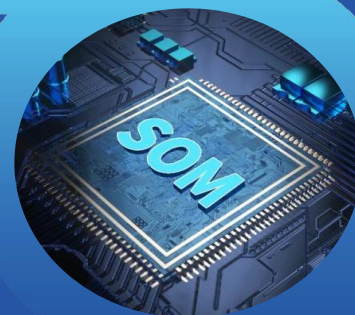


# MYD-YM62X SDK Release Notes



File status: <input type="checkbox"/> Draft <input checked="" type="checkbox"/> released	<b>FILE ID:</b>	MYIR-MYD-YM62X-SW-RN-EN-L6.1.46
	<b>VERSION:</b>	V1.0[DOC]
	<b>AUTHOR:</b>	Beste
	<b>CREATED:</b>	2023-09-20
	<b>UPDATED:</b>	2023-09-25

# Table of Contents

Table of Contents .....	- 2 -
1. Overview .....	- 3 -
2. Software information .....	- 5 -
2.1. Functional Features .....	- 5 -
2.2. Software list .....	- 10 -
2.3. Document information .....	- 11 -
3. Version History .....	- 13 -
4. Known Issue .....	- 14 -
Appendix A .....	- 15 -
Warranty & Technical Support Services .....	- 15 -

# 1. Overview

The MYD-YM62X SDK software is based on TI's AM62X series chip design and development, which includes the underlying BSP source code, pre-compiled image files, Linux software evaluation and development documents, and some tools used in the development and debugging process. The corresponding hardware information is also released as a ROM image along with the SDK, and the complete ROM content is as follows:

Table 1-1. The contents of the MYD-YM62X SDK ROM

Categories	Name	Description	Location
Documentation	Datasheet	The chip data sheet used in the MYD-YM62X design	01-Documents
	Hardware	MYB-YM62X hardware design materials	
	User_Manual	Product manuals, software documentation, etc	
File system	myir-image-full	myir-based MEASY-HMI2.x image	02_Images
	myir-image-core	Build on TI's configuration	
	myir-image-burn	Burn to the burn image of eMMC	
Tools	Cross toolchain	Arago-2023.04-toolchain-2023.04.sh	03_Tools
	Development tools	sysconfig-1.16.1 Pin Configuration Tool	
	Debug Tools	none	
	Burning tools	Win32 Disk Imager burning tool	
Source	Bootloader	U-boot 2023.04	04_Sources
	Kernel	Linux Kernel 6.1.46	
	SDK	System generation tool provided by TI	
	Sample code	MYiR-Linux-examples MYiR-MEasy_hmi 2.0	

MYD-YM62X product users can obtain the latest version of the SDK ROM image file from the following address:

Download it from: <http://d.myirtech.com/MYD-YM62X/>

The current SDK is available for development board models:

MYD-YM6254-8E2D

MYD-YM6252-8E1D

MYD-YM6231-8E1D

If you need to know the specific introduction of the board, you can visit the link to the official website of MYIR electronics

<https://www.myirtech.com/list.asp?id=730>

## 2. Software information

The Linux system of MYD-YM62X is built using Yocto project. We have built three different types of image files for different types of use scenarios. The description of the two types of image files is shown in the table below:

Table 2-1. MYD-YM62X image file description

Images	Content Description	Notes
myir-image-core	Image built in Yocto without GUI interface, contains complete hardware drivers, commonly used system tools, debugging tools, etc. Support Shell, C/C++, Python for application development.	Hereinafter abbreviated as CORE
myir-image-full	With Yocto build GUI interface image, including all the complete hardware drivers in CORE, commonly used system tools, debugging tools, including QT runtime library and HMI interface based on QT development. Support the use of Shell, C/C++, QML, Python application development.	Hereinafter abbreviated as FULL
myir-image-burn	An image built in Yocto that burns a full image to an eMMC is started through SD and will burn automatically after startup.	Not required

**Note:**

The content not included in the image file can be added by users themselves or contact us for support by referring to the contact information in the appendix.

