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Ultra-Fast VLSI Gallium arsenide



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Gallium arsenide

In CMOS devices we have also seen that the p-transistors have inherently slower performance than similar n-transistors. This is primarily due to the lower mobility of holes compared with that of electrons.

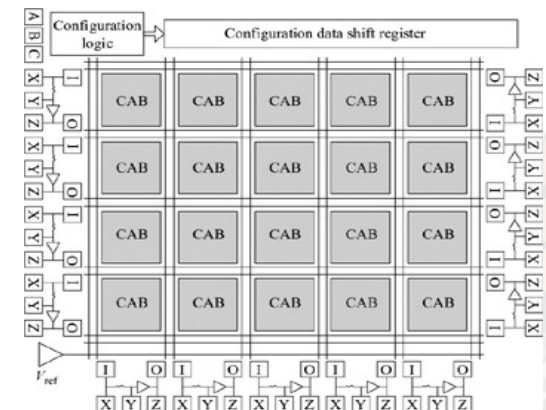
Gallium Arsenide against Silicon Tech

- The high speed electron mobility of gallium arsenide with respect to silicon.
- A semi-insulating substrate with consequent lower parasitics.
- An improvement factor of 1.4 for carrier saturation velocity of GaAs over silicon.
- Better opto-electrical properties
- Less power dissipation than silicon and radiation hardness

Field-programmable analog array (FPAA)

A field-programmable analog array (FPAA) is an integrated device containing configurable analog blocks (CAB) and interconnects between these blocks.

FPAA allows complex analog signal and processing functions into an integrated, drift-free, pre-tested device.



3D FPGA

