MCUSDKARTOSRN

MCUXpresso SDK Azure RTOS Release Notes

Rev. 2.11.1 — 10 March 2022

Release Notes

Contents

1 MCUXpresso SDK Azure RTOS introduction

Azure RTOS is an embedded development suite including a small but powerful operating system that provides reliable, ultra-fast performance for resource-constrained devices. It is easy-to-use and market-proven, deployed on more than 6.2 billion devices worldwide. Azure RTOS supports the most popular 32-bit microcontrollers and embedded development tools. Azure RTOS components include Azure RTOS ThreadX, Azure RTOS FileX, Azure RTOS GUIX, Azure RTOS NetX Duo, and Azure RTOS USBX. This release includes the above components and corresponding examples. For more information and getting started instructions, see Getting Started with MCUXpresso SDK for Azure RTOS (document MCUXSDKAZURERTOSGSUG).

2 Supported development systems

This release supports the boards and examples listed in the following table.

Name	Boards	Description
azure_iot_embedded_sdk	evkmimxrt1020, evkmimxrt1024, evkbimxrt1050, evkmimxrt1060, evkbmimxrt1060, evkmimxrt1064, evkmimxrt1160, evkmimxrt1170, lpcxpresso55s28, lpcxpresso55s69	An example communicating with Azure IoT Hub using Azure IoT SDK.
azure_iot_embedded_sdk_pnp	evkmimxrt1020, evkmimxrt1024, evkbimxrt1050, evkmimxrt1060, evkbmimxrt1060, evkmimxrt1064, evkmimxrt1160, evkmimxrt1170	An example communicating with Azure IoT Hub using Azure IoT SDK and enabling Azure IoT Plug and Play feature.
azure_iot_mqtt	evkmimxrt1020, evkmimxrt1024, evkbimxrt1050, evkmimxrt1060, evkbmimxrt1060, evkmimxrt1064, evkmimxrt1160, evkmimxrt1170	An example communicating with Azure IoT Hub using MQTT.
ethernet_over_usb	lpcxpresso55s28, lpcxpresso55s69	An example doing iperf network test over a HP USB Ethernet adapter.
filex_levelx_spiflash	lpcxpresso55s06, lpcxpresso55s16, lpcxpresso55s28, lpcxpresso55s69	The example shows how to use FileX and LevelX based on SPI flash.
filex_ram_disk	evkmimxrt1010, evkmimxrt1015, evkmimxrt1020, evkmimxrt1024, evkbimxrt1050, evkmimxrt1060, evkbmimxrt1060, evkmimxrt1064, evkmimxrt1160, evkmimxrt1170,	An example testing a RAM disk with FileX.

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Name	Boards	Description
	lpcxpresso55s06, lpcxpresso55s16, lpcxpresso55s28, lpcxpresso55s69	
filex_sdcard	evkmimxrt1020, evkmimxrt1024, evkbimxrt1050, evkmimxrt1060, evkbmimxrt1060, evkmimxrt1064, evkmimxrt1160, evkmimxrt1170, lpcxpresso55s28, lpcxpresso55s69	The example shows how to use the SD card middleware with Azure RTOS.
guix_washing_machine	evkbimxrt1050, evkmimxrt1060, evkbmimxrt1060, evkmimxrt1064	A GUI example of washing machine.
guix_washing_machine_hd	evkmimxrt1160, evkmimxrt1170	A high-definition GUI example of washing machine.
i2c_example	evkmimxrt1020, evkbimxrt1050, evkmimxrt1060, evkbmimxrt1060, evkmimxrt1064, evkmimxrt1160, evkmimxrt1170, lpcxpresso55s16, lpcxpresso55s06, lpcxpresso55s16, lpcxpresso55s28, lpcxpresso55s69	The example shows an application using Azure RTOS threads with the I2C driver.
netx_duo_iperf	evkmimxrt1020, evkmimxrt1024, evkbimxrt1050, evkmimxrt1060, evkbmimxrt1060, evkmimxrt1064, evkmimxrt1160, evkmimxrt1170	An example doing iperf network test.
netx_duo_ping	evkmimxrt1020, evkmimxrt1024, evkbimxrt1050, evkmimxrt1060, evkbmimxrt1060, evkmimxrt1064, evkmimxrt1160, evkmimxrt1170	Network ping example.
pnp_temperature_controller	evkmimxrt1020, evkmimxrt1024, evkbimxrt1050, evkmimxrt1060, evkbmimxrt1060, evkmimxrt1064, evkmimxrt1160, evkmimxrt1170	An example communicating with Azure IoT Hub using Azure IoT SDK and enabling Azure IoT Plug and Play feature, constantly reporting the device temperature value.
spi_b2b_example_master	evkmimxrt1010, evkmimxrt1015, evkmimxrt1020, evkbimxrt1050, evkmimxrt1060, evkbmimxrt1060, evkmimxrt1064	The example shows how to use the LPSPI driver in the master mode in Azure RTOS.
spi_b2b_example_slave	evkmimxrt1010, evkmimxrt1015, evkmimxrt1020, evkbimxrt1050, evkmimxrt1060, evkbmimxrt1060, evkmimxrt1064	The example shows how to use the LPSPI driver in the slave mode in Azure RTOS.
spi_example	lpcxpresso55s06, lpcxpresso55s16, lpcxpresso55s28, lpcxpresso55s69, evkbimxrt1050	The example shows how to use the SPI driver with Azure RTOS.
threadx_demo	evkmimxrt1010, evkmimxrt1015, evkmimxrt1020, evkmimxrt1024, evkbimxrt1050, evkmimxrt1060,	An example of creating multiple threads.

