



# Product Environmental Report

(International)

December 2022

## Made with better materials

100% 100%

100% recycled aluminum in enclosure  
100% recycled rPET in enclosure

## Energy efficient

56%

56% energy consumption reduction  
ENERGY STAR® design  
efficiency qualification



## Tackling climate change

100%

100% committed to joining our net-zero manufacturing supply chain by 2030

## Smarter chemistry<sup>1</sup>

- 100% nickel-free design
- 100% copper-free
- 100% rosin-free solder
- 100% C-free
- 100% lead-free

## Responsible packaging

100% 97%

100% of wood fiber comes from certified sustainable sources  
97% of packaging fiber-based due to our work on recycled ink, packaging

## Apple Trade In

Round-trip shipping included in our trade-in program

## Enclosure made with 100% recycled aluminum

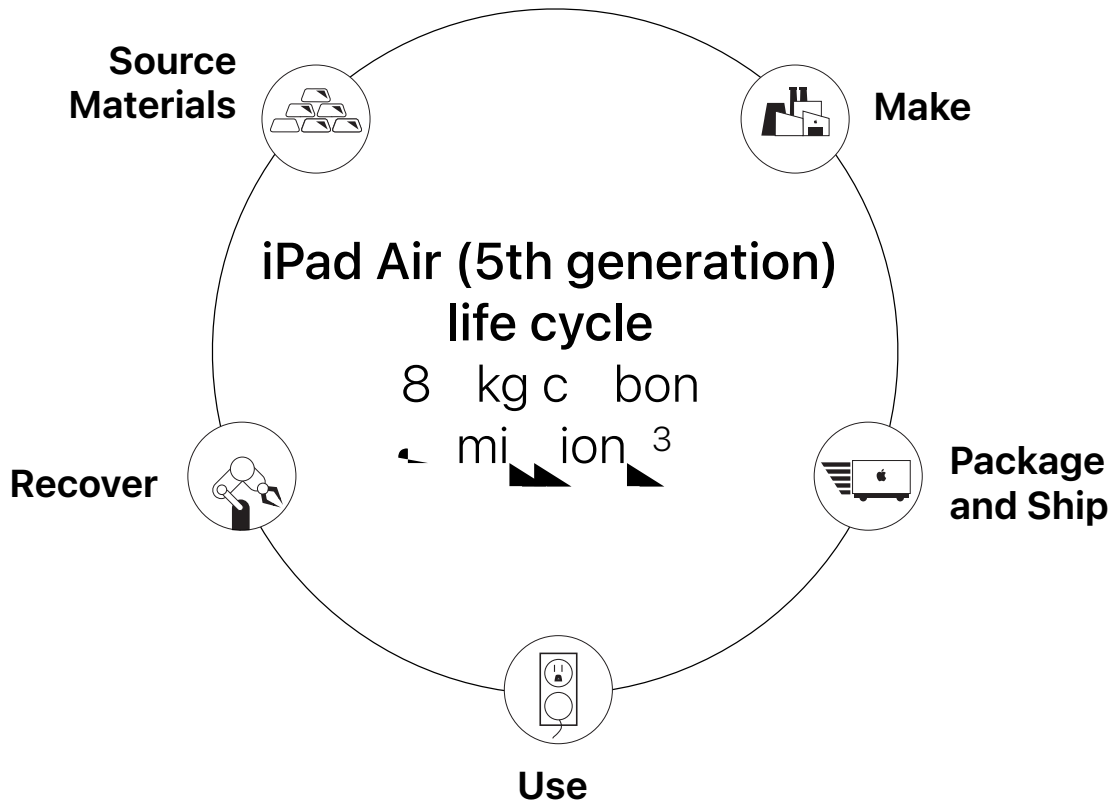
1. This report includes data on the environmental impact of the enclosure for the U.S. configuration of the iPad (International).



# Taking responsibility for our products at every stage

We take responsibility for our products throughout their lifecycle—including the materials we use, the way we make them, how we package and ship them, and how we focus on recovering them. We work on making big differences for our products, including our commitment to reducing our carbon footprint.