The following is a detailed comparison of the specific functional characteristics of Core and Full mirror, in order to facilitate users to carry out software evaluation and secondary development.

### 2.1. Functional Features

Table 2-2. MYD-YM62X software features list

Categories	Features	Description	Mirror files	
			FULL	CORE
<b>Bootloader</b>	Atf	Switching and initialization of secure and non-secure environments	Support	Support
	SPL	Initialize DDR, clock, PMIC, and load the image into memory	Support	Support

	Uboot	EMMC/TF card supports scanning, reading and writing	Support	Support
		EMMC/TF cards support fat file system access	Support	Support
		EMMC/TF cards support ext2/3/4 file system access	Support	Support
		Full upgrade of mirrors via TF cards	Support	Support
		Ethernet supports networking, PING, TFTP protocols	Support	Support
		Ethernet supports the DHCP protocol	Support	Support
		Ethernet supports NFS boot	Support	Support
		Full image upgrade via Ethernet	Support	Support
		USB Mass storage	Support	Support
		USB RNDIS protocol	Support	Support
		USB fastboot	Support	Support
		USB DFU protocol	Support	Support
		Complete image upgrade via USB port	Support	Support
		Equipment Tree FIT	Support	Support
		Memory read/write test, MDIO read/write, I2C read/write, reset	Support	Support
		The LOGO can be updated dynamically	Support	Support
<b>Kernel</b>	Network support	TCP/IP network protocol stack	Support	Support
		Ethernet protocol	Support	Support
		Net Bridge, IP Route, Netfilter	Support	Support
		PPP as well as USB serial	Support	Support
		CAN bus subsystem	Support	Support
		IPV6	Support	Support
	File system support	DEVTMPFS	Support	Support
		Ext2/3/4 File System	Support	Support
		UBIFS File System	Support	Support
		Overlay File System	Support	Support
		Network File System	Support	Support
		VFAT File System	Support	Support
		Jffs2 File System	Support	Support
		NTFS File System	Support	Support

	Multimedia Modules	Multimedia related modules, including platform supported video input module, v4l2	Not supported	Not supported
	Sound module	Audio related modules, including alsa, platform supported audio input and output devices	Support	No support
	Input subsystem	Key, HID, touch subsystem. Input devices supported by the platform	Support	No support
	USB gadget	Mass storage, rndis, serial	Support	Support
	Initial subsystem	Systemd/systemV/busybox (select sys)	Support	Support
		udev(contains udev rules)	Support	Support
		login	Support	Support
	System Tools	Bash shell environment	Support	Support
		coreutils(chgrp,chmod,chown,kill,cp,dd... )	Support	Support
		util-linux(sfdisk, fdisk, fsck...)	Support	Support
		tar with long options	Support	Support
		ubi-utils(ubiattach,ubidetach,mkfs.ubifs...)	Support	Support
		top	Support	Support
		u-boot-tools(fw_printenv, fw_setenv)	None	None
		e2fsck	Support	Support
		resize2fs	Support	Support
		genext2fs	Support	No support
		gzip	Support	Support
	System Settings	Localization Data (C en_US)	Support	Support
		Time zone information (Asia/Shanghai)	Support	No support
		User and password (account root, password is empty)	Support	Support
	Testing tools	memtester	Support	No support
		i2c-tools	Support	Support
		mmc-utils	Support	Support
		mtd-utils	Support	Support
		can-utils	Support	Support
		microcom	Support	Support
		hwclock	Support	Support
		gdbserver	Support	No support

