

MYD-Y6ULX-CHMI Display Panel

- 7-inch HMI Display Solution based on 528Hz NXP i.MX 6UltraLite / 6ULL ARM Cortex-A7 Processor
- Connectivity with USB, Ethernet, RS232, RS485, TF Card, LCD, RTC, Camera...
- Optional MYB-Y6ULX-HMI-4GEXP IO Board adds Ethernet, WiFi/BT, 4G LTE Module Interface, Audio...
- Supports Working Temperature Ranging from 0°C to 70°C
- Ready-to-Run Linux 4.1.15 OS with QT 5.6.2



Figure 1-1 MYD-Y6ULX-CHMI Display Panel

The **MYD-Y6ULX-CHMI Display Panel** is an ultra-low cost Human Machine Interface (HMI) solution based on 528MHz [NXP i.MX6UL/6ULL ARM Cortex-A7](#) processor, It is a Linux-ready device with ported QT, can be used in various applications including POS, Intelligent access control and more others. The panel provides a well-designed hardware with various peripherals and rich software resources to help users accelerate their time to the market.

The **MYD-Y6ULX-CHMI** consists of an [MYD-Y6ULX-HMI Development Board](#) and a 7-inch capacitive LCD mounting on its top. The LCD offers 800x480 pixels display resolution. The MYD-Y6ULX-HMI Development Board provides peripherals and interfaces including **RS232, RS485, Ethernet, USB Host/Device, LCD, Camera, TF card slot** and etc.



