IDT
Integrated Device Technology

Embedded Clocks

POWER MANAGEMENT | ANALOG & RF | INTERFACE & CONNECTIVITY | **CLOCKS & TIMING** | MEMORY & LOGIC | TOUCH & USER INTERFACE | VIDEO & DISPLAY | AUDIO

FEATURES

- Low power
- Integrated voltage regulators except CK410
- Integrated series resistors on differential outputs except for CK410
- Industrial temperature range available on many devices
- Some devices are available in AEC Q100 Level 3 compliant versions
- Wide variety of packages available

BENEFITS

- IDT offers supply assurance and stability for your design needs
- Proven performance in high volume systems
- IDT is a reliable high volume supplier
- Supports both AMD and Intel chipsets in the embedded space
- Longer life cycle (5 to 7 years) compared to the 1 to 1.5 year life cycle of a PC
- Excellent product support from IDT
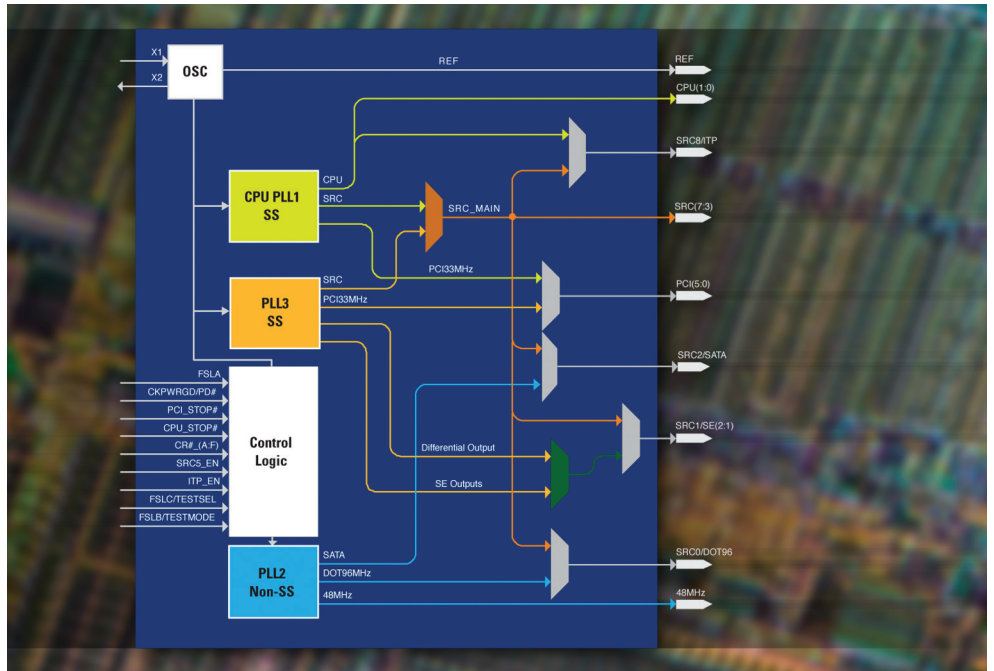
This family of IDT clock products for embedded applications provides extended availability, guaranteeing product availability for up to 7 years.

Description

PC technology is no longer limited to desktop, notebook or server applications—it is now being utilized in embedded applications at an increasing rate. These applications not only demand the smaller size, lower power and higher performance for which IDT clocks are known, but also demand extended availability to support their longer life cycles. The new embedded clock generators from IDT® support both AMD® and Intel® chipsets in the embedded space, by providing up to 7 years of availability to support the longer life cycle of these products.

Applications that can make use of the embedded clocks include:
- Communication systems
- Energy and energy renewal systems
- Military, defense and aerospace
- Industrial automation
- Medical
- Transportation: airbags, temperature control
- Retail: point-of-sale terminals
- Automotive infotainment
- Outdoor communications equipment
- Home entertainment and home theatre
- Rugged notebooks

The 9EPRS525 chip diagram shown above is an enhanced Intel 56-pin CK505. The major enhancements include fully integrated volage regulation of the differential outputs, and internal termination resistors for the differential outputs. These enhancements improve performance and reduce board footprint. Additional details on the fully integrated voltage regulation are shown on page 2.

