

GaNFast™ Chargers Enable Apple iPhone 12 High-Speed Charging Compatibility

Navitas Semiconductor Limited announced a new listing of Apple-compatible GaNFast charger solutions for the iPhone 12 and all other Apple mobile devices from AirPods and the Apple Watch all the way to the biggest MacBook Pro.

At the launch of the iPhone 12 on October 14th, Apple announced that the phone would ship without a charger in the box. For confused users, left with an old, low-powered, slow silicon charger, the new online selector tool simply recommends fast, reliable and 100%-compatible GaNFast chargers for all Apple mobile products.



Compatibility and safety is provided by using an industry standard called Universal Serial Bus with Power Delivery (USB-PD). With USB-PD, the mobile device, such as an iPhone 12, communicates with the wall charger telling it exactly how much power to deliver and at what voltage. The iPhone will also communicate back when it is fully powered, and the charger will slow down and then enter 'sleep mode' to save energy.

To connect, Apple customers can use certified MFI (originally "Made for iPod") "C-to-Lightning" cables for all iPhones since the iPhone 5, and a few iPad models. For most iPads, and all new MacBooks, a 3A-rated "C-to-C" cable can be selected, noting that the big MacBook Pro 16" requires a 5A-rated 'E-marker' C-to-C cable to charge and transfer data at the highest speed.



Gallium Nitride (GaN) is a next-generation power semiconductor technology that runs up to 100x faster than old, slow silicon chips, with dramatic improvements in energy savings and power density. Navitas' GaNFast™ power ICs integrate GaN power (FET) with drive, control and protection to enable up to 3x more power in half the size and weight. Multi-output chargers can fast-charge up to 4 Apple devices at the same time and at 3x-4x lower cost and lighter weight than individual chargers.

In August 2020, Spigen Inc. and Navitas announced a new 20W GaN wall charger, the Spigen PowerArc ArcStation Pro, ahead of the expected Apple iPhone 12 release.

A powerful upgrade over former Apple chargers, the ArcStation Pro embraces modern gallium nitride (GaN) technology which runs up to 100x faster than old, slow, silicon chips to fast-charge electronics like never before.



**“
The silicon chip
is history;
gallium nitride and
GaNFast power ICs
are driving a fast
charger revolution.
”**

“The ArcStation Pro delivers lightning-fast charging in the smallest-possible form-factor, with an elegant design and fold-flat AC pins. With 20W of charging power and a USB Type-C output, it can also charge AirPods, iPads, and any number of other phones and tablets via USB-C-to-Lightning or USB-C-to-C cables,” said Bobby Lee, Spigen’s Product, and Marketing Manager.

Navitas’ GaNFast power ICs monolithically integrate GaN power, GaN analog, and GaN logic circuits on the same chip, to enable faster, reliable, efficient operation – in a very small size. At just 39.5 x 34.5 x 27.7 mm (37.7 cc), and featuring smooth-folding AC-pins, this charger is 30% smaller than Apple’s current 18W wall chargers.

“Spigen’s PowerArc is the leading-edge fast charger ahead of Apple’s iPhone 12 and differentiated by its accessible, affordable price point and commitment to quality,” said Stephen Oliver, Navitas’ Vice-President Marketing and Investor Relations. “The silicon chip is history; gallium nitride and GaNFast power ICs are driving a fast charger revolution.”

The Spigen PowerArc ArcStation Pro retails for US\$19.99, a major saving vs. Apple chargers.

“Apple have encouraged everyone to “Think Different” about charging, which gives users the freedom to choose the ultimate fast charger,” said Stephen Oliver. “At the same time, the vast array of options can be daunting, so we’ve created a simple, safe way for users to select the best charger – with the fastest performance. The GaNFast listing also includes familiar brand names such as Belkin, Anker, AUKEY, and Baseus.”

3x smaller, lighter and lower cost than individual chargers

High-frequency ACF / QR
Toroidal or planar transformers



High-frequency CrCM boost PFC + ACF / QR
Toroidal or planar transformers

The range of over 50 Apple-compatible chargers starts at 20W to fast-charge the iPhone 12 series. The same charger can charge the AirPods case, the Apple Watch, and has more than enough power for the new 15W MagSafe wireless charger. 60W-65W versions will fast charge the MacBook 13” and higher-power, multi-output GaN fast chargers, with 100W or 120W will fast charge the largest MacBook Pro 16” and have extra ports to power an iPhone, iPad and AirPods simultaneously.



To review and buy GaNFast chargers, visit www.GaNFast.com