

We invite you to develop solutions that will have a real-world impact based on Intel's Edge-centric FPGAs.

Enter the Design Contest today!

Team projects will focus on the sustainability theme and deliver benefits to environmental issues such as water conservation, optimizing energy usage, limiting waste, and making intelligent use of the planet's resources.

If this seems interesting to you, and maybe you've got a great idea, go to www.InnovateFPGA.com now to enter the competition.



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InnovateFPGA contest seeks sustainable solutions using Microsoft Azure and Intel IoT!

Microsoft and Intel empower technologies that can build a more environmentally sustainable future and reduce the demand we place on Earth's resources. That's why Microsoft Azure IoT and Intel are partnering with the InnovateFPGA Design Contest, where developers can harness Azure cloud computing and Intel® FPGA technology to create solutions that reduce environmental impacts.

The design contest is looking for inventive developers from around the globe who can create cutting-edge solutions. Internet of Things (IoT) solutions are already reducing climate impact: from smart lighting that turns off when not needed to transportation systems that reduce pollution-exacerbating car congestion. New IoT solutions could address unique challenges, such as reducing the waste of resources such as water, tracking ocean life, or increasing protection of endangered species.

[FPGA Cloud Connectivity Kits](#), provided to qualified teams in the InnovateFPGA

contest, show how an Intel® Edge-Centric FPGA (field programmable gate array) can connect seamlessly with Azure IoT. In addition, development teams will have a choice to use Azure IoT Central or IoT Hub to connect their solution to the Azure cloud. Developers interested in building sustainable solutions using this technology can register their team at www.innovatefpga.com.

Working jointly to encourage innovative developers

Azure IoT and Intel already [work jointly together](#) in advanced solutions, complementing each other's technology to address challenges in a variety of industries. The FPGA Cloud Connectivity Kit enables innovative developers to perform new tasks and solve more challenges, as real-time handling of Azure workloads is easier with a dedicated FPGA-based hardware accelerator. FPGA circuits also can be configured specifically for various workloads to provide better performance and flexibility.

Digital technology could play a key role in scaling up local solutions led by civil society and local communities to address the climate crisis and biodiversity loss in developing countries. This collaboration between the GEF Small Grants Programme (SGP), Intel and Microsoft is an excellent opportunity to design and apply innovative and scalable digital solutions to real world problems, and help local communities to improve and expand their initiatives, ranging from climate smart agriculture to wildlife management.

– Yoko Watanabe,
Global Manager, GEF
Small Grants
Programme

Watch this ADI video to see how a large variety of ADI daughtercards can be plugged into the FPGA Cloud Connectivity Kit.

<https://www.youtube.com/watch?v=ft-SWOKmxNs>



How Microsoft Azure and Intel can reduce environmental impacts

Additionally, Azure IoT Central, IoT Hub, and IoT Plug and Play help builders and developers connect devices to the cloud. [IoT Central](#) offers a secure platform, centralized management to reconfigure and update devices, and a growing selection of IoT app templates for common scenarios. [IoT Hub](#), meanwhile, enables secure and reliable communication via the cloud between IoT applications and the devices they manage. Finally, [IoT Plug and Play](#) seeks to remove technical barriers, reducing development time, cost, and complexity.

Sustainability and environmental efforts by Microsoft and Intel go beyond their support of the InnovateFPGA contest. As part of our commitment to put sustainable technologies at the heart of our innovation, we're focused on [four key areas](#) of environmental impact to local communities: carbon, water, waste, and ecosystems. We're striving to use 100% renewable energy by 2025, replenish more water than we consume by 2030, create zero waste annually by that same year, and achieve net-zero deforestation from new construction.

Enterprises looking to understand and potentially reduce their environmental impacts can use the [Sustainability Calculator](#). Just as Azure cloud computing can help reduce energy use, Intel FPGA-enabled architecture used with the cloud is economical and power-efficient, making high-performance computing more sustainable. Microsoft is also [researching new approaches](#) for improving computing and cloud data handling while simultaneously using less energy and more sustainable materials.