**We sell millions of products. So making even small adjustments can have a meaningful impact.**



## Carbon footprint

We continue to work on reducing our carbon footprint by focusing on making a greener product, with a lower carbon footprint and with a greener supply chain. We are also working on reducing our carbon footprint in our buildings and with our employees. We are committed to reducing our carbon footprint and to making a positive impact on the environment.

### iPad Air (5th generation) life cycle carbon emissions

- 70% Production
- 7% Distribution
- 14% Use
- 9% End-of-life recycling



# Source Materials

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## Aluminum

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## Rare earth elements

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 ...o... e... e... r... a... n...  
 ...i... n... e... d... i... c... .



## Plastic

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 ...f... u... -... b... e... d... s... i... c... o... o...  
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 ...y... i... c... i... n... f... e... c... o... m... p... o... s... i... t... i... o... n... .



## Tin

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## Smarter chemistry

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 ...e... n... i... u... s... c... i... n... .W... c... o... n... j... e... n... i... d... n... i... f... e... m... k... u... of... a... 7... y... e... c... n... b... m... of...  
 ...i... d... i... c... .





# Make

Apple's Supplier Code of Conduct is designed to ensure the production of our products in a way that respects the environment and the well-being of our suppliers' employees and the communities in which they operate.

We work with our suppliers to identify and work to reduce the environmental impact of our products. Our suppliers are required to follow the Apple Supplier Code of Conduct, which includes the following requirements:

## Greener chemicals

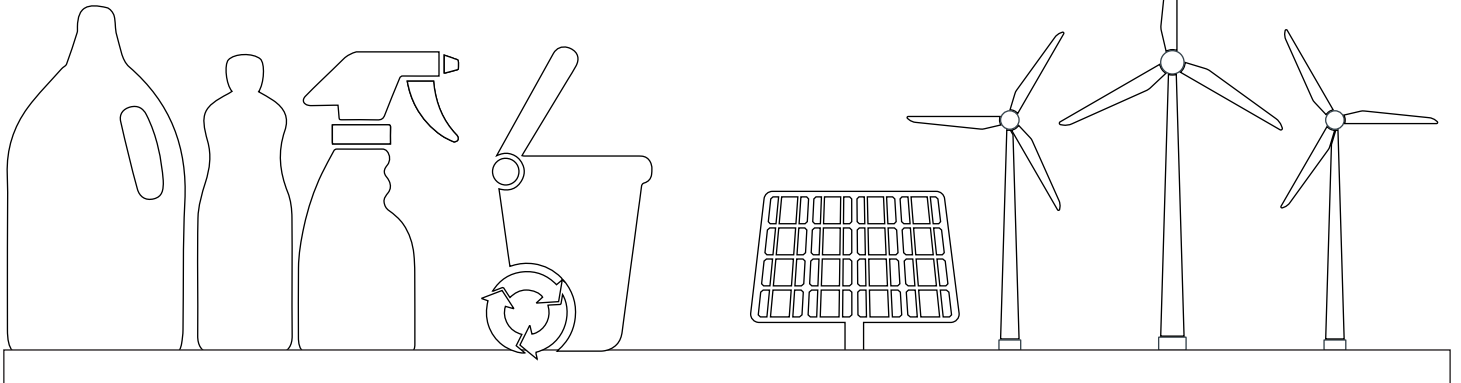
Apple is committed to reducing the use of hazardous chemicals in our products. We are working with our suppliers to identify and eliminate hazardous chemicals from our products. We are also working with our suppliers to identify and eliminate hazardous chemicals from our products.

## Zero Waste to Landfill

Apple is committed to reducing the amount of waste that is sent to landfill. We are working with our suppliers to identify and eliminate waste from our products. We are also working with our suppliers to identify and eliminate waste from our products.

## Supplier energy use

Apple is committed to reducing the amount of energy that is used in the production of our products. We are working with our suppliers to identify and eliminate energy from our products. We are also working with our suppliers to identify and eliminate energy from our products.







# Package and Ship

iPad Air (5th generation) packaging is made with 100% recycled cardboard and 36% recycled wood fiber.

During production, packaging is made with 100% recycled cardboard and 36% recycled wood fiber in our packaging. iPad Air (5th generation) packaging is made with 100% recycled cardboard and 36% recycled wood fiber in our packaging.<sup>1</sup> iPad Air (5th generation) packaging is made with 100% recycled cardboard and 36% recycled wood fiber in our packaging.

