

# Complimentary Analog Products for the TMS320DM335 Digital Media Processor

	Best Performance	Best Value	Low Power
<b>Video Amplifier</b>	<b>THS7315</b> ❖SOIC • 3 SDTV Video Amplifiers for CVBS, S-Video, Y'U'V etc... • 5.2V/V Gain (14.3dB)	<b>OPA361</b> ❖SC70 • 3V Video Amp with Internal Gain and Filter • 2-Pole Reconstruction Filter • Integrated Level Shifter • Input Range Includes Ground – DC-Coupled Input	Rail-to-Rail Output Low Quiescent Current: 5.3 mA Shutdown Current: 1.5uA
<b>Class-D Amplifier</b>	<b>TPA2013D1</b> ❖DSBGA ❖QFN • Constant Output Power • 1.8-V to 5.5-V Operation • 2.2-W into an 8-Ω Load from a 3.6-V Supply	<b>TPA2010D1</b> ❖DSBGA • 2.5-W MONO Filter Free Class-D • Efficiency: 88% at 400mW, 80% at 100mW • Improved CMRR, PSRR	<b>TPA2006D1</b> ❖SON • 1.45-W MONO Class-D • 2.8-mA Quiescent Current • 0.5-uA Shutdown Current
<b>Low Power Voltage Ref</b>	<b>REF50xx</b> ❖SOIC ❖MSOP • Low Temperature Drift (3ppm/°C (max)) • High Accuracy: .05% max • Low Noise (3uVPP/V)	<b>REF33xx</b> ❖SOIC ❖MSOP • Low Supply Current: 3.9uA (typ) • Low Temperature Drift: 30ppm/°C (max) • High Initial Accuracy: ±0.15% (max)	High Output Current: ±5mA
<b>Audio Codec's Low-Power Stereo</b>	<b>AIC3107</b> ❖QFN • Stereo CODEC with Integrated MONO Class-D Amp • Audio ADC + Audio DAC • Seven Audio Input Pins	<b>AIC3104</b> ❖QFN • Stereo Audio DAC+ADC • Six Audio Output Drivers • Automatic Gain Control • 14mW Stereo 48-kHz PB	<b>AIC3254</b> ❖QFN • 4.1 mW Stereo 48ksps DAC Playback • 6.1 mW Stereo 48 ksps ADC Record • Low Power Bypass
<b>Video DAC (Decoder)</b>	<b>TVP5150</b> ❖TQFP • Ultralow-Power NTSC/PAL Video Decoder • Two Composite Inputs or One S-Video Input • VBI Modes Supported Include: Teletext, Wide Screen Signaling, etc...		Macrovision Copy Protection Detection Ultralow Power Consumption: 113 mw (typical) Power-Down Mode: <1 mW
<b>Low Power Touch Screen Controller</b>	<b>TSC2008</b> ❖QFN ❖DSBGA • 1.2V to 3.6V, 12-Bit, Nanopower, 4-Wire Micro TOUCH SCREEN CONTROLLER with SPI™ • Effective Throughput Rate: Up to 20kHz (8-Bit) or 10kHz (12-Bit) • Low Power (12-Bit, 8.2kHz Eq Rate): 30.4mA at 1.2V, fSCLK = 5MHz	1.5 x 2 WCSP-12 and 4 x 4 QFN-16 Packages 44.6mA at 2.7V, fSCLK = 10MHz	
<b>Low Power Digital Temp Sensor</b>	<b>TMP102</b> ❖SOT • Low Quiescent Current – 10 uA (MAX) • 10 uA (MAX) shutdown current • Accuracy: 0.5°C (-25°C to +85°C)		12-bit Resolution Supply Range: 1.4V to 3.6V

