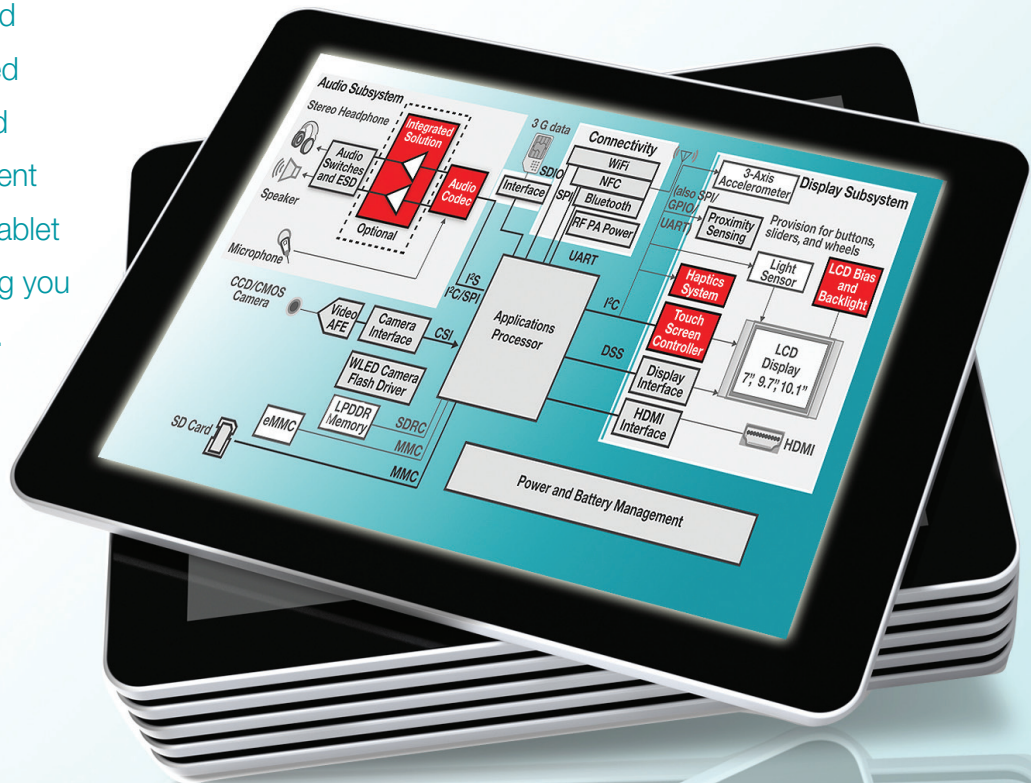


TI Tablet Solutions



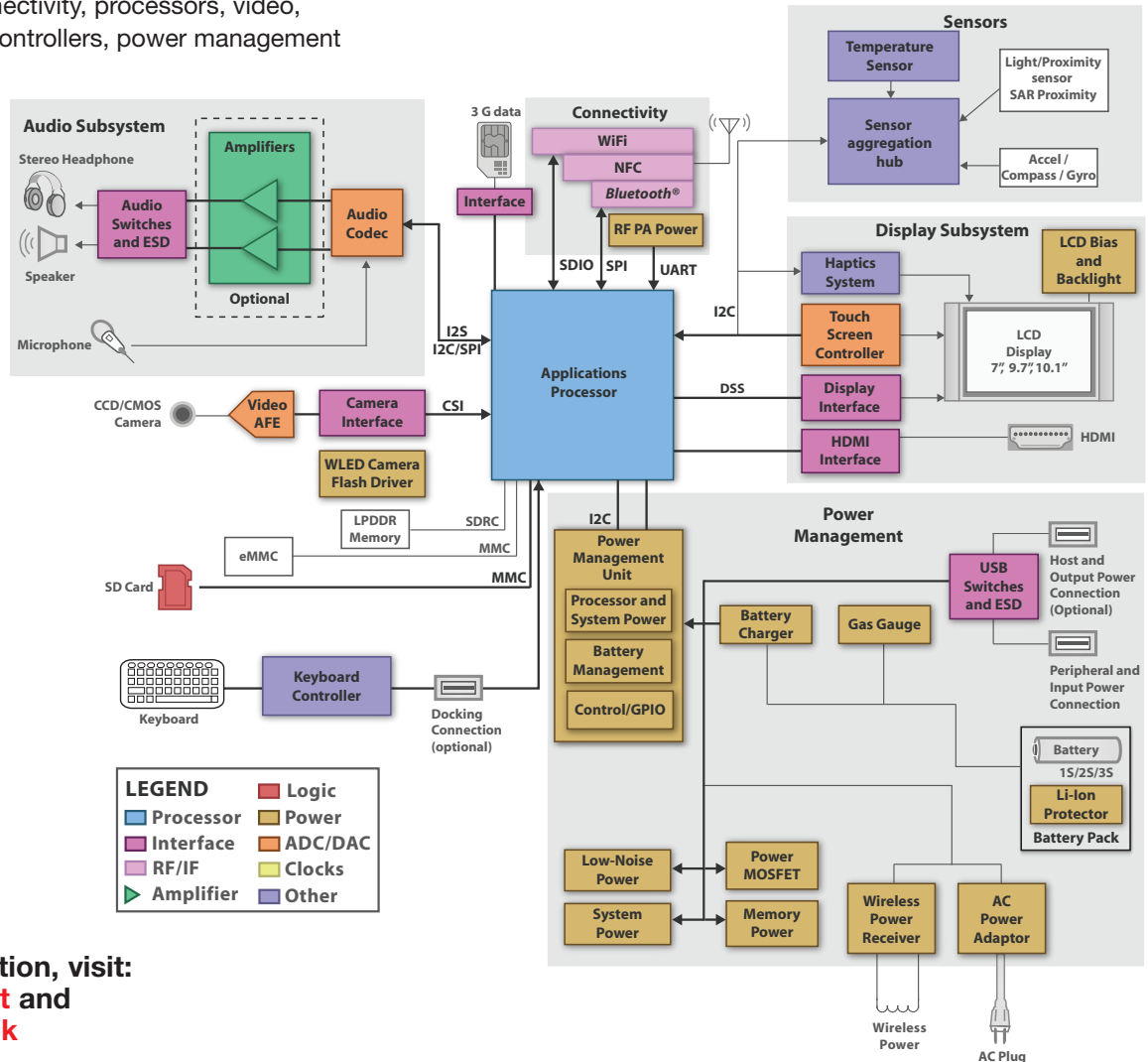
TI's extensive product portfolio delivers the performance and efficiency needed to help you build innovative, efficient and affordable tablet solutions, getting you to market faster.



Tablet and ebook Diagram

Texas Instruments (TI) offers an extensive variety of semiconductor solutions for tablets and eBooks that support wireless connectivity, processors, video, audio, touch screen controllers, power management and much more.

The following selection guide is a sampling of TI devices that are available to streamline your design process.



For more information, visit:
www.ti.com/tablet and
www.ti.com/ebook

Selection Guide

Processors

Device	Description
Application Processors	
AM3354	Single ARM® Cortex®-A8-based processor

Power Management Solutions

Device	Description
Battery Management	
TPS65090	Front-end PMU for 2-3 Li-Ion cells in series: switching-charger, DC/DC pre-regulation and load switches