Figure 1-2 MEasyHMI QT Demo Interface

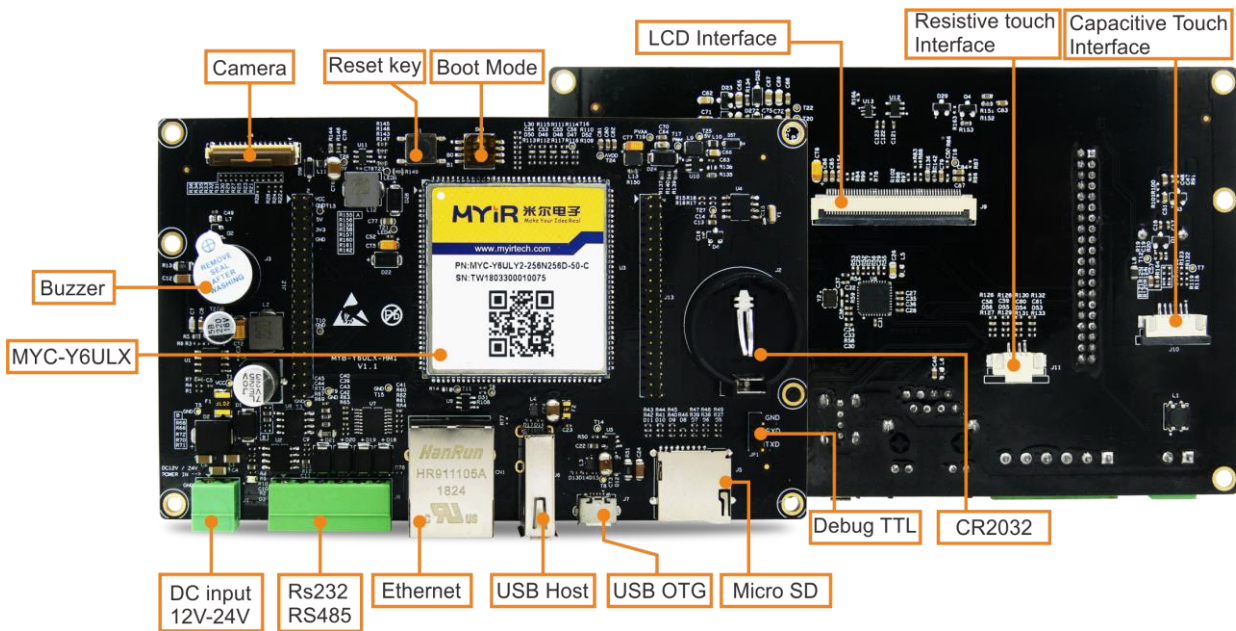


Figure 1-3 MYD-Y6ULX-HMI Development Board

Considering wireless communication and dial-up functions, MYiR offers an optional IO board [MYB-Y6ULX-HMI-4GEXP](#) for the MYD-Y6ULX-CHMI Display Panel. The IO Board features on board AP6212 module for **WiFi/Bluetooth** and a **Mini-PCIe interface for USB based 4G LTE module**. Moreover, the IO Board has extended one more Ethernet interface and Audio in/out ports to further enhance the functionality of the panel, thus making a complete solution for HMI applications. Unlike common HMI, the panel is not designed with a ready-enclosure, which gives great flexibility to users when they are making their final product.

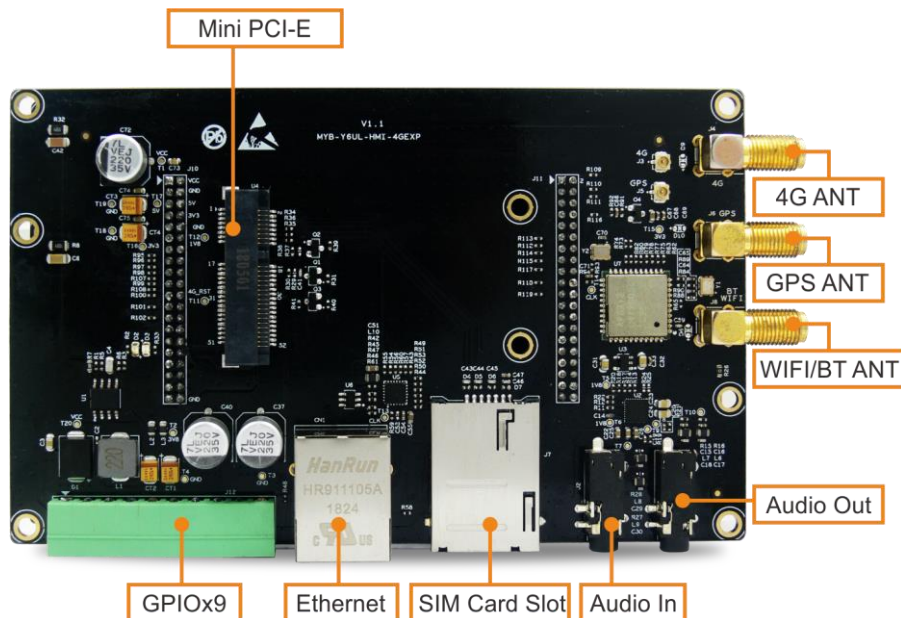


Figure 1-4 MYB-Y6ULX-HMI-4GEXP IO Board

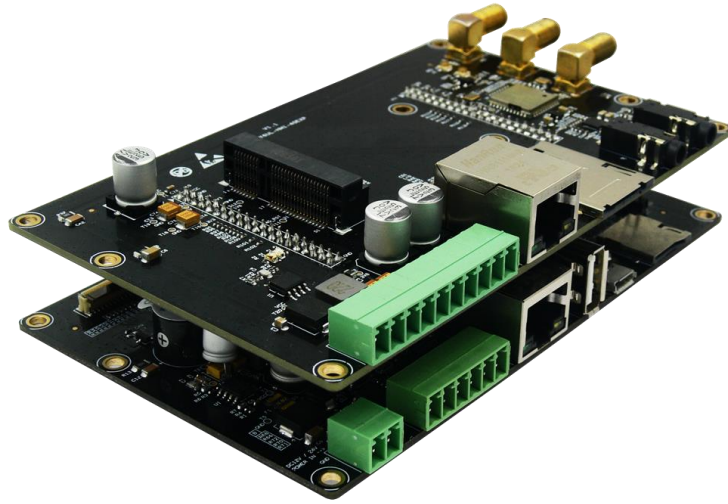


Figure 1-5 MYB-Y6ULX-HMI-4GEXP IO Board Mounted on MYD-Y6ULX-HMI Development Board