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You can count on IDT

We offer stability, results and support. In 2010 IDT celebrated its 30th anniversary, making it one of an elite group of semiconductor companies that have survived and thrived in a rapidly changing, ultra-competitive business. IDT will continue to offer the highest level of supply stability and as-surance for your clocking design needs.
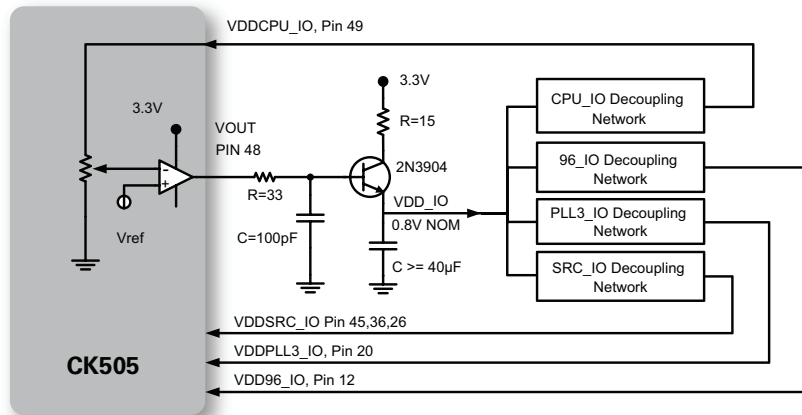
External Pass Transistor Technology
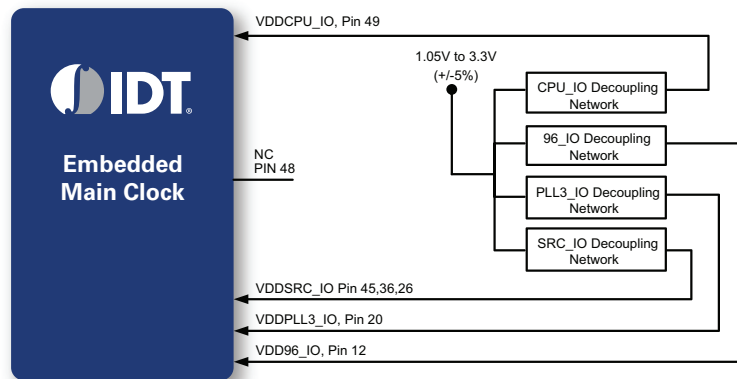
IDT Fully Integrated Regulator Technology

IDT embedded clock part information

If you do not see the part you are looking for in the chart below, contact IDT at *pcclockhelp@idt.com*, or visit *www.IDT.com/go/embeddedclocks*.

IDT Part Number	Description	Voltage	Package	Industrial Temp. Support	Availability
9ERS3187	Intel CK505 1.1 derivative for Piketon and Calpella	3.3V/ VDD_IO	32 QFN	Yes	Mar 2011
9ERS3125	Intel CK505 1.0 derivative for Montevina and Eaglelake	3.3V/ VDD_IO	56 QFN	Yes	Now
9ERS3165	Intel CK505 1.0 derivative for Montevina and Eaglelake	3.3V/ VDD_IO	64 QFN 64 TSSOP	Yes	Now
9EPRS525	Intel CK505 1.0 derivative for Eaglelake	3.3V/ VDD_IO	56 TSSOP	Yes	Now
9EPRS475	AMD M690T, 780E	3.3V/ VDD_IO	56 TSSOP	No	Now
9EPRS488	AMD M690T, 780E	3.3V/ VDD_IO	72 QFN	No	Now
9EMS9633	Intel CK610/CK633	3.3V/ VDD_IO	48 QFN 48 SSOP	Yes	Now
9E4101	Intel CK410	3.3V	56-SSOP	Yes	Now

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www.IDT.com/go/embeddedclocks