**97%**

of iPad Air (5th generation) packaging is made with 100% recycled cardboard and 36% recycled wood fiber in our packaging.

**36%**

of iPad Air (5th generation) packaging is made with 100% recycled cardboard and 36% recycled wood fiber in our packaging.

**100%**

of virgin wood fiber in iPad Air (5th generation) packaging is made with 100% recycled cardboard and 36% recycled wood fiber in our packaging.





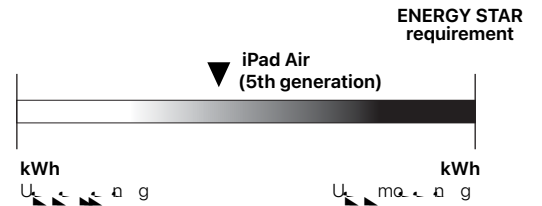
# Use

Designed for long-term use, our energy-efficient design helps you get the most out of your iPad Air. <sup>12</sup>

With our advanced power management system, you can use your iPad Air for up to 10 hours of video playback. And with our low-power mode, you can use your iPad Air for up to 96 hours of standby time. And with our ultra-wideband Wi-Fi, you can stream HD video without buffering. And with our new A12 Bionic chip, you can use your iPad Air for up to 10 hours of video playback. And with our low-power mode, you can use your iPad Air for up to 96 hours of standby time. And with our ultra-wideband Wi-Fi, you can stream HD video without buffering. And with our new A12 Bionic chip, you can use your iPad Air for up to 10 hours of video playback.

## Energy consumption of ENERGY STAR-rated products

ENERGY STAR-rated products are designed to be energy-efficient. For example, ENERGY STAR-rated products use less energy than non-rated products. This means you can save money on your energy bills. And it's better for the environment. ENERGY STAR is a symbol of energy efficiency. <sup>12</sup>



## Designed to last

Our iPad Air is built to last. It's made with a durable aluminum case and a scratch-resistant glass front. And it's designed to last for years to come. <sup>12</sup>

## Made with smarter chemistry

We use smarter chemistry in our products. This means we can use less material and reduce our carbon footprint. And it's better for the environment. <sup>12</sup>



