

Title (en)  
FLEXIBLE, SPACE-EFFICIENT I/O CIRCUITRY FOR INTEGRATED CIRCUITS

Title (de)  
FLEXIBLE UND PLATZSPARENDE EINGANGS-/AUSGANGSSCHALTUNG FÜR INTEGRIERTE SCHALTKEISE

Title (fr)  
CIRCUITERIE E/S FLEXIBLE ET COMPACTE POUR CIRCUITS INTÉGRÉS

Publication  
**EP 2901477 A4 20160706 (EN)**

Application  
**EP 13842574 A 20130924**

Priority  
• US 201213627270 A 20120926  
• US 2013061317 W 20130924

Abstract (en)  
[origin: WO2014052274A1] Flexible, space-efficient I/O architectures for integrated circuits simplify circuit design and shorten design times. In one aspect, cells for power supply pads are eliminated, in part by locating ESD protection circuitry for these pads underneath the pads themselves, leaving only signal I/O buffers. Pads coupled to the signal I/O buffers may be defined as either signal I/O pads or power supply pads in accordance with customization circuitry. Customization circuitry provides for flexible bank architectures, where signal I/O buffers within a bank share power supply requirements that may be different from power supply requirements of signal I/O buffers of another bank. The number of banks and the number of signal I/O buffers belonging to each bank is flexibly defined. Customization circuitry provides for flexible pad options, whereby the IC pads may be configured for different packaging technology, for example, for wire bonding for flip-chip bonding, or for other types of bonding.

IPC 8 full level  
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CPC (source: CN EP)  
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Citation (search report)  
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• [I] US 2010237509 A1 20100923 - WU JENG-HUANG [TW], et al  
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Designated contracting state (EPC)  
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