Figure 1-6 MYD-Y6ULX-CHMI Display Panel + MYB-Y6ULX-HMI-4GEXP

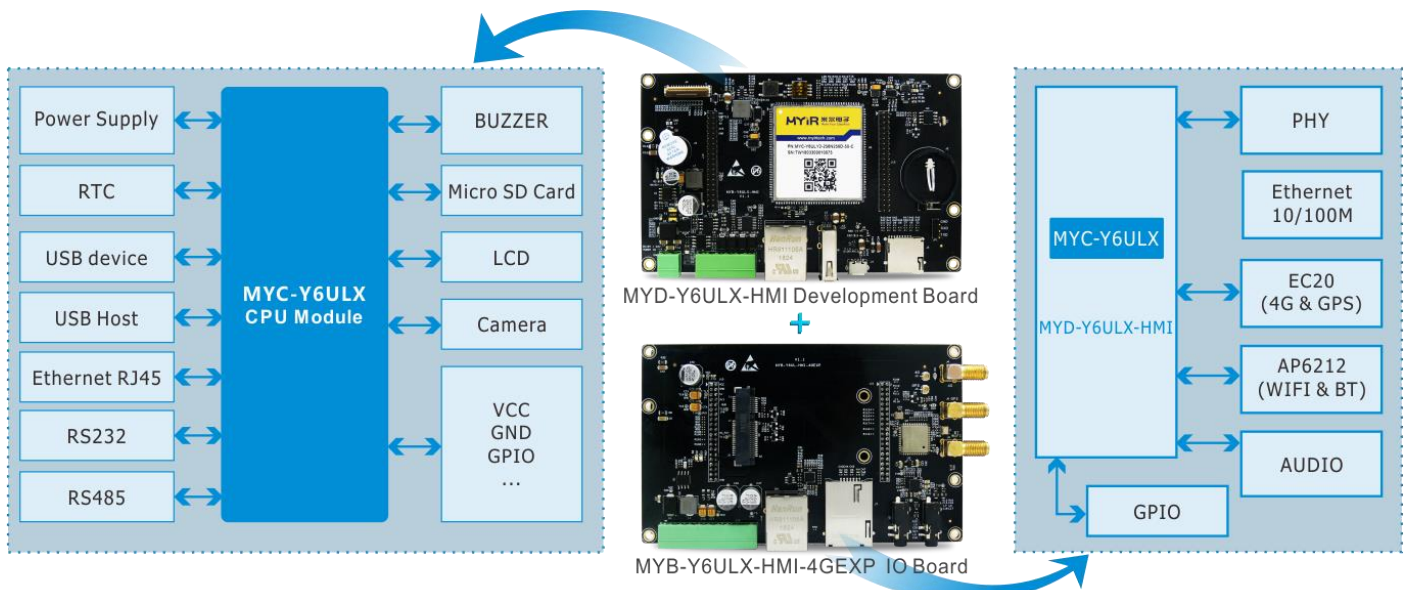


Figure 1-7 MYD-Y6ULX-CHMI Display Panel Function Block Diagram

Hardware Specification

Features	Description
Power supply	+12V/1.5A (through one 2-pin 3.81mm pitch Phoenix connector)
Power consumption	12V/0.26A (MYD-Y6ULX-CHMI) 12V/0.38A (MYD-Y6ULX-CHMI+MYB-Y6ULX-HMI-4GEXP)
Dimensions	164.90 x 100.00 mm (7-inch LCD), 130mm x 88mm (MYD-Y6ULX-HMI)
Gross Weight	384.00g
Working Temp.	0°C~70°C
CPU	528MHz NXP i.MX 6UltraLite / i.MX 6ULL ARM Cortex-A7 processor (MCIMX6Y2CVM05A or MCIMX6Y2DVM05A by default)
Memory	256MB DDR3 (supports up to 1GB) 256MB Nand Flash (4GB eMMC Flash is optional)
Display type	7-inch TFT-LCD (800 x 480 pixels resolution) with capacitive touch screen
Serial ports	1 x Debug serial port (TTL), 1 x RS485 serial port, 1 x 3-wire RS232 serial port
USB	1 x USB2.0 Host port, 1 x Micro USB2.0 OTG port
Camera	1 x Camera interface
Ethernet	1 x 10/100 Mbps Ethernet interface
TF card	1 x TF card slot
RTC	Battery backed RTC
Button	1 x Reset button
Expansion connectors	2 x 2.0mm 2*20-pin male pin headers
MYB-Y6ULX-HMI-4GEXP IO Board (Optional for MYD-6ULX-CHMI Display Panel)	130mm x 88mm, 4-layer PCB
	Supports -40°C~85°C Working Temperature
	Audio in/out ports
	1 x 10/100Mbps Ethernet
	1 x Mini PCIe interface (for optional USB based 4G LTE module)
	1 x SIM card socket
	WiFi/Bluetooth (AP6212 module, supports working temp. from -35°C~85°C)
	3 x Antenna interfaces (one for WiFi/BT, one for 4G LTE and one for GPS)
	9 x GPIOs (3.81mm 10-pin phoenix terminal)
	2 x 2.0mm 2*20-pin female connectors

Table 1-1 Hardware Specifications of MYD-6ULX-CHMI Display Panel

Software Features

Item	Features	Description
Bootstrap program	u-boot	The primary bootstrap (source code)
Kernel	Version	Linux 4.1.15 (source code, based on official imx_4.1.15_2.0.0_ga version)
Linux Drivers	USB	HOST and OTG driver (source code)
