



§ SPECIFICATION APPROVAL SHEET §

Fdt Tech Module No FG043YW000-00R

Description: 4.3" Digital TFT-LCD Module

SPEC No.: SAS-1103005

Version: 0.2

Issue Date: April 19, 2013

※ This approval sheet contains 13 pages including the cover and appendix.

Customer:

APPROVED BY:

Date: / / 13

APPROVED BY:

CHECKED BY:

DESIGNED BY:



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4.3" GRAPHIC TFT-LCD Module

■ FG043YW000-00R

1. General Description

FDT Smart Graphic TFT Module is a unique TFT LCD module which builds graphic and character inside. It provides user to present customized & full color graphics or characters without any SOC or IPC system. In addition, user can update or upload his graphics or characters via USB port by himself. FDT Smart Graphic TFT Module not only enhances your product values also saves your cost.



1.1 Features

- Single Operation Voltage +12V
- Full Colors Presentation
- UART Interface For Communication
- Easy To Set Up Without SOC or IPC Controller
- Built In Real Time Clock
- Buzzer Function
- LED Backlight Brightness Control
- USB Port For Update Graphic Library

1.2 Application

- Industrial Controller
- Medical Equipment
- Security Equipment
- Simple Function Equipment

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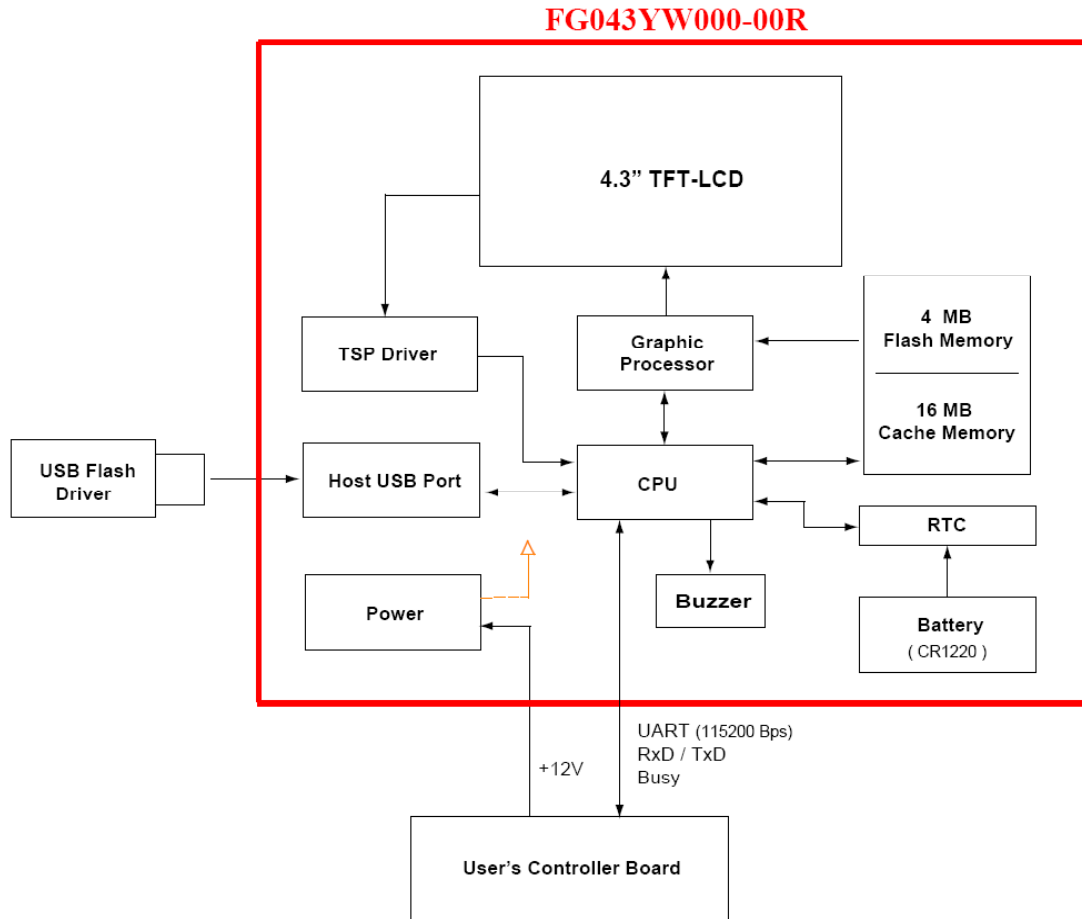


