011227887 A1 20110922 - DALLAS JAMES M [US], et al
- [XA] US 2012086733 A1 20120412 - HUDSON EDWIN LYLE [US], et al
- [X] US 2017124935 A1 20170504 - HUDSON EDWIN LYLE [US], et al
- [AD] AKHEELESH K. ABEELUCK: "58-2: Invited Paper: High-Performance Displays for Wearable and HUD Applications", SID SYMPOSIUM DIGEST OF TECHNICAL PAPERS, vol. 49, no. 1, 1 May 2018 (2018-05-01), US, pages 768 - 771, XP093155600, ISSN: 0097-966X, Retrieved from the Internet <URL:https://api.wiley.com/onlinelibrary/tdm/v1/articles/10.1002%2Fsdtp.12358> [retrieved on 20240501], DOI: 10.1002/sdtp.12358
- See also references of WO 2022256994A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

WO 2022256994 A1 20221215; CN 117377995 A 20240109; EP 4338149 A1 20240320; EP 4338149 A4 20240605

DOCDB simple family (application)

CN 2021098745 W 20210607; CN 202180097949 A 20210607; EP 21944505 A 20210607