Sync Buck for Intel Atom E6xx Tunnel Creek (1.1V @ 3.5A)

TIDesigns

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Fully assembled board (shown above) developed for testing and performance validation only, not available for sale.

Description

TI's Highest Power Density Low Input Voltage Complete Intel Atom E6xx (Tunnel Creek) power system designs; in 967mm2 this design has all the voltage regulators needed to power Intel's Atom E6xx CPU platform and fit onto a 70x70 or smaller COM Express Module used in Industrial Automation and Process Control applications.

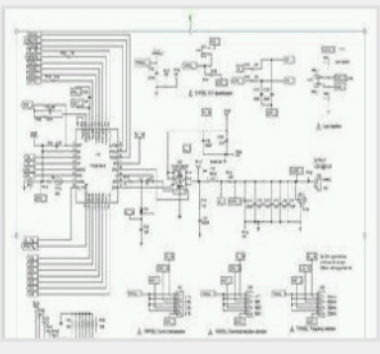
Features

- Voltage Regulators for CPU and GPU, DDR power, Chipset, RAM, PLL, and CPU Termination rails
- CSD86330 power blocks for high efficiency and high power density power solution
- Settings for evaluating all Intel IMVP6+ CPU core voltage regulator functions
- On-board Load Transient Generator for easy evaluation
- 967mm2 total power supply area
- Only one 220uF bulk capacitor and five 10uF MLCCs required for CPU and GPU core power

TI's Standard Terms and Conditions for Evaluation Modules apply.

Schematic/Block Diagram

Quickly understand overall system functionality.



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Test Data

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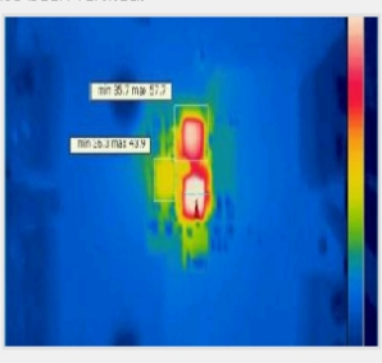

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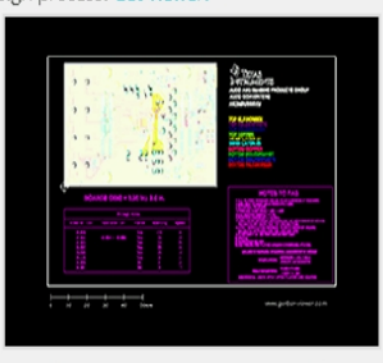
Design Files

Download ready-to-use system files to speed your design process. Get Viewer.



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Bill of Materials (BOM)

Find the complete list of components in this reference design.

Download BOM

Parametrics

	PMP5922.1
Vin (Max) (V)	5.25
Vin (Min) (V)	4.75
Vout (Nom) (V)	1.1
Iout (Max) (A)	3.5
Output Power	3.85
Isolated/Non-Isolated	Non-Isolated
Input Type	DC
Topology	Buck- Synchronous

TI Devices (8)

Order samples, get tools and find more information on the TI products in this reference design.

Part Number	Name	Product Family	Sample & Buy	Design Kits & Evaluation Modules
TLC555	Low Power Timer	Clock and Timing	Sample & Buy	View Design Kits & Evaluation Modules
TLV71125125	Dual, 200mA Output, Low Noise, High PSRR, Low-Dropout Regulator in 1.5mm	Linear Regulator (LDO)	Sample & Buy	View Design Kits & Evaluation

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CAD/CAE symbols

Part #	Package | Pins	CAD File (.bxl)	STEP Model (.stp)
TLC555	SOIC (D) | 8	Download	Download
	PDIP (P) | 8	Download	Download
	SOP (PS) | 8	Download	-
	TSSOP (PW) | 14	Download	Download
TLV71125125	WSON (DSE) | 6	Download	-
TPS51916	WQFN (RUK) | 20	Download	-
TPS53219	VQFN (RGT) | 16	Download	-
TPS53311	VQFN (RGT) | 16	Download	-
TPS72015	DSBGA (YZU) | 5	Download	-
	WSON (DRV) | 6	Download	-
UCC37324	SOIC (D) | 8	Download	Download
	HVSSOP (DGN) | 8	Download	Download
	PDIP (P) | 8	Download	Download

Texas Instruments and Accelerated Designs Inc. have collaborated together to provide TI customers with schematic symbols and PCB layout footprints for TI products.

Step 1: Download and install the Ultra Librarian software ZIP: 62MB

Step 2: Download the Symbol and Footprint .bxl file.

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Technical Documents

User Guides (1)

Title	Abstract	Type	Size (KB)	Date	Views
PMP5922 Test Results		PDF	512	16 Sep 2013	43

Selection Guides (1)

Title	Abstract	Type	Size (KB)	Date	Views
Power, Interface and Switch Solutions for Micron Memory (Rev. A)		PDF	265	18 Jun 2013	554

Design Files (4)

Title	Abstract	Type	Size (KB)	Date	Views
PMP5922 PCB		PDF	1291	16 Sep 2013	20
PMP5922 Gerber		ZIP	416	16 Sep 2013	15
PMP5922 BOM		PDF	68	16 Sep 2013	47
PMP5922 Schematic		PDF	306	16 Sep 2013	55

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