bq24190/2/3	Charger: 4A, NVDC, 1SxP, single input, integrated FETs, DPP, JEITA
bq24715	Charger: NVDC controller, SMBus, 2-3S
bq2425x	Charger: 2A, single input with PowerPath (NVDC), 1S, charge-time optimizer, JEITA

Device	Description
bq2426x	Charger: 3A, single input with PowerPath (NVDC), OTG, 1S, charge-time optimizer, JEITA
bq2416X	Charger: 2.5A, dual-input with PowerPath, 1S, integrated FETs, JEITA
bq2427X	Charger: 2.5/1.5A, single-input with PowerPath, 1S, integrated FETs, JEITA
bq40z50/55	Fuel gauge: Impedance Track™ technology, with AFE, turbo mode, 1-4S
bq28z560	Fuel gauge: Impedance Track technology + protector, 1S
bq28z600/10	Fuel gauge: Impedance Track technology, with AFE, 1-2S
bq500410A	Free positioning, Qi-compliant wireless power transmitter manager
bq51050B/51B	Wireless power receiver and battery charger: 1A, high-efficiency Qi v1.1 compliant
bq51013B	Wireless power receiver: 1A, high-efficiency Qi v1.1 compliant

New products are listed in **bold red**. Preview products are listed in **bold teal**.