	Ethernet	Ethernet driver (source code)
	MMC	MMC/eMMC/TF card driver (source code)
	NandFlash	Nand Flash driver (source code)
	eMMC	eMMC driver (source code)
	WiFi & BT	AP6212 driver (source code)
	4G LTE	4G LTE Module driver (source code, USB signal based)
	Camera	Camera driver (source code, OV2659)
	LCD Controller	LCD driver (source code, supports MYIR's 7- inch LCD)
	Touch Panel	Resistive and Capacitive touch screen driver (source code, MYIR's 7- inch Touch Panel)
	RTC	RTC driver (source code)
	GPIO Button	Button driver (source code)
	UART	UART driver (source code)
	CAN	CAN driver (source code)
	RS485	RS485 driver (source code)
	Audio	Audio driver (source code, wm8904)
	SPI	SPI driver (source code)
	I2C	I2C driver (source code)
	PWM	PWM controller driver (source code)
GPIO	GPIO driver (source code)	
Watchdog	Watchdog driver (source code)	
File System	Yocto	Including QT5.6 (source code) Common file system for terminal

Application Program	GPIO LED and Key	LED and Key driver (source code)
	NET	TCP/IP Socket C/S example
	RTC	RTC example
	RS232	RS232 example
	RS485	RS485 example
	Audio	Audio example
	LCD	LCD example
	Camera	Viewing via web
	Data base sqllite3	Data storing example
	MODBUS RTU	MODBUS RTU Protocol Library
Compiler Tool Chain	Linaro GCC 4.9 hf	Binary file
	MetaToolchain	Built by Yocto, GCC 5.3 (Binary file)
	Applications Tool Chain	Built by Yocto, GCC 5.3 (Binary file)
Demo	MEasyHMI	Including examples developed by Web Server and QT for peripherals using (source code)

Table 1-2 Software Features of MYD-6ULX-CHMI Display Panel

Order Information

Item	Packing List
MYD-Y6ULX-CHMI Display Panel (Part No.: MYD-Y6ULY2-256N256D-50-C-CHMI)	- One MYD-Y6ULX-HMI board - One 12V DC power adapter - One 7-inch LCD with Capacitive touch screen
MYB-Y6ULX-HMI-4GEXP IO Board (Part No.: MYB-Y6ULX-HMI-4GEXP)	- One MYB-Y6ULX-HMI-4GEXP board - One 4G LTE antenna - One WiFi/BT antenna



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