

FPGA Cloud Connectivity Kit

Build your FPGA-based IoT application with this “cloud-ready” development kit

FPGAs can overcome the limitations of sequential processing, limited instruction sets, and basic I/O in your Internet of Things (IoT) Edge device. Intel has a complete cloud-to-edge solution based on Cyclone® V SoC FPGAs. These FPGAs make it easy for you to develop your own FPGA-based application that can collect, analyze, and react to data from cloud-connected IoT equipment.



Solution Overview

The FPGA Cloud Connectivity Kit is designed to help you build FPGA-based IoT “cloud-ready” applications with a comprehensive set of hardware and software to kick start your project.

The development kit includes:

- Complete kit to connect an FPGA-based edge device to the cloud
- Certified for Microsoft Azure IoT and qualified for AWS Greengrass
- Free, open-source FPGA-based design examples from the Intel® Developer Zone
- Reference designs for sensor data aggregation applications
- Ambient light, temperature, and humidity sensors as well as other sensors, such as accelerometer, gyroscope, and magnetometer

The development kit is available at \$239 from Terasic.

Customer Benefits

- Get started with immediate access to free, open-source designs
- Complete and intuitive tutorials that help you install the Azure IoT Edge Runtime and build container-based applications using Microsoft Visual Studio
- Learn how to build an IoT Edge Module that gathers sensor data and stores it in the Azure Container Registry (ACR)
- Reconfigure an FPGA from the Azure Cloud using a Container Application
- Customers benefit from the Intel and Microsoft partnership to build and scale their solutions

Authors

Takayuki Ikushima

Industrial Business Development Director
Intel Programmable Solutions Group

Keith Woolvin

Channel Sales Manager
Intel Programmable Solutions Group



Enabled by Intel® Edge-Centric FPGAs

Target Application

- General edge IoT and gateway applications
- Industrial IoT, manufacturing, and process automation for anomaly detection and predictive maintenance
- Smart city infrastructure, building environmental sensing and energy optimization
- Connected transportation and logistics control system
- Remote medical devices for real-time sensing and machine learning-based diagnosis
- Smart agriculture and primary industry digitization
- Test and measurement connected devices



Learn More

- [Edge-Centric Overview Page](#)
- [Free, open-source design examples and tutorials](#)
- [Cyclone V FPGAs and SoC FPGAs](#)
- [FPGA Cloud Connectivity Kit Online Purchase](#)
- [Microsoft Azure Certified Device](#)
- [AWS Greengrass Qualified Device](#)



No product or component can be absolutely secure.

Intel does not control or audit third-party data. You should consult other sources to evaluate accuracy.

Performance varies by use, configuration and other factors. Learn more at www.Intel.com/PerformanceIndex.

Your costs and results may vary.

Intel technologies may require enabled hardware, software or service activation.

© Intel Corporation. Intel, the Intel logo, and other Intel marks are trademarks of Intel Corporation or its subsidiaries. Other names and brands may be claimed as the property of others.