

4.3" GEMmodule™

MK-480272C

Data Sheet

Amulet Color Module Kit

Introduction:

The MK-480272C is a fully integrated 4.3" WQVGA production color display module to support a variety of embedded control interface applications. Featuring the Amulet GEM Graphical OS Chip™ for color displays, the module supports GIF, JPEG and PNG graphic formats in 24-bit color, plus 8-bit alpha blending (transparency channel) found in high-end consumer electronic products.

Features:

- 480x272 TFT LCD 16:9 (wide aspect ratio) display
- White LED backlight
- · Integrated resistive touch panel
- Amulet Graphical OS Chip
- 24 Pin Interconnector
- · Royalty-FREE Graphical Operating System
- On-Board memory 32megabit Serial Flash for storing GUI pages
- Touch Panel Controller Built into Graphical OS Chip™
- Color Supported Up to 24bit + 8bit Alpha
- Graphics Supported GIF, JPEG, PNG
- Backlight can be controlled via the touch panel or HTML command
- Supports Unicode Foreign language character sets
- · Font Converter Built-in



General Specification

ITEM	STANDARD VALUE UNIT		
Pixels (Resolution)	480 x 272 dots		
Outline dimension	105.5(H) x 67.2 (V) x4.0D mm		
Active area	95.04(H) x 53.856(V) mm		
Dot Pitch	0.198 x 0.198 mm		
Luminance	350 Typ.	Cd/m2	
Operation Temp.	70 - 20 C		
View Direction	6 o'clock		
Display Mode	TN / Transmissive / Normally White		
Backlight	10 White LED		
Backlight Control	PWM		
Data Flash	32 Megabit		
Interface	USB / RS232 / UART		

Electrical Characteristic

Recommended Operating Conditions

5V	5V Recommended
5V Current	300mA Min

DC Characteristics

V core Supply Current	22mA @1.2V
V input Low Level	-0.3 to 0.8V
V input High Level	2V to (Vcc + 0.3V)
Pull Up Resistors	70K to 175KOhms
IO Output Current	8mA
Static Current Excluding Power on Reset V core = 1.2V	600uA
Static Current Logic cells consumption, including Power on Reset and all input drivers V core = 1.2V	30uA





Pin Descriptions

Pin Type
I = Input
O = Output
P = Power Supply

Pin#	Signal	Туре	Description
1	5V	Р	5V @ 300mA
2	5V	Р	5V @ 300mA
3	GND	Р	Ground
4	GND	Р	Ground
5	SCL	0	Serial Clock
6	SDA	0	Serial Data
7	COMMU RXD	I	CommU RXD UART
8	COMMU TXD	0	CommU TXD UART
9	PWM 1	0	Programmable Clock 1
10	PWM 2	0	Programmable Clock 2
11	Prog M	I	Program Mode - Float = Prog / GND = Run Note:1
12	PWM 0	0	Programmable Clock 0
13	RS232 TXD	0	TXD from RS232 Transceiver
14	T_CAL	ı	Touch Panel Cal Float = Cal / GND = Normal Note:1
15	PROGU RXD	I	PROGU RXD UART
16	PROGU TXD	0	PROGU TXD UART
17	SPI C3	0	SPI Chip Select 3
18	RS232 RXD	I	RXD from RS232 Transceiver
19	SPI C2	0	SPI Chip Select 2
20			
21	MISO	0	SPI DATA In
22	SCLK	0	SPI Clock
23	RESET	0	System Reset by driving pin low
24	MOSI	0	SPI DATA Out

Note:1 Internally pulled up. Only pull to ground

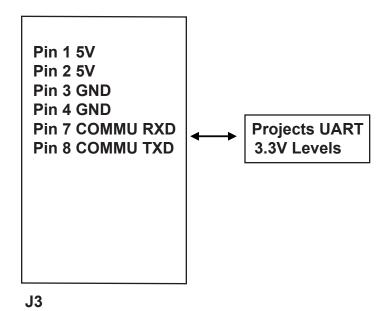
Table 1. Header J3 24pin, 2mm, Hirose DF-11-24DP-2DSA

Mating Connectors

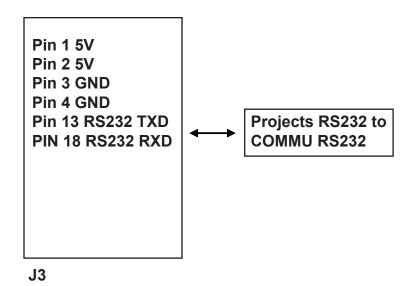
Hirose DF11-24DS-2R26 Straight
DF11-24DS-2C Right Angle
DF11-24DS-2DSA Board
JST PHDR-24VS

J3 Wiring

Connecting Project via UART

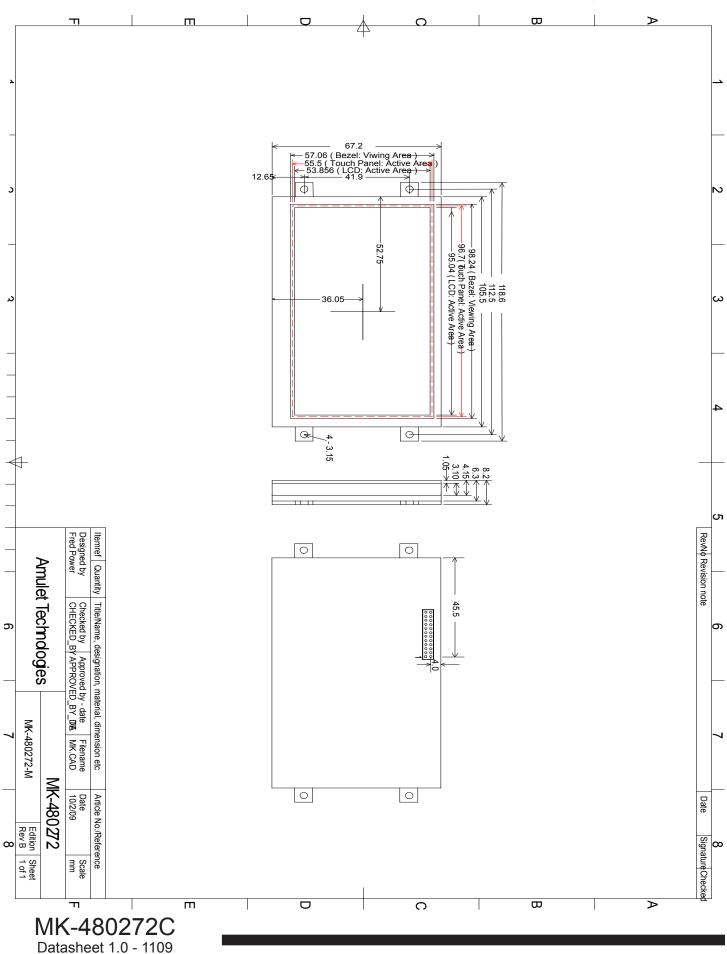


Connecting Project via RS232















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