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3. Block Diagram

3.1 Block Diagram



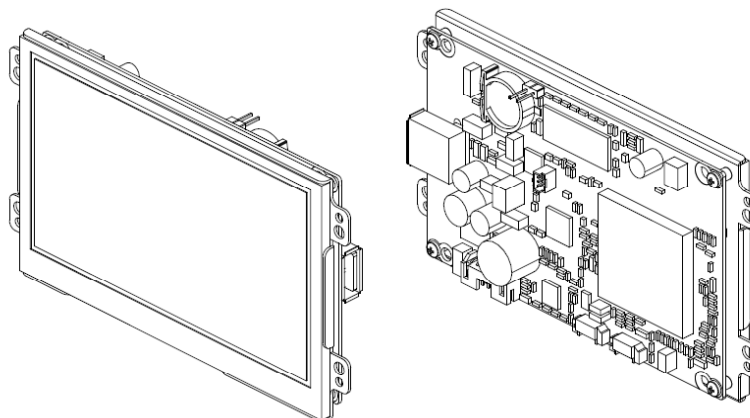
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4. Order Information

4.1 Unit

Unit



Parameter	FG043YW000-00R	Unit
RTC	<input type="radio"/>	
Buzzer Function	<input type="radio"/>	

Note: 1.The tape in back of the bracket is to avoid the panel falling from the unit in delivery.
2.It's Just A temporary adhesion.

4.2 Power Cable (Option)

Power Cable



Order Part Number	Pin Description	Remark
LACABLE008-FDR	7P 2.0mm - 4P1.25mm - 5.5mm-DC Jack	

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5. Specifications

Parameter	Specifications	Unit	Remark
Communication Protocol	Duplex Transmission (UART)		
	UART Transmission Rate	115200	Bps
	Data Bit	8	Bits
	Parity Bit Check	NO	
	Stop Bit	1	Bit
USB(TYPE A)	Host	USB 1.1	
Weight	---	g	
Flash ROM	4M	Bytes	Note1
SDRAM	16M	Bytes	
Picture Format	JPEG Category		Note1

NOTE:1 How many pictures in flash memory depend on picture's compression ratio.

6. Absolute Maximum Ratings

6.1 Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit	Remark
Input Voltage	V _{in}	+9	+15	V	
Digital Input Signal	TTL	+0.3	+3.6	V	
Operating Temperature		-20	+70	°C	
Storage Temperature		-30	+80	°C	

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7. Recommended Operating Conditions

7.1 Electrical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Note
Input Voltage	Vin	+10	+12	+14	V	
Total Current	Lin	-	211	-	mA	
Power Consumption		-	2.53	-	W	
I/O	TTL	+0.1	-	+3.3	V	

8. TFT-LCD Information

8.1 TFT-LCD Mechanical Specifications

Parameter	Specifications	Unit
Screen Size	4.3 (Diagonal)	inch
Display Format	480 x (R.G.B) x 272	dot
Active Area	95.04 (W) x 53.856 (H)	mm
Surface Treatment	Antiglare, Hard-Coating (3H)	

8.2 TFT-LCD Optical Characteristics

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Remark	
Viewing Angle	Horizontal	Left	65	75	---	deg		
		Right	65	75	---	deg		
	Vertical	Top	CR >10	50	60	---	deg	
		Bottom		60	70	---	deg	
Contrast Ratio	CR	$\theta = 0^\circ$	480	600	---	---		
Brightness	L	$\theta = 0^\circ$	400	500	---	Cd/m ²		
LED Life Time		+25°	10000	---	---	Hrs		

9. Pin Description

9.1 J201 Pin Assignment of Signal Input (Pitch 2.0mm 7Pin, Side Entry Type)

※ FDT Connector Part No.: M24267R (STM) [Same as S7B-PH-K-S (JST)];