(Continued next page)

Selection Guide

Power Management Solutions (Continued)

Device	Description
Processor Power	
TPS62361	Single step-down DC/DC, 3A processor core supply with I ² C compatible interface and remote sense
TPS650380	Triple buck with multiphase (5A, 2A, 1.8A) in WCSP package
TPS65910	Cortex A8 PMU for OMAP3, Sitara™ AM335x, Rockchip, etc.
TPS658640	Nvidia Tegra 2 PMU with 3 buck converters and 9 LDO
TPS659110	Nvidia Tegra 3 PMU with 3 buck converters, 1 buck controller and 9 LDO
TPS65913/14	PMU for Cortex A15 processors
TPS65912	PMU for LTE modems
TPS65712	3G/ 4G/ LTE RF PMU

Display Power	
TPS65132	Single inductor/ dual output regulator for VPOS/VNEG LCD displays, with AVDD
TPS65135	Single inductor/ dual output regulator for VPOS/VNEG LCD displays
TPS65630A	Dual output power supply for AMOLED displays up to 10"
TPS65631	Dual output power supply for AMOLED displays up to 6"

WLED Backlighting and CameraFlashlight	
LP8553/52	4/6 channel high-efficacy LED backlight drivers with adaptive brightness control
LP8556	1 to 6 channel high-efficacy LED backlight driver with CABC
LM3530/33	2 string x 10WLED per string, 256 step dimming, auto-fade and CABC input
TPS61181A/3/5	6/8 strings x 10WLED per string, 30/25mA, 20000:1/1000:1/200:1 dimming ratio; 2s1p Li-Ion cell
TPS61176	High-efficiency 6-channel WLED driver supporting single-cell Li-Ion battery input
TPS61187	6 strings x 10WLED per string, 30mA, 10000:1 /100:1 dimming ratio; 24Vin, adaptive boost output
TPS61311	2 LEDs, 1.5A WLED driver camera flash and video light driver with I ² C interface and HW reset input
TPS61050	2 LED, 1.2A WLED driver camera flash and video light driver with I ² C interface and voltage mode selection pin.
LM3560	2 LEDs, 2A WLED driver camera flash
LM3556/42	1 WLED, 1.5A WLED camera flash, 4MHz

Power for HDMI, USB-OTG, DDR Core and Audio Power amplifiers	
TPS61253/6	5V boost converter, up to 1.5A peak current, for mono/stereo audio power supply, USB-OTG
TPS81256	3W boost module in MicroSiP™ technology for USB-OTG and audio power supply.
TPS82671	Step-down module in MicroSiP technology, 600mA current capability
TPS62130/40/50/60/70	Step-down DC/DC with 17Vin, currents from 0.5A to 3A, adj. soft start
TPS61275	0.5A buck converter, SLEEP mode and DCS-Control™ for housekeeping / low power controllers
TPS62080/90	Low V _{IN} buck converter, 1.2A /3A, SNOOZE mode and adj. soft start
TPS63036 / TPS63020	Single inductor buck-boost converter with 1A / 4A current switch, up to 96% efficiency
TPS63060	Single inductor buck-boost converter with 2A current switch, wide V _{IN} up to 12V (2S1P)
TPS51632	1/2/3-phase DCAP™+ step-down driverless controller with serial VID control and DVFS
TPS51916, TPS51716	DDR core (VDDQ) controller
TPS51200/6, TPS53317	DDR termination (VTT) controller

