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platform: {Windows10} device: { NIFE200P2E}

language: {C#}

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# Connect NIFE200P2E device to your Azure IoT services

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## Introduction

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### About this document

This document describes how to connect [Nexaiot NIFE200P2E](#) to Azure IoT Hub using the Azure IoT Explorer with certified device application and device models.

IoT Plug and Play certified device simplifies the process of building devices without custom device code. Using Solution builders can integrated quickly using the certified IoT Plug and Play enabled device based on Azure IoT Central as well as third-party solutions.

This getting started guide provides step by step instruction on getting the device provisioned to Azure IoT Hub using Device Provisioning Service (DPS) and using Azure IoT Explorer to interact with device's capabilities.

[Nexaiot NIFE200P2E](#) is Powered by the latest generation of Intel® Celeron® processor J1900 (formerly codenamed "Bay Trail-D"), NIFE 200P2/P2E presents intelligent PC-based controller and IoT gateway for factory automation. NIFE 200P2/P2E supports up to 8G DDR3L memory and have several options on storage devices like SD, mSATA, HDD and SSD. The NIFE 200P2/P2E support operating temperature from -5 up to 55 degree C with typical DC input 24V +/-20% range. The NIFE 200P2/P2Es has high integration ability with optional Mini-PCle module and 2 x COM ports, which makes it a reliable connection with devices in factory automation applications (with optional PROFIBUS, ProfiNET, DeviceNET, EtherCAT, EtherNet/IP, CANopen, SERCOSIII master module), IoT applications (with optional GbE LAN, Wi-Fi, 3.5G/4G LTE module) and communication applications (with optional GPIO, RS232/422/485). NIFE 200P2/P2E is definitely the top choice for M2M intelligent system as a factory automation controller and gateway.

## Step 1: Prerequisites

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You should have the following items ready before beginning the process:

- [Azure Account](#)
- [Azure IoT Hub Instance](#)
- [Azure IoT Hub Device Provisioning Service](#)
- [Azure IoT Public Model Repository](#)

## Step 2: Prepare your Device

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- Connect the power adapter, USB Keyboard/Mouse with [Nexaiot NIFE200P2E](#).
- Wait until the operating system is ready.

## Step 3: Prepare your DPS and iot hub

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- Connect to the Azure portal and Create [Azure IOT Hub Device Provisioning Services](#) and [Azure IoT Hub Instance](#)
- Please keep the DPS information (ID Scope/Global device endpoint/Device Key).
- Please Create a device under [Azure IoT Hub Instance](#) and keep the device ID.

## Step 4: Build and Run the sample

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- Download the [Xcare SDK](#) and the sample programs and save them to your local repository.
- Start a new instance of Visual Studio 2019.
- Open the **xcarePNP.csproj** solution in your local copy of the repository.
- In **Solution Explorer**, right-click and choose **Build** for build this project.
- right-click the **XcarePNP** project, click **Debug**, and then add run parameter : "-s dps -i {DPS ID Scope} -d {Device ID} -k {DeviceKey} -e {Global device endpoint}"
- click **Start new instance** to build and run the sample. The console displays messages as the application sends device-to-cloud messages to IoT Hub.

## Integration with Azure IoT Explorer

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- Use the **DeviceExplorer** utility and Click **IoT Plug and Play components**
  - (Step1) On the **Model ID** field to fill **dtmi:nexcom:NIFE200P2e;1**
  - (Step2) You can add **Public Repository** or Choose **Local Folder** (Path on Models in your local copy of the repository).
  - (Step3) Click **Components**"->Default component\*\*
  - Refer [IoT Plug and Play components](#)
  - You can see the device **Information\Properties(read-only)\Properties(writable)\Commands\Telemetry**
  - Refer [IoT Plug and Play components Interface](#) to see the your device Interface.
  - Refer [IoT Plug and Play components Properiteies](#) to see the your device Properitieies.
  - Refer [IoT Plug and Play components Properiteies \(writable\)](#) to see the your device Properitieies(writable).
  - Refer [IoT Plug and Play components Command](#) to sent your reboot command.
  - Under **Telemetry** property and press **Start** to observe the messages IoT Hub receives from the application.

## Additional Links

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Please refer to the below link for additional information for Plug and Play - [Manage cloud device messaging with Azure-IoT-Explorer](#) - [Import the Plug and Play model](#) - [Configure to connect to IoT Hub](#) - [How to use IoT Explorer to interact with the device](#) - [Nexaiot NIFE200P2E](#)