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What is a TFT LCD?

What is an MCU TFT LCD?

What is a UART TFT LCD?

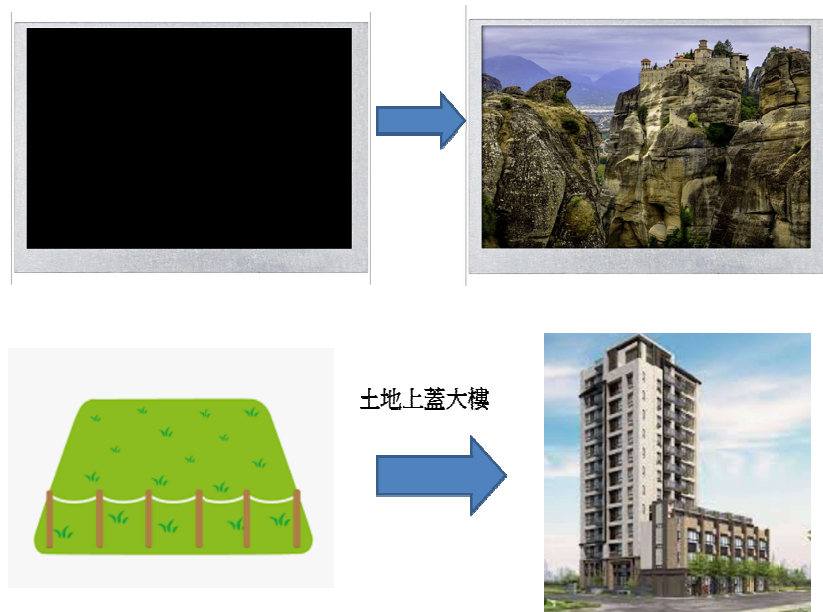
How do I choose which one?

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In order to make users more aware of the differences between , we use the concept of building a building to illustrate . differences As shown in the following figure:



- **TFT LCD** ([Standard TFT LCD \(bolymin.com.tw\)](http://bolymin.com.tw))

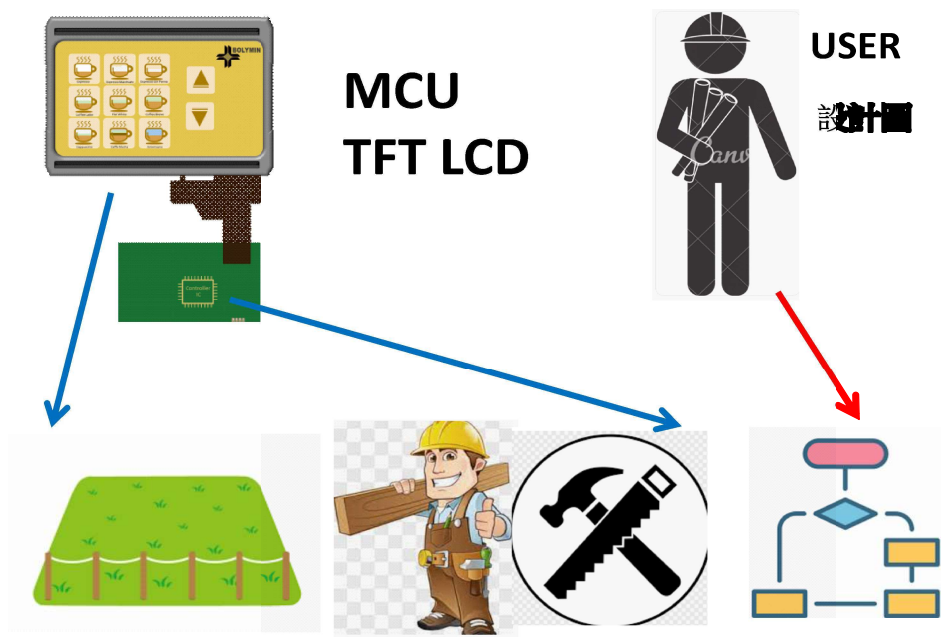
Simply using TFT LCD, just like a building to be built, it is necessary to have architects, land, workers, material tools and construction methods, etc. To build a building, just like to display the picture on the TFT LCD .

After the architect (TFT LCD user) has finished designing the drawings, he needs to build a building on a piece of land (on TFT LCD). If you do not understand the construction process and methods, the architect must organize the worker, integrate the materials and tools, and understand the construction method. This work is complicated and difficult, which affects the work efficiency of the architect (TFT LCD user), as shown in the figure below:, The TFT LCD interface is generally commonly used as RGB or LVDS.