Device	Description
NexFET™ Power MOSFETs	
CSD16301Q2/ 17313Q2	n-channel in a compact SON 2x2-mm package minimizes losses
CSD87330Q3D/ 87331Q3D	Dual n-channel power block designed for synchronous buck applications
CSD87312Q3E	Dual n-channel in common source configuration and low drain to drain ON resistance in an SON 3x3mm package.
CSD23201W10	p-channel with low ON resistance and gate charge in 1x1-mm CSP package with a 0.62-mm profile
CSD25302Q2	p-channel w/ lowest ON resistance and gate charge in an ultra-low-profile SON 2x2-mm package
CSD75205W1015	Dual p-channel in common source configuration and gate charge in 1.0x1.5-mm CSP package

Power/Load/ USB Switches	
TPS22920	Ultra-small, 3.6V/4A load switch with 5.3-mΩ ON resistance and controlled turn-ON in WCSP-8
TPS22921/2/2B	Load switch with 2A max current and 0.8μA standby current in tiny 6 WCSP package for the memory power
TPS22912/13	Ultra-small, 5.5V/2A load switches with 60mΩ ON resistance, reverse current protection, WCSP-4
TPS22965/66	Single/Dual-channel 5.5V/6A load switches with charge pump, 16mΩ ON resistance, SON-8/14
TPS22924B/C	Ultra-small, 3.6V/2A load switches with 18.3mΩ ON resistance, quick output discharge, WCSP-6
TPS2500/1	USB power switch with boost converter for 1.1A load current and fast current limit
TPS2552/3	USB3.0 power switch with ±6% current limiting accuracy at 1.3A
TPS2051C	Single-channel, current-limited USB power distribution switch
TPS2065C	Single-channel, current-limited USB power distribution switch

Linear Regulators and Voltage Supervisors	
TLV713/TLV716	Single/dual 150mA LDOs in 1x1mm and 1.2 x1.2mm with inrush current control and capless operation
TPS709	1μA quiescent current, 150mA LDO in SOT23 package
TPS780/2	500nA quiescent current, 150mA LDO in 2x2mm package
TLV707	200mA LDO in small 1x1mm package with lower than 1.2V V _{OUT} options
LP5907	250mA LDO with low noise (6.5μV _{rms}) in 0.65x0.65mm WCSP
TPS720	350mA LDO with bias pin for low V _{IN} (1.1V) operation, in 2x2mm SON or WCSP package
TPS737	1A LDO with low 130mV dropout in 2 x 2mm
TPS3839	150nA, 3-pin reset IC in 1x1mm
TPS3420/1/2	250nA, single/dual-channel push-button in 1x1.5mm
TPS3780	Dual-channel voltage detector with low I _Q (1.8μA), 1x1.5mm

Power Adapters	
UCC28600/10	Up to 65W green-mode flyback controller
UCC24610	Secondary side synchronous rectifier controller
UCC28700	CVCC flyback with primary side control and <30mW no load power
UCC28710	CVCC flyback with primary side control and <10mW no load power

RF PA DC/DC Power and RF Detectors/ Clock Synthesizer	
LM3242	WCDMA/UMTS (3G/4G) buck up to 750mA
LM3243	2G/3G/4G buck up to 2.5A
LM3253	GSM/EDGE multimode (2G/3G/4G) buck up to 3A
LMH2110	8GHz 45dB LOG RMS RF detector for 2G/3G/4G/WAP - transmit power control

New products are listed in bold red. Preview products are listed in bold teal.

Selection Guide

Signal Chain Solutions

Device	Description
Audio Codecs, DACs and Amplifiers	
TLV320AIC3110/1	Audio codec - low power mono ADC with integrated stereo Class-D amplifiers and embedded miniDSP (3111)
TLV320AIC3262	Low-power stereo codec with miniDSP, three audio interfaces, DirectPath™ headphone and stereo class-D speaker amplifier
TPA2080D1	Class DG boosted speaker amp
TPA6165A2	Multimedia headset interface
TAS2552	3.5W boosted speaker amp with integrated I-V sense
LM48901	4-channel spatial array
LM48903	2-channel spatial array
TWL6040/41	OMAP4 dedicated audio codec