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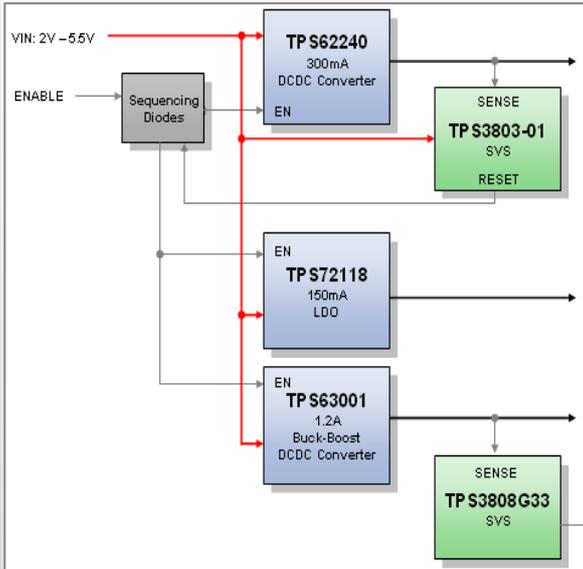
	Best Performance	Best Value	Low Power
Clocks Programmable PLL Synthesizer	<b>CDCE913</b>	• Programmable 1-PLL VCXO Clock Synthesizer With 1.8-V and 3.3-V Outputs Flexible Clock Driver	
	❖TSSOP	• In-System Programmability and EEPROM (Serial Programmable Volatile Register and Nonvolatile EEPROM) Separate Output Supply Pins • Flexible Input Clocking Concept (External Crystal: 8 MHz to 32 MHz) • Low-Noise PLL Core (PLL Loop Filter Components Integrated and Low Period Jitter (typical 50 ps))	
Low Power Wireless 2.4 GHz RF Transceiver	<b>CC2525</b>	• Wide Supply Range (2.0V – 3.8V) • Low Current Consumption (27 mA in RX, 31 mA in TX @ 0 dBm) • -87 dBm sensitivity (at 2 Mbps)	<b>CC2500</b>
	❖QFN		• Low Current Consumption (13.3 mA in RX, 250 kBaud) • Programmable data rate from 1.2 to 500 kBaud
Class A-B Amplifier	<b>TPA6204A1</b>	• 1.7W into 8Ω From a 5V Supply at THD = 10% TYP • Fast Startup • Only Three External Components	<b>TPA6205</b>
	❖SON	• 1.25W Into 8Ω From a 5-V Supply at THD=1% TYP • Shutdown Pin has 1.8V Compatible Thresholds • Only 5 Ext Components	• 250 to 700mW @ 3.3, 5V with 8Ω Load • Depop Circuitry • Thermal and Short-Circuit Protection
24/16/8-bit I/O Expander	<b>TCA6424</b>	• 24-bit I/O Expander • No Glitch on Power Up • 5-V Tolerant I/O Ports	<b>TCA6416</b>
	❖QFN	• 16-bit I/O Expander • Internal Power-On Reset • Noise Filter on SCL/SDA Inputs	• 8-bit I/O Expander • Low Standby Current Consumption of 1 uA
Compact Flash Interface	<b>CF4320H</b>	• Compact Flash Bus-Interface Chip with ±15-kV ESD Protection, Translation, and Card-Detect Circuitry	
	❖LFBGA	• Logic-Level Translation Between 1.8-V, 2.5-V, 3.3-V, and 5-V Supplies • Floating Input Conditions Allowed • Latch-Up Performance Exceeds 250 mA Per JESD 17	
ESD Protection ±15-kV Array	<b>TPD4E001</b>	• 4-Channel ESD Protection • Low 1.5-pF Input Capacitance	<b>TPD2E001</b>
	❖SOT	• 2-Channel ESD Protection • Low 1-nA (MAX) Leakage Current • 0.9-V to 5.5-V Supply-Voltage Range • DRY, DRL and QFN PKG	

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# Power Options for DM335/DM355

## Highest efficiency

### Wide Vin, high-efficiency discrete power solution

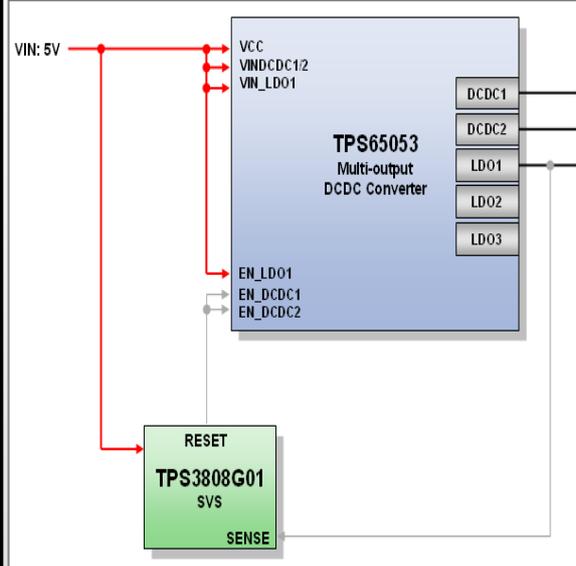


- 2V – 5.5V Input
- Up to 96% Efficiency
- Power Save Mode for Light Loads

Full Design Document: [SLVA288](#)

## Most integration

### Multiple-output DC/DC converter with integrated FETs

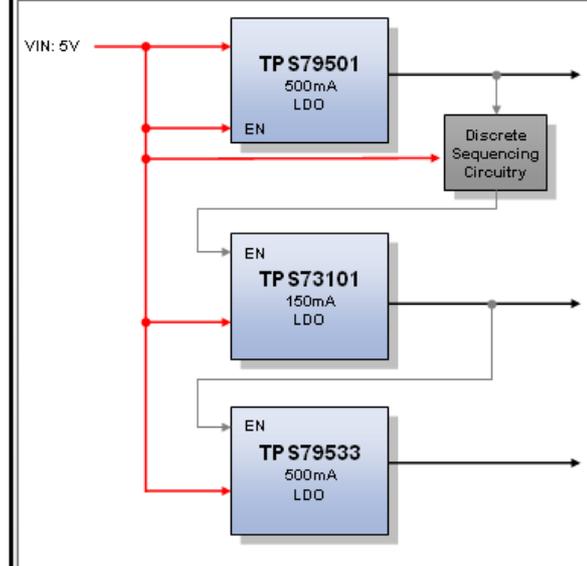


- 2 DCDC + 3 LDO's in 4x4mm QFN
- 2.25MHz for Small Inductors
- 180° Out-of-Phase Operation

Full Design Document: [SLVR330](#)

## Simplest solution

### LDO power solution



- No output cap required (TPS73101)
- No Inductors Required
- Small SON & SOT-23 packaging

Full Design Document: [SLVR331](#)

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SPRT510

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