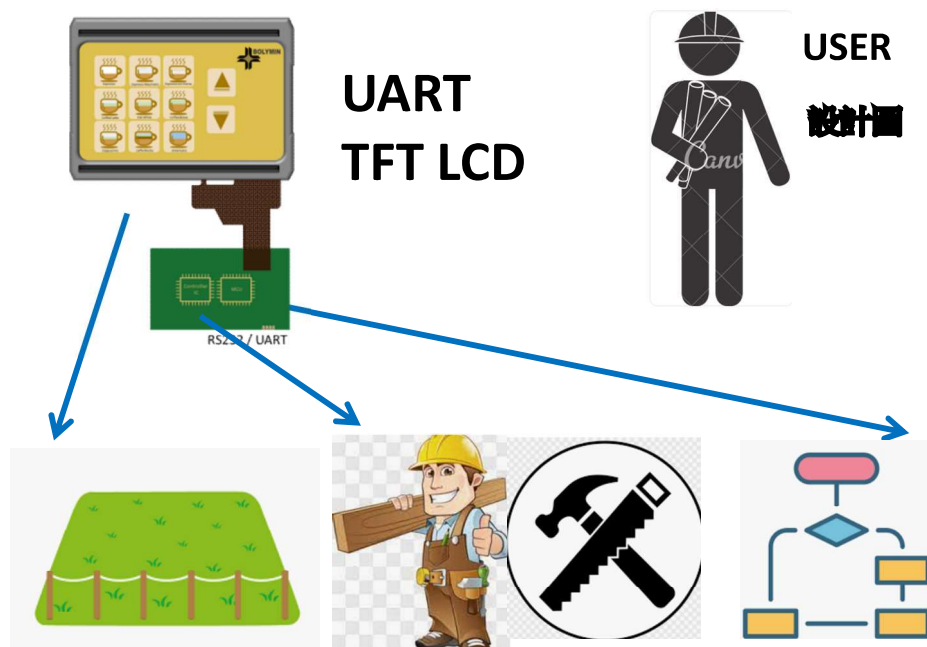
- **MCU TFT LCD** ([MCU TFT LCD \(bolymin.com.tw\)](http://bolymin.com.tw))

Since from the establishment of workers, tool materials and understanding of construction methods, not the professionalism of architects, so the development of a new model, the use of ready workers, material tools to let the architect use , so that the architect (TFT LCD user) simplifies the time to set up the workers, tools and materials , but still has to establish the construction process and construction method, and direct the workers, as shown in the following figure:



- **UART TFT LCD** ([UART HMI \(bolymin.com.tw\)](http://bolymin.com.tw))

Because the Architect's (TFT LCD user) specialty is in the design and planning of the building, rather than spending too much time on the process and engineering. Just like the automation company, specialize in peripheral device design instead of spending time on TFT LCD display, therefore, the TFT LCD has evolved to automate the construction method and process, as shown below, the architect (TFT LCD user) as long as the focus on the design drawing, the internal process details are handed over to the professional division of labor, just design the required drawing.



Therefore, our UART TFT LCD provides a UI editor that can be edited on PC, users only need to edit pictures and flowcharts, this editor will be converted into a picture that can be displayed on the UART TFT LCD to speed up the customer's development and application. product. What you see is what you get.

● Comparison table

According to the following comparison table, users can choose different products according to their own needs, and Bolymin provide different products and technical support.

	TFT	MCU TFT	UART TFT
Part NO.	BTF serial	BTC serial	BTU serial
Size	0.96"~10.1"	0.96"~10.1"	2.8/3.2/4.3/5/7/10.1
Interface	RGB / LVDS	8080 / 6800 / SPI / I ² C	UART / RS232
Structure	TFT	TFT+ Controller IC	TFT+ ARM IC
UI editor	None	None	YES
SoftwareSupport	None	YES	YES
Cost	Low	Middle	Middle
Convenience	Low	Middle	High
Software level	High	Middle	Low
Hardware Level	High	Middle	Low
Time to Market	Slow	Middle	Fast
MCU Level	High	Middle	Low
Main board cost	High	Middle	Low
Suggestion	Customers need to use high-end MCU, built-in TFT LCD control IC, software and hardware must be designed by themselves, and the complexity is high	Customers can use low-end MCU, such as 8051, the program is simple, but you need to set the parameters to display it. If there are many layers, the complexity will increase	Customers can use low-level MCUs, such as 8051, without program editing, and provide PC editing software to achieve What You See Is What You Get (WYSIWYG)
Product Link	https://www.bolymin.com.tw/standard-tft-lcd.htm	https://www.bolymin.com.tw/mcu.htm	https://www.bolymin.com.tw/uart-hmi.htm