		evtest	Support	No support
		hexdump	Support	Support
	Development language	python3.9	Support	Support
		c/c++	Support	Support
		perl	Support	No support
	Database	sqlite3	Support	No support
	Web apps	scp	Support	Support
		ethtool	Support	Support
		netstat	Support	Support
		iptables	Support	Support
		iperf3	Support	Support
		iproute2	Support	No support
		dns	Support	Support
		udhcp	Support	Support
		udhcpd	Support	Support
		tftpd	Support	Support
		tftp	Support	Support
		ntpd	Support	No support
		pppd	Support	Support
		ifconfig	Support	Support
		openssh server(sshd)	Support	Support
		openssh client(ssh)	Support	Support
		tcpdump	Support	Support
		bridge-utils	Support	Support
		telnet	Support	Support
		route	Support	Support
		avahi	Support	Support
		openssl-devel	Support	Support
	Word processing	ncurses	Support	Support
		readline	Support	Support
		grep	Support	Support
		Sed	Support	Support

		Awk	Support	Support
		Vim(vi)	Support	Support
	Graphics system	qt5.14.2(qtbase, qtwidget, qtquick2.0, qtmultimedia, qtvirtualkeyboard) Chinese and English fonts	Support	No support
		modetest	Support	Not support
		fbset	Support	Support
		psplash	Support	Support
		weston	Support	Support
		v4l-utils	Support	Support
		alsa-utils	Support	Support
	Other	bc	Support	Support
		pv	Support	No support
		dbus	Support	Support
<b>SDK</b>	Toolchain: arch64-none-linux-gnu-		Support	Support
	C function library: glibc		Support	Support
	C++ function library: libstdc++		Support	Support
	qmake:		Support	No support
	libasound		Support	Support
	libssl-dev		Support	Support
	libxml2		Support	Support

**Note:**

1. The table lists the more commonly used functions and modules. For a complete list, please see the manifest file in the ROM image.

## 2.2. Software list

MYD-YM62X bootloader, kernel and file system and all parts of the application source code is completely open, users can get *myd-YM62x-sdk\_v1.0.0.7z* compressed package from the ROM image and then unzip:

### - U-boot:

Version: V2023.04

URL: <https://github.com/MYIR-TI/myir-ti-uboot.git>

Branch: myd-ym62x-uboot-2023.04

### - Linux Kernel:

Version: V6.1.46

URL: <https://github.com/MYIR-TI/myir-ti-linux.git>

Branch: myd-am62x-linux-6.1.46

### -Yocto:

Release: V2023

URL: <https://github.com/MYIR-TI/oe-layerssetup.git>

Branch: develop\_2023.04

In order to facilitate the porting of the kernel, the source code paths of each kernel driver module are organized as follows:

Table 2-3. List of MYD-YM62X kernel drivers

Modules	Description	Source path
MMC	emmc driver	drivers/mmc/host/sdhci-of-dwcmshc.c
SPI	SPI driver	drivers/spi/spi-dw-mmio.c
I2C	i2c driver	i2c/busses/busses/i2c-designware-platdrv.c
EEProm	eeeprom driver	drivers/misc/eeeprom/at24.c
USB Host	USB driver	drivers/usb/dwc3/core.c drivers/usb/dwc3/dwc3-of-simple.c
Ethernet	Gigabit network driver	drivers/net/phy/motorcomm.c
RS232/RS485/Uart	Serial port driver	drivers/tty/serial/8250/8250_dw.c

Can bus	Can bus driver	drivers/net/can/flexcan/flexcan.c
Audio	Audio driver	sound/soc/codecs/sgtl5000.c
Camera	OV5640 driver	drivers/media/i2c/ov5640.c
GPIO key	Key driver	drivers/input/keyboard/gpio_keys.c
RTC	RTC driver	drivers/rtc/rtc-ti-k3.c
Gpio Led	Led driver	drivers/leds/leds-gpio.c
HDMI	LT8912 driver	drivers/video/fbdev/omap2/omapfb/displays/connector-hdmi.c
Touch	Touch screen driver	drivers/input/touchscreen/edt-ft5x06.c