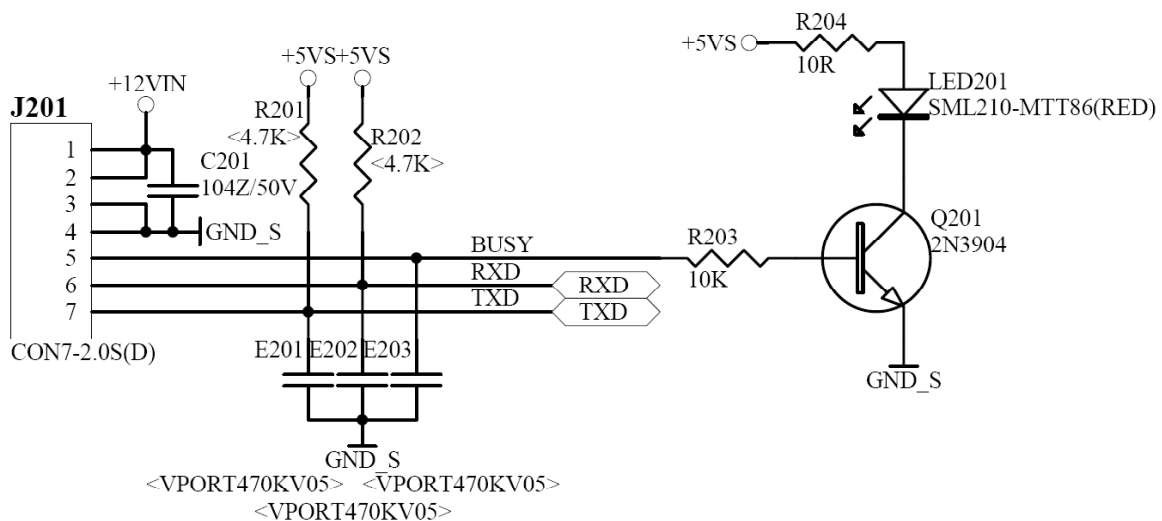
FDT Matching Connector Part No.: P24267 (STM) [Same as PHR-7 (JST)].

Pin No	Symbol	I/O	Description	Remark
1	VCC12V	-	+12V Input Voltage	DC
2	VCC12V	-	+12V Input Voltage	DC
3	GND	-	Ground	
4	GND	-	Ground	
5	BUSY	O	Busy status	High (3.3V): Busy Low (0V): Normal (Note)
6	RXD	I	Receive Data (UART)	TTL Level RS-232 (3.3V)
7	TXD	O	Transmit Data (UART)	TTL Level RS-232 (3.3V)

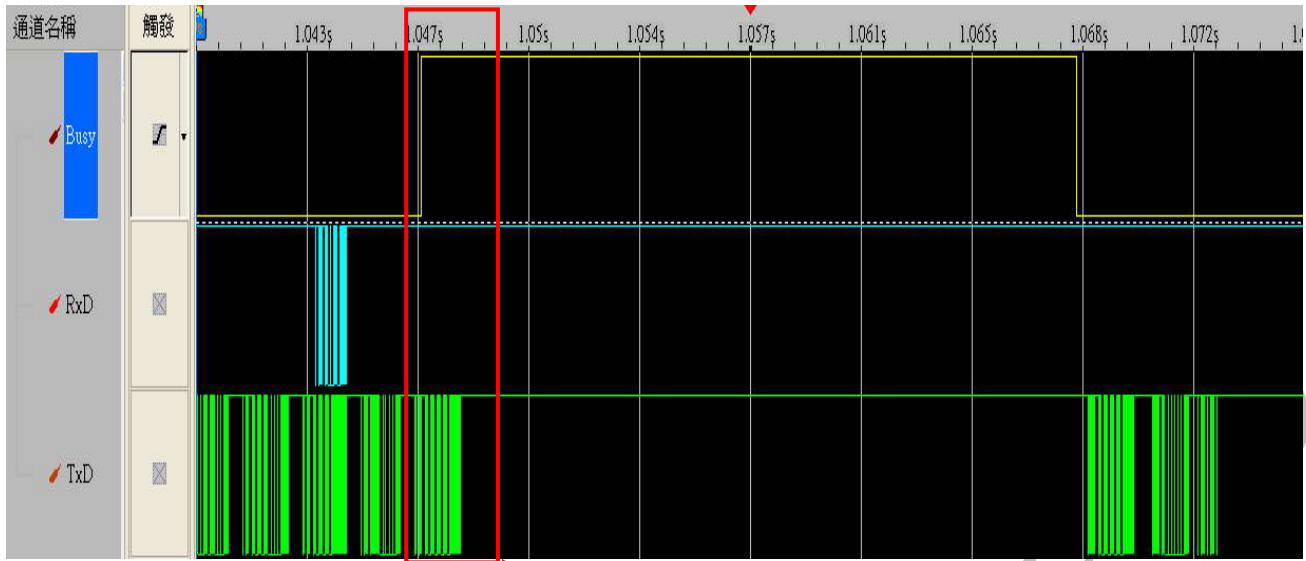
Note: 1. Your application circuit board must be connects with busy pin of SGM.

