ANT-1776X USER CODE HOSTING

The ANT-1776 series allows users to host their own Linux application in addition to the 1776 encoding application firmware.

The user can put their code in the **management partition**. This isn't modified during software updates.

Note!! The user must use the same compiler library **GLIBC**

Currently, we use GLIB binary version 2.38 and **gcc** compiler version 11.0.

We use build root to build it's **ROOTFS** and for the compiler toolchain.

This is the same toolchain that is used in YOCTO.

The Linux version is 5.10

PREPARE TO BUILD ROOT TOOLCHAIN

In case the customer selects build root for compiling their application

We use "buildroot-2023.02.3" to configure it

Create a text file named: imx8maris_defconfig and add the the following text :

```
BR2_aarch64=y
BR2_ARM_FPU_VFPV3=y
BR2_PACKAGE_HOST_LINUX_HEADERS_CUSTOM_5_10=y
BR2_PACKAGE_GLIBC_UTILS=y
BR2_TOOLCHAIN_BUILDROOT_CXX=y
BR2_GCC_ENABLE_OPENMP=y
BR2_GCC_ENABLE_GRAPHITE=y
BR2_PACKAGE_HOST_GDB=y
BR2_PACKAGE_HOST_GDB_TUI=y
BR2_PACKAGE_HOST_GDB_PYTHON3=y
BR2_PACKAGE_HOST_GDB_SIM=y
BR2_ENABLE_LTO=y
BR2_TARGET_GENERIC_GETTY_PORT="ttymxc1"
BR2_LINUX_KERNEL=y
BR2_LINUX_KERNEL_CUSTOM_TARBALL=y
##      BR2_LINUX_KERNEL_CUSTOM_TARBALL_LOCATION=file:///home/imx8/develop/proj/linux_tar/linux-imx-lf-5.10.y-1.0.0.tar.bz2
BR2_LINUX_KERNEL_CUSTOM_TARBALL_LOCATION="$(call      github,nxp-imx,linux-imx,lf-5.10.y-1.0.0)/linux-imx-lf-5.10.y-1.0.0.tar.gz"
BR2_LINUX_KERNEL_DEFCONFIG="imx_v8"
BR2_LINUX_KERNEL_DTS_SUPPORT=y
BR2_LINUX_KERNEL_INTREE_DTS_NAME="freescale/imx8mp-evk"
BR2_LINUX_KERNEL_NEEDS_HOST_OPENSSL=y
BR2_PACKAGE_BUSYBOX_SHOW_OTHERS=y
```

compile "buildroot" :
cd buildroot
make imx8maris_defconfig
make

IHOW TO RUN YOUR LINUX APPLICATION

Automatically Running the customer application:

The directory /management is not changed during the system update

You should copy your application to the directory /management

To run your application within the system you should add it's application path to /management

the script will execute at the end of the boot sequence, .i.e./management/customer_boot.sh

Copy Customer application to the ANT-1776 board:

Use sftp to copy the application to the board

Currently the log in is user = root , password = root