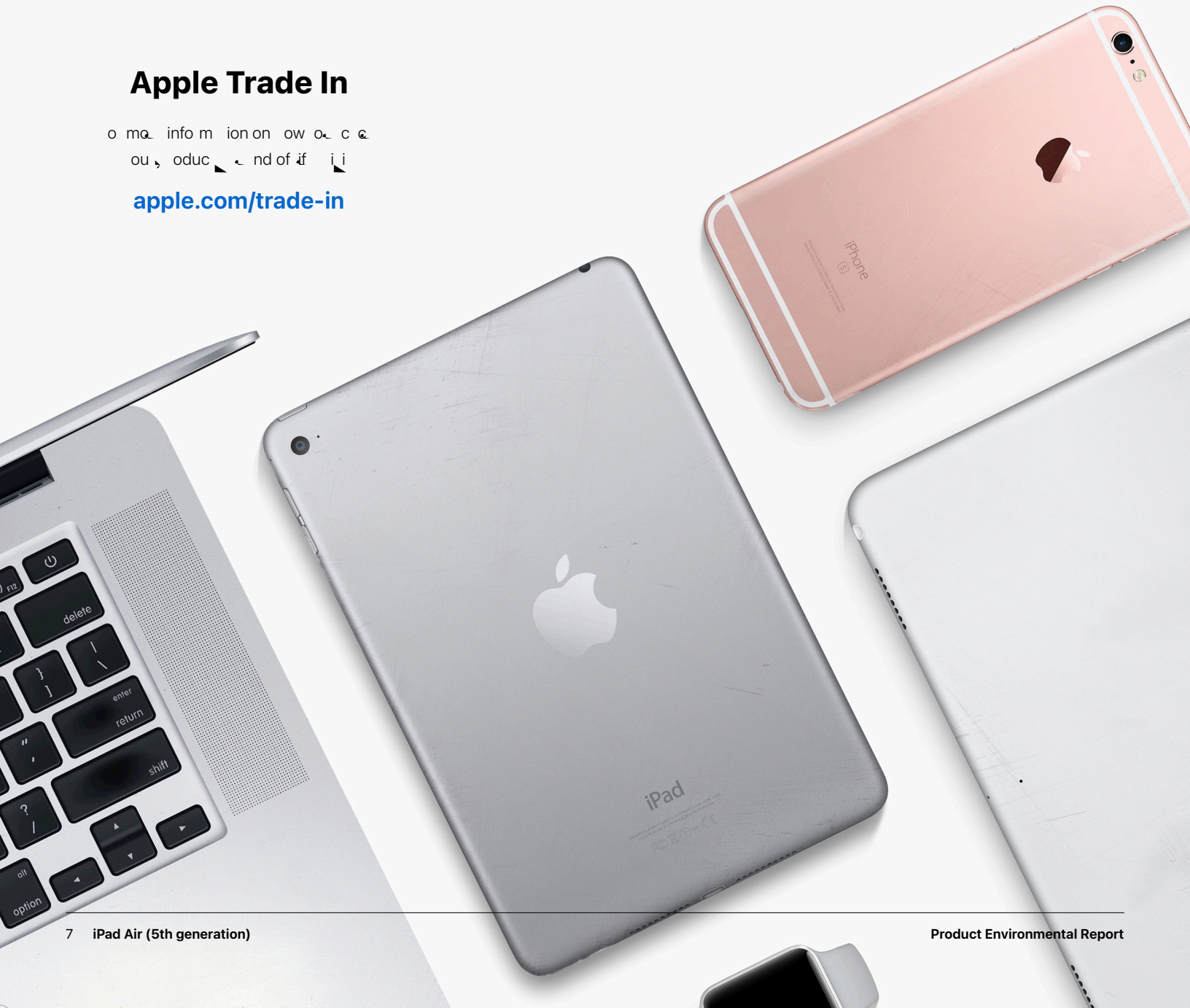
# Recover

Recovery of products is a key element in our environmental strategy. We aim to recover as much as possible from our products at the end of their useful life.

We have developed a circular economy model that focuses on recovering materials and components from our products at the end of their useful life. This model is based on the principles of the circular economy, which aims to eliminate waste and reduce the need for raw materials. We have implemented a number of initiatives to support this model, including the use of recycled materials in our products, the development of repair and refurbishment programs, and the implementation of take-back programs. These initiatives are designed to reduce our environmental footprint and create a more sustainable future for our company and the world.

## Apple Trade In

For more information on how our products can be recycled, visit [apple.com/trade-in](http://apple.com/trade-in)



# Definitions

**Bio-based plastics:** io-b e d s ic e m d f om bio ogic ou c e n f om fo i fu ou c io-b e d s ic ow u o e duc e i nc on fo i fu .

**Carbon footprint:** E im e d m i ion e c cu e d in cco d nc wi guid ia nde qui ra n e cifi d b IS 14 4 nd IS 14 44. e e i in e n unc in in mod ing c bor m i ion du s im i o d i m i ion o e q con o n con ibu o a s s e ' c bor m i ion s s e dd e i unc in b d e q ing d i d s oc b e d n i on r a n mod wi s s e e cific, r a e o e e m ining e r a n o f s s e ' c bonfoo s in w e on indu e g d nd um i ion. C cu ion in c ud e m i ion fo e fo owing if c e s e con ibu ing o Gob W ming a n i GW 1 e ) in C e qui e nc f co e e )

**Production:** Inc ud e e c ion s oduc ion nd n o ion of w m e i w e m nuf cu e n o nd e mb of s nd s oduc s ck ging.

**Transport:** Inc ud i nd e n o ion of e fini e d s oduc nd i oci e d s ck ging f om m nuf cu ing i o e gion di ibu ion ub e n o of s oduc f om di ibu ion ub e nd cu ora i mod e du ing e g di nc b e d on e gion g og s .

