Product Environmental Report

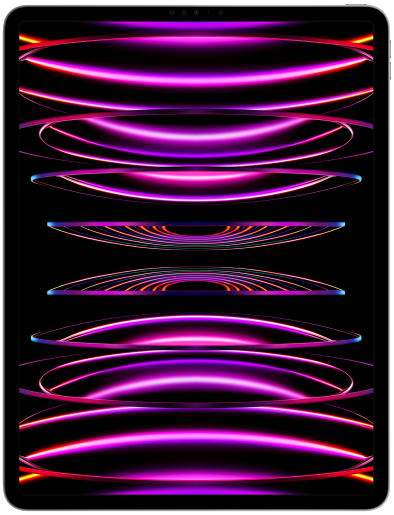
iPad Pro 12.9-inch (6th generation)

Date introduced
October 18, 2022

Made with better materials

100%
recycled aluminum in the enclosure

99%
recycled rare earth elements



Tackling climate change

100%
We're committed to transitioning our entire manufacturing supply chain to 100 percent renewable electricity by 2030.

Energy efficient

57%
less energy consumed than the ENERGY STAR® energy efficiency requirement

Smarter chemistry[1]

- Arsenic-free display glass
- Mercury-free
- Brominated flame retardant–free
- PVC-free
- Beryllium-free

Responsible packaging

100%
of the wood fiber comes from recycled and responsible sources

99%
of the packaging is fiber-based, due to our work to eliminate plastic in packaging

Apple Trade In

Return your device through Apple Trade In, and we'll give it a new life or recycle it for free.

Now with recycled gold—a first for iPad Pro

This report includes data current as of product launch. Product evaluations are based on U.S. configuration of iPad Pro 12.9-inch (6th generation).

Definitions

Bio-based plastics: Bio-based plastics are made from biological sources rather than from fossil-fuel sources. Bio-based plastics allow us to reduce reliance on fossil fuels.

Carbon footprint: Estimated emissions are calculated in accordance with guidelines and requirements as specified by ISO 14040 and ISO 14044. There is inherent uncertainty in modeling carbon emissions due primarily to data limitations. For the top component contributors to Apple's carbon emissions, Apple addresses this uncertainty by developing detailed process-based environmental models with Apple-specific parameters. For the remaining elements of Apple's carbon footprint, we rely on industry average data and assumptions. Calculation includes emissions for the following life cycle phases contributing to Global Warming Potential (GWP 100 years) in CO_2 equivalency factors (CO_2e):

- **Production:** Includes the extraction, production, and transportation of raw materials, as well as the manufacture, transport, and assembly of all parts and product packaging.
- **Transport:** Includes air and sea transportation of the finished product and its associated packaging from manufacturing site to regional distribution hubs. Transport of products from distribution hubs to end customers is modeled using average distances based on regional geography.
- **Use:** Apple assumes a three- or four-year period for power use by first owners based on the product type. Product use scenarios are based on historical customer use data for similar products. Energy use is simulated in various ways; for example, by modeling daily battery drain or through performing activities like movie and music playback. Geographic differences in the power grid mix have been accounted for at a regional level.
- **End-of-life processing:** Includes transportation from collection hubs to recycling centers and the energy used in mechanical separation and shredding of parts. For more information on the carbon footprint, visit apple.com/environment/answers

Recycled materials: Recycling makes better use of finite resources by sourcing from recovered rather than mined materials. Recycled content claims for materials used in our products have been verified by an independent third party to a recycled content standard that conforms to ISO 14021.

Renewable materials: We define bio-materials as those that can be regenerated in a human lifespan, like paper fibers or sugarcane. Bio-materials can help us use fewer finite resources. But even though bio-materials have the ability to regrow, they are not always managed responsibly. Renewable materials are a type of bio-material managed in a way that enables continuous production without depleting the earth's resources. That's why we focus on sources that are certified for their management practices.

Supplier Clean Energy Program: Since the electricity used to make our products is the largest contributor to our overall carbon footprint, we're helping our suppliers become more energy efficient and transition to new renewable energy sources. We're committed to transitioning our entire manufacturing supply chain to 100 percent renewable electricity by 2030.

Endnotes

[1] Apple's Regulated Substances Specification describes Apple's restrictions on the use of certain chemical substances in materials in Apple products, accessories, manufacturing processes, and packaging used for shipping products to Apple's end-customers. Restrictions are derived from international laws or directives, regulatory agencies, eco-label requirements, environmental standards, and Apple policies. Every Apple product is free of PVC and phthalates except for AC power cords in India, Thailand (for 2-prong AC power cords), and South Korea, where we continue to seek government approval for our PVC and phthalates replacement. Apple products comply with the European Union Directive 2011/65/EU and its amendments, including exemptions for the use of lead such as high-temperature solder. Apple is working to phase out the use of these exempted substances for new products where technically possible.