2. Busy pin could source/sink 4mA.

3. Busy input circuit.



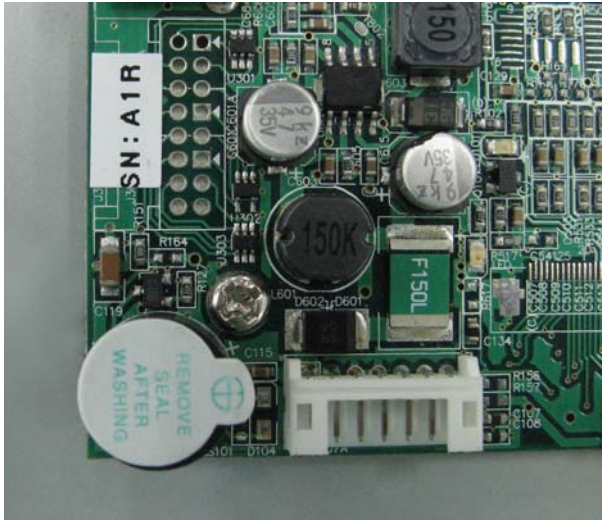
9.2 UART Timing Chart (Client side)



※ If busy signal of SGM appears on the duration of client processor transmission command.
Please don't worry this situation and goes on last command procedure.

10. Buzzer Notice

10.1 Remove Buzzer Label



Remove

Preliminary

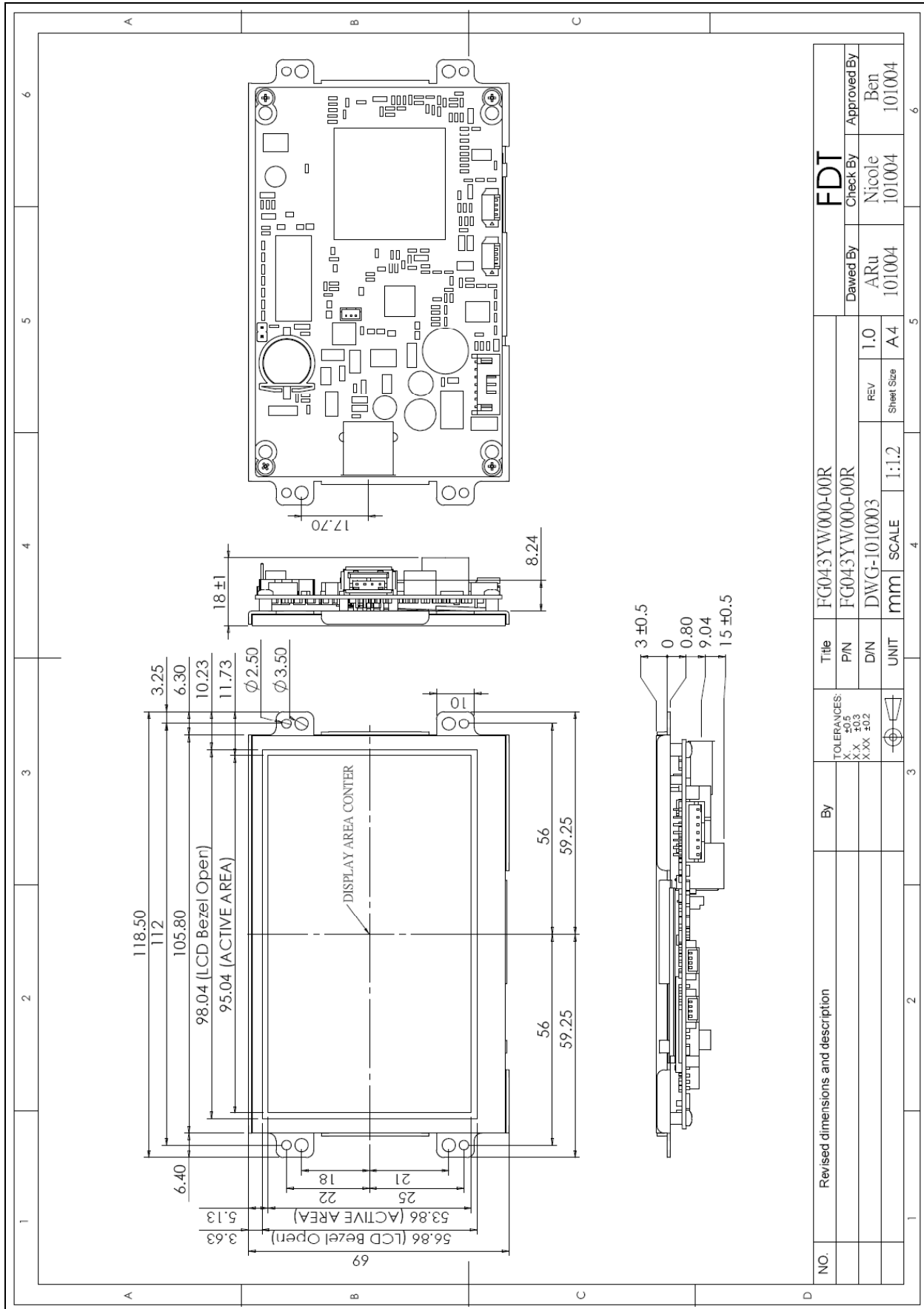
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11. Dimension Information