**Use:** s s e um e e o fou e e iod fo s ow u b fi owa b e d on e s oduc e . oduc u e c n io e b e d on i o ic cu ora u e d fo im i s oduc . Ea g u e i im u e d in iou w fo e m e b mod ing

d i b e d in o oug e fo ming c i i i k mo j nd mu ic s b ck. G og s ic diff e nc in e s ow g id mi e b e n ccour e d fo e gion e e .

**End-of-life processing:** Inc ud n o ion f om c a c ion ub o e c cing c r e nd e e a g u d in r a c nic s s ion nd e dding of, o m a info m ion on e c bonfoo s in i i s s e . [www.apple.com/environment/](http://www.apple.com/environment/)

**Recycled materials:** R c cing m k b e u e of fini e ou e b ou cing f om e c a e d e n m i a d m e i . R c e d cor n c im fo m e i u e d in ou s oduc e b e n e i f i d b n ind e nd n i d s o e c e d cor n nd d confo m o IS 14 21.

**Renewable materials:** W d fia bio-m e i o e c n b e g a e d in um n if e n ik s e fib o ug c a . io-m e i c n e s u u e f w fini e ou c . u e n oug bio-m e i e e b i i o e g ow e e no w m n g d e on ib . R a w l e m e i e e of bio-m e i m n g d in w e n l e con inuou s oduc ion wi ou d s e ing e e ' e ou c e w w focu on ou c e c i f i d fo e i m n g r a n s c ic e

**Supplier Clean Energy Program:** Sinc e e e c i c i u e d o m k ou s oduc i e g con ibu o o ou a c bonfoo s in w l e s ingou u s i b cor a m a e a g e f f i c i n nd n i ion o a w e a w l e a g ou c . W l e commi d o n i ioning ou e n e m nuf cu ing u s c in o 1 e c n e a w l e e c i c i b 2 3 .

# Endnotes

<sup>1</sup> s s e d fia i e ic ion on mfu ub nc including d fini ion fo w s s e con id o b "e e of" in e s s e R gu e d Sub nc s e cific ion. E e s s e s oduc i e e of C nd s e e c s fo C s ow co d in Indi i nd fo 2 s ong. C s ow co d ) nd Sou s a w e e w con inu o e e k g a e n r a n s s o fo ou C nd s e e s c r a n s s e s oduc con s wi e Eu e n Union D e c k 2 11 e /EU nd i r a nd r a n including e m i ion fo e u e of d u c ig e m e u o d s s e i wo king o s e ou e u e of e e e m e d ub nc w e e c nic s o i l e .

<sup>2</sup> i d i e g a ion) c d e d God ing in e Unl d S e nd C n d in cco d nc wi IEEE 1 8 .1 o U 11 nd i j e d u c on e e c onic oduc En ion r a n e e r a n o o e e ) R g i . E . E e g e con s u e d i e nd mobi s o a b e d o r e n i on r a n e qui ra n in e e nd d e o m a info m ion i i [www.apple.com](http://www.apple.com) .

<sup>3</sup> G e n ou g e m i ion w e c cu e du ing if c e e r a n r a odo og in cco d nc wi IS 14 4 nd 14 44 nd d nd b e d on i d i e g a ion) nd d configu ion wi e 4G o g . W o f n u d e ou c bon mod e e g a w info m ion e u ou e im e fo e c bonfoo s in of e s e iou g a ion—i d i e g a ion) wi e 4G o g configu ion—ina e d f om 82 kg C e e ub i e d in i oduc En ion r a n R s o ) o 88 kg C e .

Carbon footprint		
	iPad Air (5th generation)	iPad Air (4th generation)
64G	8 kg C e	88 kg C e
128G	84 kg C e	-
256G	82 kg C e	1.2 kg C e

# Endnotes

4 i d i (A g a ion) w u d fo com i on e mo e c n e e d nd imi d ic . e s oduc ion i d i (A g a ion) nd d configu ion wi 04G o g w com e d o i s ingi d i (A g a ion) nd d configu ion wi 04G o g configu ion inc e e e e wo ow o g configu ion off e d.

W m s m e i in ou u s c in nd s ubi i of id n i f i d in n um ung e n nd god (B G) cob nd i um ra e nd e fia in ou u s c in i d s ra n e k o confi m ou cing s c ic nd e s of ou e s on i la ou cing s og m. In ddi ion ou e ffo con id b o d ng of i k including oci e n ion n a n um n ig nd go e n n c i k.