[2] iPad Pro 12.9-inch (6th generation) achieved a Gold rating in the United States and Canada, in accordance with IEEE 1680.1 or UL 110, and is listed as such on the Electronic Product Environmental Assessment Tool (EPEAT) Registry. EPEAT registers computers, displays, and mobile phones based on environmental requirements in these standards. For more information, visit www.epeat.net.

Endnotes

[3] Greenhouse gas emissions were calculated using a life cycle assessment methodology in accordance with ISO 14040 and 14044 standards and based on iPad Pro 12.9-inch (6th generation) standard configuration with 128GB storage. We often update our carbon models to leverage new information. As a result, our estimate for the carbon footprint of the previous generation—iPad Pro 12.9-inch (5th generation) Wi-Fi + Cellular 128GB storage configuration—decreased from 138 kg CO2e (as published in its Product Environmental Report) to 137 kg CO2e.

	iPad Pro 12.9-inch Wi-Fi + Cellular (mmWave 5G) carbon footprint	
Configuration	**6th generation**	**5th generation**
128GB	135 kg CO_2e	137 kg CO_2e
256GB	142 kg CO_2e	148 kg CO_2e
512GB	156 kg CO_2e	169 kg CO_2e
1TB	183 kg CO_2e	209 kg CO_2e
2TB	284 kg CO_2e	267 kg CO_2e

[4] iPad Pro 12.9-inch (5th generation) Wi-Fi + Cellular 128GB was used for comparison as the most recently released and similar device. Preproduction iPad Pro 12.9-inch (6th generation) standard configuration with 128GB storage was compared to shipping iPad Pro 12.9-inch (5th generation) Wi-Fi + Cellular standard configuration with 128GB storage configuration since these are the two lowest storage configurations offered.

[5] Percentages may not total 100 due to rounding.

[6] We map materials in our supply chain and publish a list of identified tin, tantalum, tungsten, and gold (3TG), cobalt, and lithium smelters and refiners in our supply chain. Third-party assessments seek to confirm sourcing practices and are part of our responsible sourcing program. In addition, our efforts consider a broad range of risks, including social, environmental, human rights, and governance risks.

[7] Chemicals that meet GreenScreen® benchmark 3 or 4 or other equivalent methodologies like U.S. EPA Safer Choice are considered safer and preferred for use. GreenScreen® is a comprehensive hazard assessment tool that evaluates substances against 18 different criteria. For more information, visit www.greenscreenchemicals.org.

[8] All established final assembly supplier sites—or those that have been Apple suppliers for more than one year—for iPad Pro 12.9-inch (6th generation) are third-party verified as Zero Waste by UL LLC (UL 2799 Standard). UL requires at least 90 percent diversion through methods other than waste to energy to achieve Zero Waste to Landfill (Silver 90–94 percent, Gold 95–99 percent, and Platinum 100 percent) designations.

[9] Based on retail packaging as shipped by Apple.

[10] Responsible sourcing of wood fiber is defined in Apple's Sustainable Fiber Specification. We consider wood fibers to include bamboo.

[11] For more information about our work to protect and create responsibly managed forests, please read our Environmental Progress Report.

[12] Breakdown of U.S. retail packaging by weight. Select non-plastic, non-fiber materials excluded.

[13] Energy consumption and energy efficiency values are based on the ENERGY STAR Program Requirements for Computers, including the max energy allowance for iPad Pro 12.9-inch (6th generation). For more information, visit www.energystar.gov. ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency.

iPad Pro 12.9-inch (6th generation) is tested with a fully charged battery and powered by the 20W USB-C Power Adapter with the USB-C to Charge Cable (1 m).

- Sleep: Low power state that is entered automatically after two minutes of inactivity (default) or by pressing the Sleep/Wake button. Connected to Wi-Fi. All other settings were left in their default state.
- Idle—Display on: Display brightness was set as defined by ENERGY STAR Program Requirements for Computers, and Auto-Brightness was turned off. Connected to Wi-Fi. All other settings were left in their default state.
- Power adapter, no-load: Condition in which the 20W USB-C Power Adapter with the USB-C to Charge Cable (1 m) is connected to AC power, but not connected to the system.
- Power adapter efficiency: Average of the 20W USB-C Power Adapter with the USB-C Charge Cable (1 m) measured efficiency when tested at 100 percent, 75 percent, 50 percent, and 25 percent of the power adapter's rated output current.

Endnotes

	Power consumption for iPad Pro 12.9-inch (6th generation)		
Mode	**100V**	**115V**	**230V**
Sleep	0.29W	0.28W	0.33W
Idle—Display On	4.26W	4.25W	4.31W
Power adapter, no load	0.04W	0.04W	0.05W
Power adapter efficiency	86.8%	87.9%	87.8%

[14] Trade-in values vary based on the condition, year, and configuration of your trade-in device, and may also vary between online and in-store trade-in. You must be at least 18 years old. In-store trade-in requires presentation of a valid, government-issued photo ID (local law may require saving this information). Additional terms from Apple or Apple's trade-in partners may apply.

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