11.1 Unit (FG043YW000-00R)

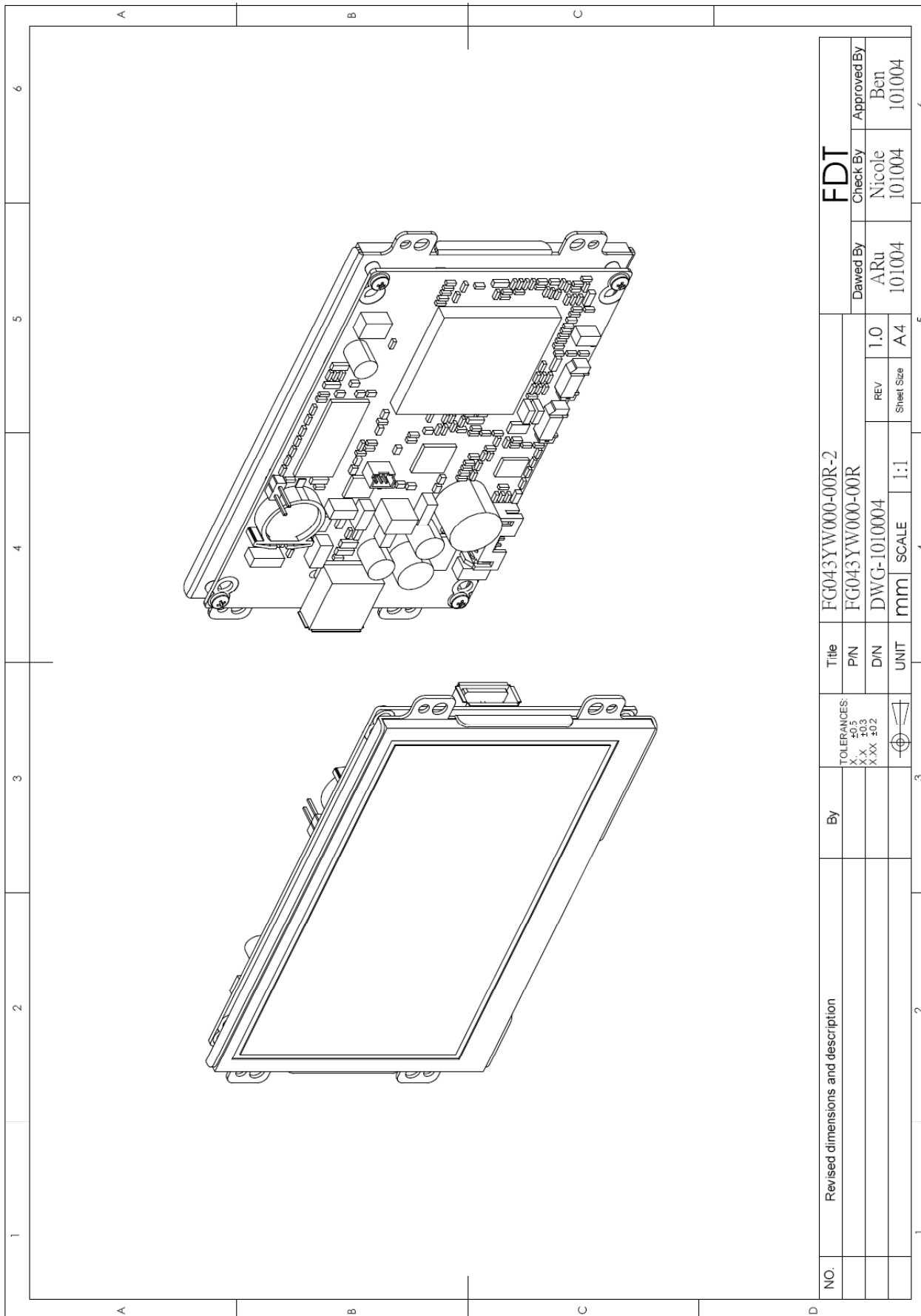


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11.2 Unit (FG043YW000-00R-2)

