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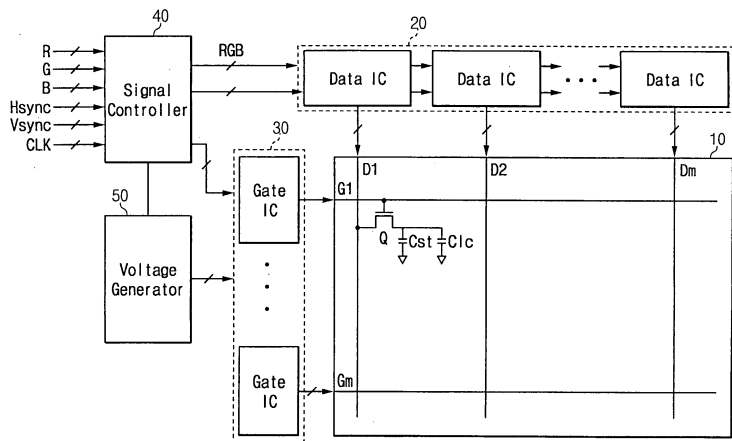
(54)

Liquid crystal display and driving method thereof

(57)

A liquid crystal display is provided, which includes: a liquid crystal panel (10) including a plurality of pixels including switching elements, a plurality of gate lines (G1-Gn) for transmitting gate signals to the switching elements, and a plurality of data lines (D1-Dm) for transmitting data voltages to the pixels; a data driver (20) including a plurality of data driving ICs connected to respective sets of the data lines, receiving image data, and applying the data voltages corresponding to the image data to the data lines; and a gate driver (30) applying the gate voltages to the gate lines, wherein the data driving ICs are supplied with a ground voltage and a supply voltage and voltage levels of the image data swing with reference to a reference voltage lower than the supply voltage.

Fig. 1





European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 03 02 3873

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
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A	US 6 429 841 B1 (LEE HYUN CHANG) 6 August 2002 (2002-08-06) * column 4, lines 8-19 * * column 5, line 36 - column 7, line 12; figure 5 *	1-16	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			G09G
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 29 August 2005	Examiner Kunze, H
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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专利名称(译)	液晶显示器及其驱动方法		
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代理机构(译)	MODIANO , GUIDO		
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其他公开文献	EP1414013A2		
外部链接	Espacenet		

摘要(译)

提供一种液晶显示器，包括：液晶面板（10），包括多个包括开关元件的像素，多个栅极线（G1-Gn），用于将栅极信号传输到开关元件，以及多个数据用于将数据电压传输到像素的线（D1-Dm）；数据驱动器（20），包括连接到各组数据线的多个数据驱动IC，接收图像数据，以及将对应于图像数据的数据电压施加到数据线；栅极驱动器（30）将栅极电压施加到栅极线，其中数据驱动IC被提供有接地电压以及参考低于电源电压的参考电压的图像数据摆动的电源电压和电压电平。

Fig. 1

