

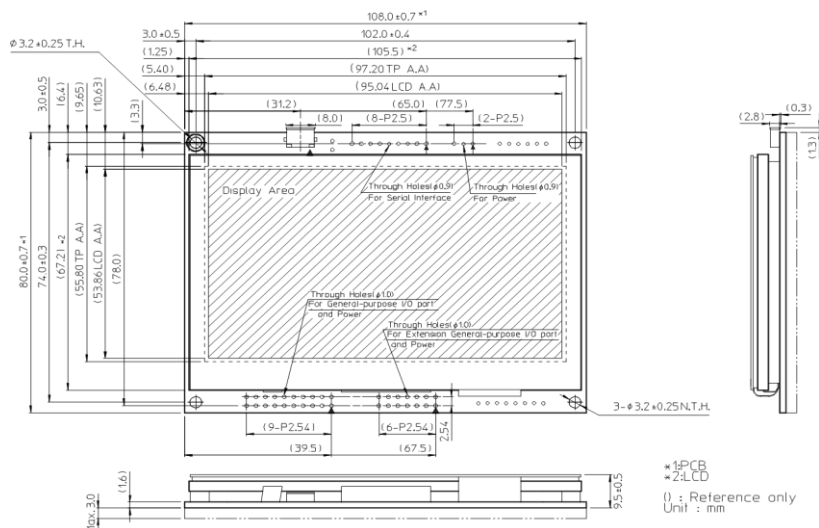
# GTWQ043C3A00PA

## SIMPLIFIED DATASHEET

### ■ Features

- 4.3inch TFT-LCD
  - LED backlight module
  - Wide-QVGA: 480 x RGB x 272 pixels
  - High brightness (850cd/m<sup>2</sup>)
  - FLETAS touch panel mounted
- [Features of FLETAS]
- High sensitivity
  - Excellent noise resistance

### ■ Physical Dimensions



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### Specifications

#### ■ Basic Specification

Item	Content	
Display	Display area	95.04 x 53.86 mm (X x Y)
	Number of pixels	480 x RGB x 272
	Pixel pitch	0.198 x 0.198 mm (X x Y)
	Color	16.7M colors (24-bit color (RGB 8-8-8))
	View Direction	12 o'clock
	Gray Scale Inversion Direction	6 o'clock
	Brightness (100%)	Min. 500 cd/m <sup>2</sup> (nit) Typ. 850 cd/m <sup>2</sup> (nit)
FLETAS Touch Panel	Type	MPCT (Metallized Projective Capacitive Touch) supporting multi-touch.
	Interface	Serial interface (UART / I2C / SPI CMOS 3.3V)
Other	Weight	Approximately 100g

#### ■ Electrical Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Power Supply Voltage	VCC	4.75	5.00	5.25	VDC	-

#### ■ Electrical Characteristics

Measuring Conditions: Ambient temperature = 25 °C, VCC=5.0VDC

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition	
UART	Logic output voltage TXD, DTR	VsOH1	2.8	-	-	VDC	IOH=1.6mA
		VsOL1	-	-	0.4	VDC	IOH=1.6mA
I2C I/F	Logic output voltage TRDY, SBUSY	VsOH2	2.8	-	-	VDC	IOH=1.6mA
		VsOL2	-	-	0.4	VDC	IOH=1.6mA
	Internal pull-up resistance SDA, SCL	Rp	-	10	-	kΩ	-
SPI	Logic output voltage TXD, DTR, MISO	VsOH3	2.8	-	-	VDC	IOH=-1.6mA
		VsOL3	-	-	0.4	VDC	IOL=1.6mA
GPIO Port	Logic input current	IiIH	-	-	1.0	μADC	-
		IiIL	-	-	-200	μADC	-
Port 0,1,2,3	Logic input voltage	ViIH	2.4	-	3.3	VDC	-
		ViIL	0	-	0.8	VDC	-
Port 0,1,2,3	Logic output voltage	ViOH	2.8	-	-	VDC	IOH=-200 μA
		ViOL	-	-	0.4	VDC	IOL=1.6mA
Power	Output voltage	VpOH	3.0	-	3.6	VDC	IpOHp=-20mA
	Port 0,1,2,3	Output permissible current (Sum of all port)	(Single port) IiOHp	0	-	-5	mADC
IiOLp			0	-	5	mADC	-
IiOHT			0	-	-80	mADC	include power 3.3V
IiOLt			0	-	80	mADC	-
Power		IpOHp	0	-	-20	mADC	-
		ICC-1	-	440	570	mADC	(*1) 100% Brightness
Power Supply current		ICC-2	-	350	-	mADC	(*2) 50% Brightness
		ICC-3	-	260	340	mADC	Display power OFF
		P-1	-	2.2	2.85	W	(*1) 100% Brightness
Power Consumption		P-2	-	1.75	-	W	(*2) 50% Brightness
		P-3	-	1.3	1.7	W	Display power OFF

(\*1)All black display (\*2)All white display

#### ■ Interface Details/Connectors

• Serial interface (UART / I2C / SPI CMOS 3.3V) [CN9]

Pin No.	Signal			Function	Direction
	UART	SPI	I2C		
1	-	/RESET	-	Reset	Input
2	-	SCK	SCL	Serial Clock	Input
3	RXD	MOSI	SDA	Data Receive	Input/ Output
4	DTR	-	SBUSY	Display Busy	Output
5	DSR	SSEL	-	Host Busy	Input
6	TXD	MISO	-	Data Send	Output
7	-	TRDY	-	Target Ready	Output
8	-	VCC	-	Power Supply (5V)	-
9	-	GND	-	Ground	-

• USB Interface [CN3]

Pin No.	Signal				
1	VBUS	2	D-	3	D+
4	ID	5	GND		

• Power Through-holes [CN8]

Pin No.	Signal	Function
1	VCC	Power Supply (5V)
2	NC(*TEST)	No Connection
3	GND	Ground

NOTE: Shorting JP1 enables power supply from VBUS.

\*Factory test use only

• General Purpose I/O & Power Through-holes [CN10][CN11]

Please see the Hardware Specification for details.

#### ■ Environmental Specifications

Parameter	Contents
Operating temperature	-20 ~ +70 °C
Storage temperature	-30 ~ +80 °C
Operating humidity (No condensation)	Temp. ≤ 60 °C, 80% RH MAX. Temp. > 60 °C, Absolute humidity shall be less than 80% RH at 60 °C
Vibration (non-operating)	10-55-10Hz, all amplitude 1mm, 30 minutes, X-Y-Z
Shock (non-operating)	392m/s <sup>2</sup> (40G) 9ms X-Y-Z, 3 times each direction

#### ■ Selectable Font

Parameter	Contents
1-byte(dot)	6x8, 8x16, 12x24, 16x32, International font
2-byte(dot)	16x16 (Japanese/Korean/SimplifiedChinese/TraditionalChinese), 32x32(Japanese)
Outline Font	Source Han Sans

#### ■ Functions

Character display, graphic display, control command, display action command, window function, touch panel input, general-purpose I/O port control, macro, program macro function, character and image download function, memory SW, data storage, etc.



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Singel 3 | B-2550 Kontich | Belgium | Tel. +32 (0)3 458 30 33 | info@alcom.be | www.alcom.be

Rivium 1e straat 52 | 2909 LE Capelle aan den IJssel | The Netherlands | Tel. +31 (0)10 288 25 00 | info@alcom.nl | www.alcom.nl