# mail

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



# Contact us

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## **Product Overview**

### NCP6151: VR12 2-, 3-, 4-Phase CPU Controller + 1-Phase GPU Controller



#### For complete documentation, see the data sheet

#### Product Description

NCP6151/NCP6151A dual output four plus one phase buck solution is optimized for Intel VR12 compatible CPUs. The controller combines true differential voltage sensing, differential inductor DCR current sensing, input voltage feed-forward, and adaptive voltage positioning to provide accurately regulated power for both desktop and notebook applications. The control system is based on dual-edge pulse width modulation (PWM) combined with DCR current sensing providing the fastest initial response to dynamic load events and reduced system cost. It also sheds to single phase during light load operation and can auto frequency scale in light load while maintaining excellent transient performance.

#### Features

- · Meets Intel VR12/IMVP7 specifications
- · Current mode dual edge modulation for fastest initial response to transient loading
- · Dual high performance operational error amplifier
- · One digital soft start ramp for both rails

#### Applications

· Desktop and notebook processors

#### Part Electrical Specifications

Product	Compliance	Status	Topology	Phases	Control Mode	V <sub>CC</sub> Min (V)	V <sub>CC</sub> Max (V)	f <sub>sw</sub> Typ (kHz)	t <sub>res</sub> Typ (ns)	Package Type
NCP6151AD52MNR2 G	Pb-free Halide free	Active								QFN-52
NCP6151D52MNR2G	Pb-free Halide free	Active								QFN-52
NCP6151S52MNR2G	Pb-free Halide free	Active								QFN-52

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