0 R c e d m e i c im s s i o e n c o u nd i b e d on u di ing do a b U C.

7 C mic ra e G e n S a e n @ b n c m k 3 o 4 o o e e qui e n r a o do og i k U.S. E S f C o i c e con id e d f nd s e f e d fo u e G e n S a e n @ i com e e n i e d e ra n o o e u e ub n c g in 18 diff e n c i i . o m a e i n f o m i o n i i [www.g-e-n.com](http://www.g-e-n.com).

8 e b i e d fin e mb u s i i o o e e b e n s s e u s i fo m a n o a e - fo i d i (A g a ion) e i d s e i f i d e o W e b U C ( 2 7 2 9 S nd d). U e qui e e e c n d e ion ou g ra od o e n w e a a g o c i e e o W e o nd f i e e 4 e c n God e e c n nd inum 1 e c n) d ign ion.

9 R s on i la ou cing of wood fib i d fia d in s s e ' S u in la i b S e cific ion. W con id wood fib o incud b mboo.

1 o m a e i n f o m i o n bou ou wo k o s a e c nd a e e s on i b m n g d fa e e d ou [En i on n a n og R o](#).

11 e kdown of U.S. i s ck ging b w ig . S e c non s ic non-fib m e i e c ud d.

12 E a g con um ion nd a g e f f i a i n c u e b e d on e ENERGY S R og m R qui ra n fo Com u including e m e a g ow n c fo i d i (A g a ion). o m a e i n f o m i o n i i [www.a-g.com](http://www.a-g.com). ENERGY S R nd e ENERGY S R m k e e g i e d d m k o w a d b e U.S. En i on n a n e c i o n g n c .

i d i (A g a ion) i e e d wi fu c g d b e nd s ow e d b e 2 W US -C ow d s e wi e US -C o C g C l a ( m).

→ S e s , ow ow e i e r e d u o m i c e w o m i n u of in c i i ( d f u ) o b s e i n g e S e s / W k bu on. Con a e d o Wi- i o e e i n g w e e f in e i d f u e e .

→ I d -D i s on D i s big a w e d fia d b ENERGY S R og m R qui ra n fo Com u nd u o- ig a w u a d off. Con a e d o Wi- i o e e i n g w e e f in e i d f u e e .

→ ow d s e no-o d Con d i o n i n w i c e 2 W US -C ow d s e wi e US -C o C g C l a ( m) i con a e d a C s ow bu no con a e d o i d i (A g a ion).

→ ow d s e e f f i a i n c e g of e 2 W US -C ow d s e wi e US -C C g C l a ( m) ra u d f f i a i n c w e n e e d 1 e c n 7 e c n e c n nd 2 e c n of e s ow d s e e d ou s u c u e n .

Power consumption for iPad Air (5th generation)			
Mode	100V	115V	230V
S e s	.44W	.44W	.42W
I d -D i s on	3.3W	3.3W	3. W
ow d s e no-o d	. 4W	. 4W	. W
ow d s e e f f i a i n c	80.8	87.0	87.8

13 \_ d -in u b e d on e con d i o n e nd configu ion of ou d -in d ic nd m o b w e n on i a nd in- a d -in. You mu b e 18 e o d. In- a d -in e qui e s e n ion of id go e n n a n i u d s o o D o c w m e qui i n g i n f o m i o n) d d i o n e m f o m s s e o s s e e d -in s a m s s .

© 2 2 2 2 e Inc. i g e e d s s e e s s e o g o . c e . c o g o i o a i d s s e W c H o r a o d s s e \_ i S i d S m c S S nd w c S e d m k of s s e Inc. e g i e d in e U.S. nd o e coun j nd e gion i d i (A g a ion) i d m k of s s e Inc. s s e S a i e i c m k of s s e Inc. e g i e d in e U.S. nd o e coun j nd e gion ENERGY S R nd e ENERGY S R m k e e g i e d d m k o w a d b e U.S. En i on n a n e c i o n g n c . e s oduc nd com n n ra ra n i o a d e e in m b d m k of e i e e c k com a i .