

# Azure Sphere

에코시스템 파트너 워크샵





## Azure Sphere Hands-on Lab

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실습 가이드

https://github.com/azsphere/Azure-Sphere-Bootcamp

예제 샘플

https://github.com/Azure/azure-sphere-samples

노트북 인터넷 연결 / SSID = MSFTGUEST / AccessCode : msevent948zw

Azure Sphere 보드 연결용 Wi-Fi

SSID: HOL06 / No password



### Device setup (1/2)

- Unboxing EVB packages
  - Avnet Starter Kit
  - MT3620 Reference Development Board
- Windows 10 PC + VS2017/2019 (15.7 or later) + unused USB-A port
- Install Azure Sphere SDK
  - <a href="https://docs.microsoft.com/ko-kr/azure-sphere/install/install-sdk#azure-sphere-sdk-preview-for-visual-studio">https://docs.microsoft.com/ko-kr/azure-sphere/install/install-sdk#azure-sphere-sdk-preview-for-visual-studio</a>
- Connect USB port
- Update Azure Sphere OS / Recover image
- Claim device
  - https://docs.microsoft.com/ko-kr/azure-sphere/install/claim-device



### Device setup (2/2)

- Wi-Fi configuration
  - https://docs.microsoft.com/ko-kr/azure-sphere/install/configure-wifi
- Subscribe notification
  - https://docs.microsoft.com/ko-kr/azure-sphere/install/get-notifications



#### Debug mode

• <a href="https://docs.microsoft.com/ko-kr/azure-sphere/quickstarts/qs-blink-application#prepare-your-device-for-development-and-debugging">https://docs.microsoft.com/ko-kr/azure-sphere/quickstarts/qs-blink-application#prepare-your-device-for-development-and-debugging</a>

#### Build and run Blink sample

https://docs.microsoft.com/ko-kr/azure-sphere/quickstarts/qs-blink-application#build-and-run-the-blink-sample

#### Application Manifest

 https://docs.microsoft.com/ko-kr/azure-sphere/quickstarts/qs-blink-application#application -manifest-settings

#### Code review

#### Debugger practice

- https://docs.microsoft.com/ko-kr/azure-sphere/install/get-notifications
- More Samples: https://github.com/JuergenSchwertl/AzureSphereSamples



### More Examples

- https://github.com/JuergenSchwertl/AzureSphereSamples
- https://github.com/xiongyu0523/azure-sphere-rtcore-freertos
  - Azure Sphere RTcore FreeRTOS demo
- <a href="https://github.com/xiongyu0523/azure-sphere-rtcore-nnom-minst-simple">https://github.com/xiongyu0523/azure-sphere-rtcore-nnom-minst-simple</a>
  - Embedded ML: Hand-written digit recognition
- https://github.com/JuergenSchwertl/AzureSphereSamples/tree/master/OTA
  - Multi-Core app and OTA deployment lab



#### https://github.com/PaulDFoster/AzureSphereCookBook

- CMSIS-NN CIFAR10 demonstration for Azure Sphere
- Tensorflow Lite for Microcontroller micro speech test for Azure Sphere
- C++ Azure Sphere toolchain file and linker script for RTApp/Library compilation in Visual Studio

#### https://github.com/PaulDFoster/tensorflow

- Tensorflow fork containing basic Azure Sphere implementations (debug\_log.cc)
- Generate micro speech test example:

make -f tensorflow/lite/experimental/micro/tools/make/Makefile TARGET="azuresphere"

TARGET\_ARCH="cortex-m4" generate\_micro\_speech\_test\_make\_project

#### Please utilize and contribute



### Reminder

- Please create an Azure Subscription before the IoT Hub lab
  - https://azure.microsoft.com/en-us/free/

# Questions?