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Name	Boards	Description
	evkbmimxrt1060, evkmimxrt1064, evkmimxrt1160, evkmimxrt1170, lpcxpresso55s06, lpcxpresso55s16, lpcxpresso55s28, lpcxpresso55s69	
uart_example	evkmimxrt1020, evkmimxrt1024, evkbimxrt1050, evkmimxrt1060, evkbmimxrt1060, evkmimxrt1064, evkmimxrt1160, evkmimxrt1170, lpcxpresso55s06, lpcxpresso55s16, lpcxpresso55s28, lpcxpresso55s69	The example demonstrates how to use the UART driver in Azure RTOS.
usbx_device_audio_loopback	lpcxpresso55s16, lpcxpresso55s28, lpcxpresso55s69	This example works as a USB audio device. When connecting it to a PC, it will appear as a USB speaker and a USB microphone device.
usbx_device_cdc_acm	lpcxpresso55s16, lpcxpresso55s28, lpcxpresso55s69	An example worked as a USB CDC ACM device.
usbx_device_composite_cdc_acm_cdc_acm	evkmimxrt1010, evkmimxrt1015, evkmimxrt1020, evkmimxrt1024, evkbimxrt1050, evkmimxrt1060, evkbmimxrt1060, evkmimxrt1064, evkmimxrt1160, evkmimxrt1170, lpcxpresso55s16, lpcxpresso55s28, lpcxpresso55s69	This example works as two USB CDC ACM devices.
usbx_device_hid_keyboard	lpcxpresso55s16, lpcxpresso55s28, lpcxpresso55s69	An example worked as a USB HID device.
usbx_device_hid_mouse	evkmimxrt1010, evkmimxrt1015, evkmimxrt1020, evkmimxrt1024, evkbimxrt1050, evkmimxrt1060, evkbmimxrt1060, evkmimxrt1064, evkmimxrt1160, evkmimxrt1170, lpcxpresso55s16, lpcxpresso55s28, lpcxpresso55s69	This example works as a USB HID mouse device.
usbx_device_mass_storage	evkmimxrt1010, evkmimxrt1024, evkmimxrt1015, evkmimxrt1020, evkbimxrt1050, evkmimxrt1060, evkbmimxrt1060, evkmimxrt1064, evkmimxrt1160, evkmimxrt1170, lpcxpresso55s28, lpcxpresso55s69	USB mass storage device example.
usbx_host_cdc_acm	lpcxpresso55s28, lpcxpresso55s69	This example works as a USB host. It can communicate with a USB CDC ACM device.
usbx_host_hid_keyboard	evkmimxrt1010, evkmimxrt1015, evkmimxrt1020, evkmimxrt1024, evkbimxrt1050, evkmimxrt1060, evkbmimxrt1060, evkmimxrt1064,	An example worked as a USB HID host.

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Name	Boards	Description
	evkmimxrt1160, evkmimxrt1170, lpcxpresso55s28, lpcxpresso55s69	
usbx_host_hid_mouse	evkmimxrt1010, evkmimxrt1015, evkmimxrt1020, evkmimxrt1024, evkbimxrt1050, evkmimxrt1060, evkbmimxrt1060, evkmimxrt1064, evkmimxrt1160, evkmimxrt1170, lpcxpresso55s28, lpcxpresso55s69	This example works as a USB host. When connecting a USB HID mouse and clicking the mouse buttons, the serial console will output which button has been clicked.
usbx_host_mass_storage	evkmimxrt1010, evkmimxrt1015, evkmimxrt1020, evkmimxrt1024, evkbimxrt1050, evkmimxrt1060, evkbmimxrt1060, evkmimxrt1064, evkmimxrt1160, evkmimxrt1170, lpcxpresso55s28, lpcxpresso55s69	USB mass storage host example.

3 Known issues

3.1 NetX Duo iperf example

The NetX Duo iperf example works for Linux but not for Windows 10.

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