Touch Interface Solutions and Sensor Hub	
TSC2046E	2nd gen lowest cost 4-wire SPI resistive touch controller
TSC2020	Very low-power 4-wire multi-touch resistive touch screen controller
TSC3060	Capacitive touch controller with 16 channel and patented AFE, for small displays
TSC4270	Capacitive touch controller with μ C, flash and I ² C, for 7" tablets
MSP430FR57xx	Ultra-low-power MSP430™ for touchpad applications
MSP430F5419A	MSP430 based keyboard controller/aggregation hub with HID/I ² C support, 4xI ² C ports
MSP430F5310	MSP430 based keyboard controller/aggregation hub with HID/I ² C support, 2xI ² C ports
MSP430F5528	Ultra-low-power MSP430 sensor hub with USB
MSP430F5229	Ultra-low-power MSP430 sensor hub with I2C
MSP430G2553	Ultra-low-power MSP430 fir SAR/proximity sensing and capacitive touch los

Haptics Drivers	
DRV2604/05	ERM/LRA haptics driver with integrated waveform library
DRV2667/68	Piezo haptics driver with integrated digital front end (x68: 2S battery support)

Interface	
SN65DSI83/84/85	MIPI-DSI to LVDS Flatlink™ interface
SN65DSI86/87	MIPI-DSI to DP interface
DS30RT148	HDMI retimer
DS90C185/7	RGB to dual-LVDS flat panel display transmitter with 1.8V and up to 185MHz pixel clock
SN75LVDS83B/C	FlatLink LVDS flat panel display transmitter with 1.8V and up to 135MHz/75MHz pixel clock
SN65LVDS315	MIPI camera serial interface (CSI-1) transmitter

Wireless	
WiLink™ 8.0 Solutions	Single-chip WiFi, GPS & Glonass, <i>Bluetooth</i> ® 4.0, FM and NFC solution
WL1271-TiWi	Wi-Fi® + <i>Bluetooth</i> modules offered by LSR and Murata
TRF7970A	NFC Transceiver IC (NFCIP1 and NFCIP2)

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Device	Description
Temperature Sensors	
TMP103	Ultra-small, 3 μ A (max) local temperature sensor with multiple-device access
TMP104	Ultra-small, 3 μ A (max) local temperature sensor with SMAART wire interface
TMP102/112	Low-power (10 μ A max) local temperature sensors in SOT-563
TMP006	Contactless IR thermopile sensor in WCSP
TMP108	Local sensor with dynamically progr temp limit window and under-/over-temperature ALERT
TMP451	1-channel remote temp sensor with alert function and 1.8V I ² C Interface

ESD & EMI Protection	
TPD12S015/16	HDMI companion+ protection
TPD4S014	USB OVP+ESD for charging and OTG
TPD4S214	USB OTG protection
TPD1E10B06/09	Audio headset and speaker
TPD5E003	SIM card ESD protection
TPD8E003	Keyboard ESD protection

Switches and Multiplexers	
BQ24391	BCD 1.2 compliant charger detection device
TS3A225E	Autonomous audio switch with headset type detection
TS3USB221E	High-speed USB 2.0 (480Mbps) 1:2 multiplexer/demultiplexer switch with single enable
TS3DV642	4-channel differential 8:16 multiplexer switch for DVI / HDMI applications
TCA8424	Fully compliant HID over I ² C keyboard controller, with windows 8 support

Voltage Translators	
TXS0102/TXS0104E	2-bit/4-bit bidirectional open-drain application
TXS4555	Single SIM card interface voltage translators
TXS0206-29	MMC, SD card, MemoryStick interface voltage translator
TXB0108/TXS0108E	Auto-direction sensing 8-bit voltage translators for display applications
TCA9406	Dual bidirectional I ² C-Bus and SMBus voltage translator with 1MHz support and 8kV HBM ESD
SN74AVC2T245	Dual-bit, 2-DIR pin dual-supply bus transceiver
SN74AVC4T774	4-bit dual-supply bus transceiver with configurable voltage translation

New products are listed in bold red. Preview products are listed in bold teal.

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