

Am335x-USB-quick-start

USB ports on AM335x

AM335x platform has two usb port and both are based on Mentor Graphic's USB OTG2.0 controller which is generally called as MUSB. Each musb port is capable of acting as USB host or USB device but a board based on AM335x can be made so that a musb port is either host only or device only. TI Linux Core release has been tested on AM335x based AM335xEVM, BeagleBone and Beaglebone Black boards. Following sections would describe the musb port capability and how to quickly start using them with supplied pre-built binaries.

AM335xEVM

The capability of musb ports on AM335x based EVM are provided below.

MUSB0 port

MUSB0 port is coming out on EVM as micro-AB receptacle and it can act either as host or device based on the micro plug inserted to it. If a micro-A plug is inserted then it will act as host and if a micro-B plug is inserted then the port will work in device mode. A gadget driver need to be inserted after booting the pre-built binary for MUSB0 port to become active.

MUSB1 port

MUSB1 port is coming out on EVM as standard-A receptacle and it can only work as host. MUSB1 port will not work in device mode. Use a standard-A plug to attach the devices to MUSB1 port. This port will work soon after booting the pre-built binary.

BeagleBone

The capability of musb ports on AM335x based BeagleBone board are provided below.

MUSB0 port

MUSB0 port, an usb-to-serial and a JTAG interface are connected to downstream port of an on-board hub chip. The upstream port of the on-board hub is coming out on BeagleBone board as mini-B receptacle. MUSB0 port will only work in device mode and we need to use a mini-B plug to connect this port to host. Please note that host will recognize the on-board hub chip and three usb devices connected to it. A gadget driver need to be inserted after booting the pre-built binary for MUSB0 port to become active.

MUSB1 port

MUSB1 port is coming out on BeagleBone as standard-A receptacle and it can only work as host. MUSB1 port will not work in device mode. Use a standard-A plug to attach the devices to MUSB1 port. This port will work soon after booting the pre-built binary.

BeagleBone Black

The capability of musb ports on AM335x based BeagleBone Black board are provided below.

MUSB0 port

MUSB0 port, an usb-to-serial is connected to downstream port of an on-board hub chip. The upstream port of the on-board hub is coming out on BeagleBone Black board as mini-B receptacle. MUSB0 port will only work in device mode and we need to use a mini-B plug to connect this port to host. Please note that host will recognize the on-board hub chip and three usb devices connected to it. A gadget driver need to be inserted after booting the pre-built binary for MUSB0 port to become active.

MUSB1 port

MUSB1 port is coming out on BeagleBone Black as standard-A receptacle and it can only work as host. MUSB1 port will not work in device mode. Use a standard-A plug to attach the devices to MUSB1 port. This port will work soon after booting the pre-built binary.

EVM-SK

The capability of musb ports on AM335x based EVM-SK board are provided below.

MUSB0 port

MUSB0 port, an usb-to-serial and a JTAG interface are connected to downstream port of an on-board hub chip. The upstream port of the on-board hub is coming out on EVM-SK board as micro-AB receptacle. MUSB0 port will only work in device mode and we need to use a micro-B plug to connect this port to host. Please note that host will recognize the on-board hub chip and three usb devices connected to it. A gadget driver need to be inserted after booting the pre-built binary for MUSB0 port to become active.

MUSB1 port

MUSB1 port is coming out on EVM-SK as standard-A receptacle and it can only work as host. MUSB1 port will not work in device mode. Use a standard-A plug to attach the devices to MUSB1 port. This port will work soon after booting the pre-built binary.

Article Sources and Contributors

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