Getting Supporting Tools

To get started with the IzoT SDK, you will need a development tool for your selected development language. You can develop IzoT applications with the IzoT SDK using Python, C++, or C. A low-level C-compatible interface to the IzoT Device Stack is included with the IzoT SDK that you can use for developing C++ or C applications. An IzoT Python Package is also included that enhances the low-level C interface and simplifies development of IzoT applications. You can also develop using a hybrid approach, using IzoT Python to create your application's IzoT interface including the implementation of the blocks and datapoints required for your application as well as the network installation support required by your application, and then implement any low-level timing-dependent code in C modules that you call from your IzoT Python application. This is the methodology used by the IzoT SDK itself. The low-level drivers are written in C, the IzoT Device Stack EX implementation of the LonTalk/IP protocol is written in C++, the C API is implemented in C, and the IzoT Python Package is implemented in Python 3.

If your development target requires an SD card or Micro SD card, you will also need tools to format the card and copy the image to the card.

For an overview of how to get the supporting tools for IzoT Python development, view the following video:

Getting Started with the Raspberry Pi

Alternatively, follow these steps to get supporting tools for IzoT Python:

1. Select, download, and install a Python 3 integrated development environment (IDE). You can use a Python command-line interface or IDE natively on your target device, or you can use an IDE that runs on a Windows, Mac, or Linux destop computer and remotely access your Raspberry Pi, or multiple Raspberry Pi devices. You can also use a hybrid approach doing source code development within a desktop Python IDE, and run applications from a console interface to your target device. While not required, the PyCharm IDE from JetBrains is a good choice for a desktop-hosted IDE with an integrated console interface for your target devices. It is available for Windows, Mac OS X, and Linux desktop computers. Use the Professional Edition to get remote client support since your target devices will be remote hosts. You can get a 30-day trial version at www.jetbrains.com/pycharm/download/.

2. Download and install Python 3.3.4 or newer for your host computer. You can download Python 3.3.4 for Windows and Mac OS X at www.python.org/download/. Python 3.3.4 is also available for Linux computers.

3. Select, download, and install software for formatting an SD card. You can download the SDFormatter utility for Windows and Mac OS X at www.sdcard.org/downloads.

4. Select, download, and install software for writing a raw disk image to an SD card. You can download the Win32 Disk Imager utility for Windows at sourceforge.net/projects/win32diskimager/. If you are using another host platform for your IDE, see www.raspberrypi.org/documentation/installation/installing-images/README.md for SD raw image writers.

5. If your computer does not have an SD card reader/writer, purchase and install a USB SD card reader/writer for your computer. If you will be writing many SD cards and your computer has a USB 3 interface, use a USB SD card reader/writer with a USB 3 interface to reduce the SD card write time.