- **UART TFT LCD INTRODUCTION**

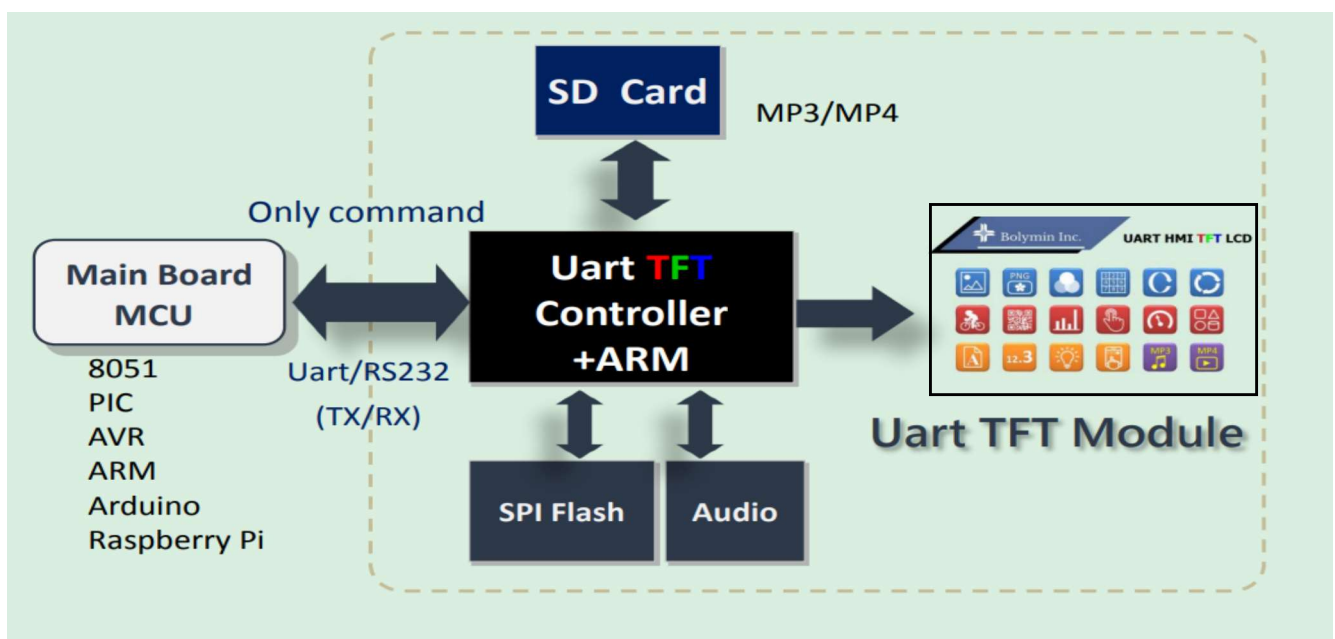
General customers convert TFT LCD concerns about the following items, these projects are no longer a problem and obstacle

Difficult to convert?

- Does the original MCU need to be modified?
- Are the motherboard changes heavily?
- What should I do if the MCU speed is not fast enough and the screen refresh is too slow?
- ROM is not enough?
- Face problem on file Complicated graphics overlap operation

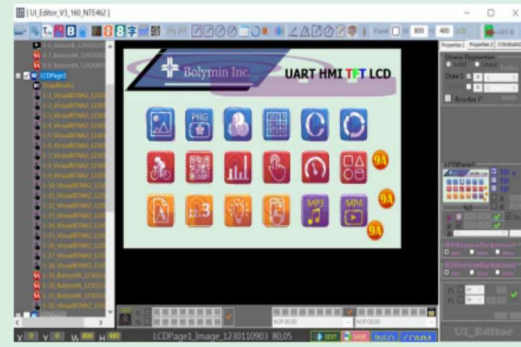
- **BOLYMIN SOLUTION**

Bolymin provides the following solutions, which can completely solve the above customer problems



PC Software

- ◆ 90 kinds of UI Commands
- ◆ PC Software
- ◆ User Manual
- ◆ DM Available
- ◆ Drag and drop design way



Simulation Software

- ◆ Verify UI process
- ◆ Save development time
- ◆ Instant debugging function



● COMPETITIVE ADVANTAGE

Up

•Product competitive

Solve

•Monochrome to Color Gap

Down

•Software and hardware development costs

Save

•Labor costs

Shorten

•Development Time& Time to Market

Focus

•Customer product rather than only LCD module

● **UART TFT LCD PRODUCT LIST**

Bolymin offers a range of standard products as follows, and can be customized to the required sizes: If you need to contact our company.

inch	Display Format	Model No.	Outline Dimension (mm)	Active Area (mm)	Typ.Brightness (module surface,cd/m2)	View Angle	Interface	IC Part No. or Compatible with Controller	TOUCH PANEL	Audio/ Video
2.8	320x240	BTU028-3224TL100	96.6 x 55.94	57.6 x 43.2	200	6H	UART/RS232	ARM M4	RTP	WAV
3.2	320x240	BTU032-3224TL100	96.6 x 55.94	64.8 x 48.6	290	6H	UART/RS232	ARM M4	RTP	WAV
4.3	480x272	BTU043-4827IL000	120 x 74	95.04 x 53.86	340	ALL	UART/RS232	ARM 9	RTP/CTP	WAV/MP3/MP4
5	800x480	BTU050-8048IL000	136.9 x 84	108 x 64.8	550	ALL	UART/RS232	ARM 9	RTP/CTP	WAV/MP3/MP4
7	800x480	BTU070-8048TL000	181 x 108	154.08 x 85.92	700	12H	UART/RS232	ARM 9	RTP/CTP	WAV/MP3/MP4
10.1	1024x600	BTU101-1060TL000	235 x 143	222.72 x 125.28	360	6H	UART/RS232	ARM 9	RTP/CTP	WAV/MP3/MP4





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