## 2.3. Document information

In addition to this release note, the SDK contains different types of documents and manuals, such as the Getting Started guide, evaluation guide, development guide, application notes, common questions and answers, etc., depending on the stage of the user's use of the development board. The starter guide is a booklet that tells users how to quickly connect the hardware, start the development board, and how to quickly obtain information for subsequent evaluation and development after getting the development board. The evaluation guide focuses on introducing the use and experience of the development board, informing users of the specific software and hardware characteristics of the development board and making corresponding demonstrations, so as to facilitate users to do project evaluation. The development guide focuses on the whole process of porting the operating system and applications, and tells users how to quickly port the operating system and applications to the hardware platform based on our core board design based on our SDK. In the development stage, we also provide detailed application notes for a specific function or module to guide users to develop; In addition, we also organize and summarize some common questions in each stage to form a list of commonly used questions and answers, which is provided to users as a reference. The complete document information is shown in the table below:

Table 2-4. MYD-YM62X SDK documentation list

Stages of Use	Document name	Notes
Getting	MYD-YM62X Quick Start guide	A quick start booklet is included in

Started		the product packaging
Evaluation Phase	MYD-YM62X_Linux Software Evaluation Guide	
Development phase	MYD-YM62X_Linux Software Development Guide	
	MYD-YM62X_QT and MEasy HMI software development guide	No release yet
	Other App Notes	No published yet
Technical Support	MYD-YM62X Frequently Asked Questions	No published yet
Release Notes	MYD-YM62X SDK Release Notes	

## 3. Version History

Table 3-1. MYD-YM62X SDK version history

Versions	Time	State	Description	Download path
V1.0.0	2023.09.30	RC	U-boot version:2023.04 Linux Kernel version:6.1.46 Yocto version:4.1 QT version:5.14.2	<a href="http://d.myirtech.com/MYD-YM62X/">http://d.myirtech.com/MYD-YM62X/</a>

## 4. Known Issue

The following table lists some known issues with this release. Please read the following list carefully to determine if you need to make any hardware or software changes before using it. If you need help, please contact us using the contact information in the appendix.

Table 4-1. Remaining Issues and Disposal

ID	Area of influence	Description	The Solution
1	CSI camera head	Camera shows a slight green bias when using ov5640	The problem will be solved by the subsequent upgrade software version

# Appendix A

## Warranty & Technical Support Services

**MYIR Electronics Limited** is a global provider of ARM hardware and software tools, design solutions for embedded applications. We support our customers in a wide range of services to accelerate your time to market.

MYIR is an ARM Connected Community Member and work closely with ARM and many semiconductor vendors. We sell products ranging from board level products such as development boards, single board computers and CPU modules to help with your evaluation, prototype, and system integration or creating your own applications. Our products are used widely in industrial control, medical devices, consumer electronic, telecommunication systems, Human Machine Interface (HMI) and more other embedded applications. MYIR has an experienced team and provides custom design services based on ARM processors to help customers make your idea a reality.

The contents below introduce to customers the warranty and technical support services provided by MYIR as well as the matters needing attention in using MYIR's products.

### Service Guarantee

MYIR regards the product quality as the life of an enterprise. We strictly check and control the core board design, the procurement of components, production control, product testing, packaging, shipping and other aspects and strive to provide products with best quality to customers. We believe that only quality products and excellent services can ensure the long-term cooperation and mutual benefit.

### Price

MYIR insists on providing customers with the most valuable products. We do not pursue excess profits which we think only for short-time cooperation. Instead, we hope to establish long-term cooperation and win-win business with customers. So we will offer reasonable prices in the hope of making the business greater with the customers together hand in hand.

### Delivery Time

MYIR will always keep a certain stock for its regular products. If your order quantity is less than the amount of inventory, the delivery time would be within three days; if your order quantity is greater than the number of inventory, the delivery time would be always four to six weeks. If for any urgent delivery, we can negotiate with customer and try to supply the goods in advance.

### Technical Support

MYIR has a professional technical support team. Customer can contact us by email (support@myirtech.com), we will try to reply you within 48 hours. For mass production and customized products, we will specify person to follow the case and ensure the smooth production.