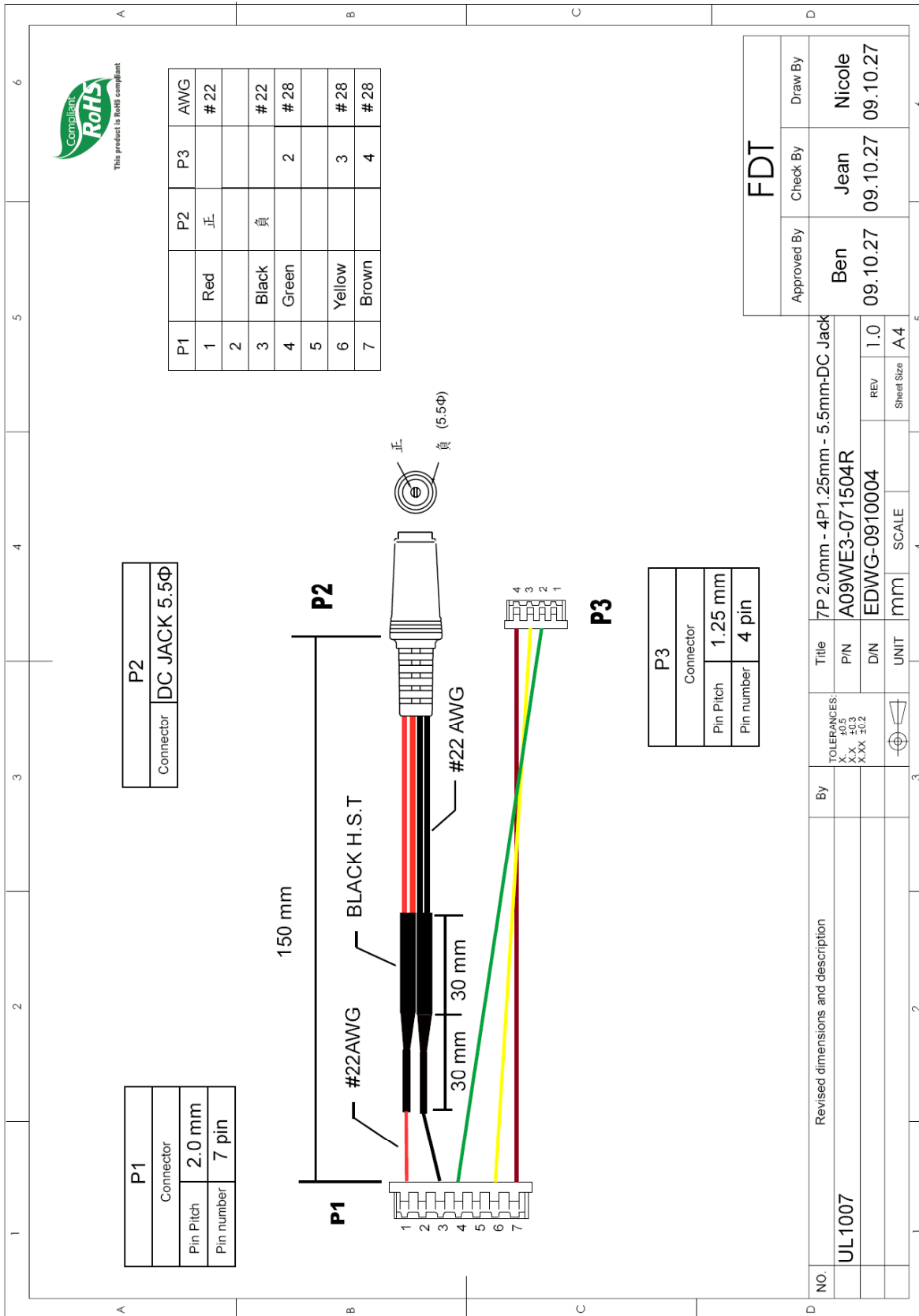


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12. Accessory

12.1 LACABLE008-FDR (Option)



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