POWERNAP™
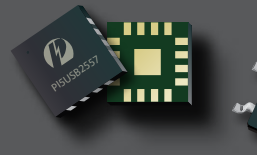## USB Solutions for Sleep-and-Charge Design

## USB Charger Controller For Automotive Market

No USB Host needed!

→ Charging set-up is managed by Pericom
→ Charge FASTER, up to 2A
→ Dedicated charger support:
   □ USB 1.0 & 1.1 charger spec
   □ YD/T-1591 spec, and
   □ Apple products (ie: iPhones & iPods)

Via USB ports, users want to charge cell phones, MP3/MP4 players, DSC, digtial video recorders, eReaders, and tablets/pads, and they want to charge them FAST!

Pericom's all-in-one USB charger controller allows automotive manufacturers to offer a USB port that will charge all external USB devices quickly and efficiently. All of this for a fraction of the cost of a full USB host controller. A USB controller is used to set up data transfer as well as low current charge transfer. On the other hand, a Pericom USB charger controller will only need to set up the charge transfer, thereby reducing complex circuitry and in turn offering a less-expensive solution to the end customer.

This USB controller can detect and support devices based on essential charger specifications including USB BC 1.0, USB BC 1.1, USB BC1.2, YD/T-1591, as well as Apple based products. In order to prove charging support across USB devices, Pericom has officially tested 67 USB devices at a 3rd party lab. The list of devices can be found on the back of this document.
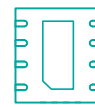
TQFN 8 - PI5USB1457
2.0mm x 2.0mm x 0.75mm

SOT23 5 - PI5USB66
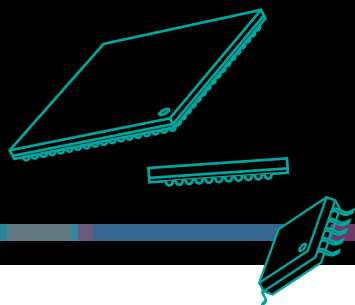3.0mm x 1.75mm x 1.30mm

TQFN 16 - PI5USB2543
3.0mm x 3.0mm x 0.75mm

TQFN 16 - PI5USB2557
3.0mm x 3.0mm x 0.75mm

SEE DATASHEETS/DATA BRIEFS FOR ALL PACKAGE OPTIONS

PERICOM SOLUTION	Apple 1A, YD/T-1591, USB BC 1.0 & 1.1 support	USB BC 1.2 Support	CDP Support	Apple 2A Support	Integrated Power Switch	Package
PI5USB66	YES	YES	NO	YES	NO	2mm x 2mm, 8pin TQFN
PI5USB1457	YES	YES	YES	NO	NO	2mm x 2mm, 10pin TQFN
PI5USB2557	YES	YES	YES	YES	YES	3mm x 3mm, 16pin TQFN
PI5USB2543	YES	YES	YES	YES	YES	3mm x 3mm, 16pin TQFN

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USB Charging Controller Test Results

Make	Model	Charging Y/N
Acer	Liquid E (S100)	Y
Amazon Kindle	Wireless Reading Device (6'')	Y
Apple iPhone	iPhone 3GS 16G (MC132TA/A), iPhone4 (16G), iPhone 3G 8GB (MB489J/A) Model A1241, iPhone Original/EDGE (A1203) (MA712LL), iPhone 4GS, iPhone 5GS	Y
Apple iPod	iPod Classic 6.5Gen 120GB (MB565J/A), iPod classic 6.5Gen 160GB MC297J/A, iPod classic 6Gen 160GB (MB150J/A, iPod nano 3Gen 8GB (MB261J/A), iPod nano 4Gen 16GB (MB918J/A), iPod nano 5Gen 16GB (MC060J/A), iPod nano 6Gen 16GB MC526J/A, iPod shuffle 2Gen 1GB (MB225J/A), iPod shuffle 3Gen 4GB (MC164J/A), iPod shuffle 4Gen 2GB MC584J/A, iPod touch 1Gen 32GB (MB376J/A), iPod touch 2Gen 16GB (MB531J/A) iPod touch 3Gen 64GB (MC011J/A), iPod touch 4Gen 32GB MC544J/A,	Y
Apple iPad	iPad WiFi 16GB (A1219), MC349LL/A iPad WiFi + 3G 16GB-USA	Y
Blackberry	Bold 9000, Storm 9500, 8100, 8300, 8310, 8800, Pearl	Y
Creative	ZN-XF216G	Y
Garmin & Asus	G60	Y
Hitachi Living Systems	HMP-X934	Y
HTC	7 Mozart T8698; Desire HD A9191; Desire Z - A7272 Vision; EVO 4G; Touch Diamond2; Diamond Touch MP6950SP Sprint; EVO design YH	Y
iRiver	E150	Y
JVC	alneo XA-M40	Y
KENWOOD	MG-F508	Y
LG	CT810; Thrill 4G	Y
Motorola	Defy MB525, A855 Milestone, MILESTONE XT701, XT720, Photo 4G	Y
Nokia	E72, N8, N85, N97, 6500C	Y
Panasonic	SV-SD950N	Y
Samsung	GOOGLE NEXUS S (GT-I9023); GT-I9000 (Galaxy S I9000 8GB) OMNIA II i8000; YP-P3, Epic 4G touch, Galaxy Note	Y
Sony Ericsson	Satio U1, T715, XPERIA X10	Y
SamSung	Galaxy Tab(GT-P1000)	Y
SanDisk	Sansa Fuze SDMX14R-002GK-A70	Y
SONY	NWD-W253; NW-E042; NW-S644	Y
Toshiba	gigabeat T401S 4GB (MET401S)	Y
Transcend	TS4GMP330	Y
ViewSonic	ViewPad7	Y

USB Sleep N Charge Auto V2-20120326

USB 2.0 Charger Controller
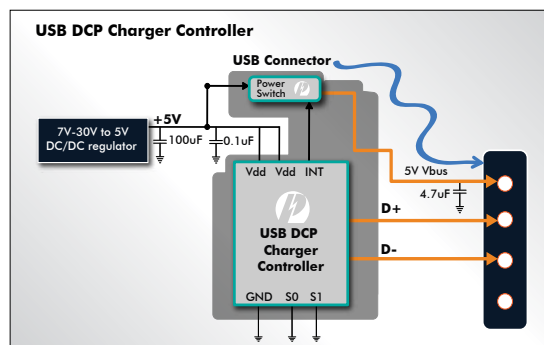
PI5USB66 Key Features

➔ Protects USB path from direct short to Vbus

➔ Integrated ESD support on D+/-

➔ Automatically switch between modes by detecting correctly plugged in device

➔ 5V power supply

➔ Packaging (Pb-free & Green available):
   ▫ 5-pin SOT23 (T)

PI5USB2557 Key Features

➔ Integrated 70mΩ power MOSFET

➔ Thermal and Short-Circuit Protection

➔ Continuous current support up to 2.5A

➔ Operating Range: 5V ±10%

➔ Undervoltage Lockout

➔ De-glitched Fault Report($\overline{OC}$)

➔ Integrated ESD protection
   ▫ +/- 4kV contact on pins D+/D- IEC61000-4-2 spec

➔ Reverse Current Blocking

➔ 16-Contact TQFN, ZH

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Get more info on connecting, timing and conditioning high-speed serial signals at www.pericom.com

CONNECTIVITY