**After-sale Service**

MYIR offers one year free technical support and after-sales maintenance service from the purchase date.

The service covers:

**Technical support service**

MYIR offers technical support for the hardware and software materials which have provided to customers;

- To help customers compile and run the source code we offer;
- To help customers solve problems occurred during operations if users follow the user manual documents;
- To judge whether the failure exists;
- To provide free software upgrading service.

However, the following situations are not included in the scope of our free technical support service:

- Hardware or software problems occurred during customers' own development;
- Problems occurred when customers compile or run the OS which is tailored by themselves;
- Problems occurred during customers' own applications development;
- Problems occurred during the modification of MYIR's software source code.

**After-sales maintenance service**

The products except LCD, which are not used properly, will take the twelve months free maintenance service since the purchase date. But following situations are not included in the scope of our free maintenance service:

- The warranty period is expired;
- The customer cannot provide proof-of-purchase or the product has no serial number;
- The customer has not followed the instruction of the manual which has caused the damage the product;
- Due to the natural disasters (unexpected matters), or natural attrition of the components, or unexpected matters leads the defects of appearance/function;
- Due to the power supply, bump, leaking of the roof, pets, moist, impurities into the boards, all those reasons which have caused the damage of the products or defects of appearance;
- Due to unauthorized weld or dismantle parts or repair the products which has caused the damage of the products or defects of appearance;

- Due to unauthorized installation of the software, system or incorrect configuration or computer virus which has caused the damage of products.

**Warm tips**

1. MYIR does not supply maintenance service to LCD. We suggest the customer first check the LCD when receiving the goods. In case the LCD cannot run or no display, customer should contact MYIR within 7 business days from the moment get the goods.
2. Please do not use finger nails or hard sharp object to touch the surface of the LCD.
3. MYIR suggests user purchasing a piece of special wiper to wipe the LCD after long time use, please avoid clean the surface with fingers or hands to leave fingerprint.
4. Do not clean the surface of the screen with chemicals.
5. Please read through the product user manual before you using MYIR's products.
6. For any maintenance service, customers should communicate with MYIR to confirm the issue first. MYIR's support team will judge the failure to see if the goods need to be returned for repair service, we will issue you RMA number for return maintenance service after confirmation.

**Maintenance period and charges**

- MYIR will test the products within three days after receipt of the returned goods and inform customer the testing result. Then we will arrange shipment within one week for the repaired goods to the customer. For any special failure, we will negotiate with customers to confirm the maintenance period.
- For products within warranty period and caused by quality problem, MYIR offers free maintenance service; for products within warranty period but out of free maintenance service scope, MYIR provides maintenance service but shall charge some basic material cost; for products out of warranty period, MYIR provides maintenance service but shall charge some basic material cost and handling fee.

**Shipping cost**

During the warranty period, the shipping cost which delivered to MYIR should be responsible by user; MYIR will pay for the return shipping cost to users when the product is repaired. If the warranty period is expired, all the shipping cost will be responsible by users.

**Products Life Cycle**

MYIR will always select mainstream chips for our design, thus to ensure at least ten years continuous supply; if meeting some main chip stopping production, we will inform customers in time and assist customers with products updating and upgrading.

**Value-added Services**

1. MYIR provides services of driver development base on MYIR's products, like serial port, USB, Ethernet, LCD, etc.
2. MYIR provides the services of OS porting, BSP drivers' development, API software development, etc.
3. MYIR provides other products supporting services like power adapter, LCD panel, etc.
4. ODM/OEM services.

**MYIR Electronics Limited**

Room 04, 6th Floor, Building No.2, Fada Road,  
Yunli Intelligent Park, Bantian, Longgang District.

Support Email: [support@myirtech.com](mailto:support@myirtech.com)

Sales Email: [sales.en@myirtech.com](mailto:sales.en@myirtech.com)

Phone: +86-755-22984836

Fax: +86-755-25532724

Website: [www.myirtech.com](http://www.myirtech.com)