[Project 15 from Microsoft](#) also is helping to accelerate conservation organizations and scientific teams reduce costs and complexity in deploying IoT technologies through its [open-source software platform](#). The [Global Environment Facility Small Grants Programme \(GEF SGP\)](#), implemented by the United Nations Development Program, is collaborating with the InnovateFPGA contest to task teams to create solutions for biodiversity, sustainable agriculture, and marine conservation. The SGP has shared [use cases from the Project 15 initiative](#) on the contest website.

(continued on Page 3)



Terasic is dedicated in providing engineers of the future the opportunities to share their visions and innovations and demonstrate their FPGA development skills on an international stage.

Continued from the success we had with previous InnovateAsia design contests, where we see many innovative inventions, there should be no doubt that we will see more brilliant works from 2021 InnovateFPGA Design Contest.

- Sean Peng, CEO of Terasic.

Submit design proposals to the InnovateFPGA Design Contest

Regional teams of university students, builders, and professional engineers with the creativity and ingenuity to design solutions for challenging environmental issues are encouraged to participate in the InnovateFPGA Design Contest. Teams must register and submit their solution proposals at the [contest registration page](#) by Sept. 30, 2021. After registering, free FPGA Cloud Connectivity Kits will be shipped to teams whose proposals are selected to advance forward.

Qualifying teams will develop solutions for sustainability until Spring 2022, where they will compete in their respective regional competition. Teams at this level will have a chance to win cash prizes and an invitation to the Grand Finale event at Intel headquarters in San Jose, California, in 2022. For more details, rules, and an FAQ page, go to www.innovatefpga.com. For more details, rules, and an FAQ page, go to www.innovatefpga.com.



Connecting the edge
for a **sustainable** future

Read the blog



Professional Support

Contest organizer Terasic will answer questions and provide technical support for contestants / developers. Stay tuned for more 'how to' details in upcoming newsletters. Go to URL to submit questions:

<https://www.innovatefpga.com/portal/support.html>



Key Dates

Contest Launch: July 1, 2021

The Design Contest launches on July 1. Register as a developer. Each entry will receive a confirmation email and a unique team ID upon registration.

Proposal Submission: Aug. 1 – Sept. 30, 2021

Registered developers can start to submit project proposal during this period. Final proposals need to be received by September 30.

SGP Program: To propose a solution to real-world projects brought in by the Global Environmental Facility Small Grants Programme (GEF SGP), the deadline to submit your proposal is extended to **October 31, 2021**.

Proposal Selection: Oct. 15, 2021

The InnovateFPGA Judging Committee and community will select regional teams based on the submitted design proposals. These teams will be notified and each receive an Intel FPGA Cloud Connectivity Kit, and will be eligible to receive up to three ADI daughter cards to begin developing the proposed project, turning them into real designs. Shipment of the hardware is expected to start on October 16.

SGP-related projects: Judging will start from Nov. 1 to Nov. 3, 2021. Shipment of hardware is expected to start on Nov. 4.

Develop Designs Oct. 16, 2021 – Feb. 7, 2022

Selected teams will develop the projects using provided resources and upload completed design paper and project video before the deadline.

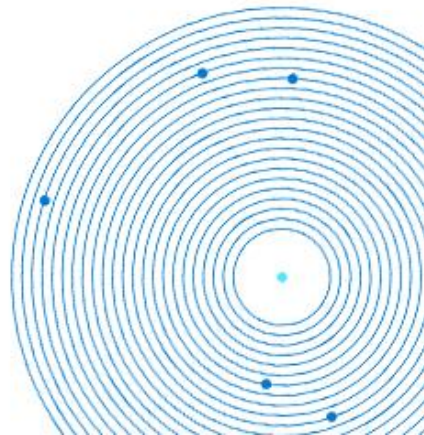
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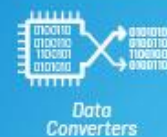
[> Learn more](#)



"ADI and Intel are committed to minimizing the carbon footprint of our factories by reducing material waste and maintenance time while operating at maximum efficiency. To achieve such efforts, a combination of real-world datasets and complex processing algorithms are required."



Brandon Bushey
*Systems Design/Architecture Engineer
Analog Devices*



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