

## Features

- 5.0" TFT
- HDMI Input
- 800 x 480 Resolution
- Projected Capacitive (PCAP) Touch Screen
- USB Touch Interface
- 850 cd/m<sup>2</sup> Brightness
- IPS Panel
- Full Viewing Angles
- -30°C to +70°C Operating Temperatures
- High Contrast Ratio
- 16.7M Colours

## RS PRO HDMI TFT LCD Display

RS Stock No.: 254-0022



RS PRO is the own brand of RS. The RS PRO Seal of Approval is your assurance of professional quality, a guarantee that every part is rigorously tested, inspected, and audited against demanding standards. Making RS PRO the Smart Choice for our customers.

## Product Description

This RS PRO HDMI Display is a 5" (16:9) TFT LCD Display, with a high resolution of 800x480 (WVGA), IPS technology and high brightness. This model is composed of:

- A TFT LCD panel
- Backlight system
- A projected capacitive touch panel
- HDMI interface

It is designed to make Raspberry Pi usage easy. You can simply use this TFT display with your Raspberry Pi, or any other computer device with HDMI as an output. The high brightness and wide operating temperature make this model the ideal solution for any indoor or outdoor application.

## General Specifications

Panel Size	5"
Resolution	800x480
Display Technology	IPS
Contrast Ratio	600
Brightness (cd/m <sup>2</sup> )	850
Video Input	HDMI
Operating Temperature	-30°C to +70°C
Storage Temperature	-30°C to +80°C
Touch Panel	Projected Capacitive
Touch Panel Interface	USB

## Mechanical Specifications

Overall Dimensions WxHxD (mm)	120.7 x 75.8 x 19.2
Active Area WxH (mm)	108 x 64.8



## CN1 – HDMI A Type

Pin No.	Symbol	I/O	Function
1	TMDS 2+	I	TMDS Data2+
2	GND	P	TMDS Data2 Shield
3	TMDS 2-	I	TMDS Data2-
4	TMDS 1+	I	TMDS Data1+
5	GND	P	TMDS Data1 Shield
6	TMDS 1-	I	TMDS Data1-
7	TMDS 0+	I	TMDS Data0+
8	GND	P	TMDS Data0 Shield
9	TMDS 0-	I	TMDS Data0-
10	TMDS CLK+	I	TMDS Clock+
11	GND	P	TMDS Clock Shield
12	TMDS CLK-	I	TMDS Clock-
13	N.C.	-	N.C.
14	N.C.	-	N.C.
15	DDC_SCL	I	IIC SCL to EDID ROM
16	DDC_SDA	I/O	IIC SDA to EDID ROM
17	GND	P	DDC/CEC Ground
18	HD_5V	P	+5V Power
19	HPD	O	Hot Plug Detect

CN5 - Power Input and Touch Control - WAFER P1.25mm: 1251-05-ST-SE or compatible

Pin No.	Symbol	I/O	Function
1	GND - EARTH	P	Earth Ground(Shield)
2	VDD_5V	P	Power supply +5V for LCM and USB I/F
3	GND	P	Power Ground
4	D+	I/O	USB data +
5	D-	I/O	USB data -

CN3 – Backlight Control - WAFER P1.25mm: 1251-03-ST-SE or compatible

Pin No.	Symbol	I/O	Function
1	GND	P	Ground
2	PWM	I	Back-light Dimming control (internal pull up to 3.3V)
3	NC	-	No connection.

## Electrical Specifications

HDMI TFT LCD Module

Item	Symbol	Values			Unit
		Min	Typ.	Max.	
Supply Voltage	5.0V	4.5	5	5.5	V
PWM frequency		200	-	200K	Hz
PWM Dimming Voltage	V <sub>PWM-IH</sub>	2	3.3	5	V
	V <sub>PWM-IL</sub>	-	-	0.8	V
Supply Current	ICC(5V)	-	440	490	mA
LED life-time		-	50000	-	Hr

## Projected Capacitive Touch Panel

Item	Specification
Screen Size	5.0 inch
Type	Transparent Type Projected Capacitive
Input Mode	Human's Finger
Finger	5
Interface	USB 2.0
Operating system OS	Windows / Linux / Android
Cover glass pencil-hardness	7H
Response time	25
Driver IC	FT5426

## Optical Characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Brightness	--	Note1, Note 3, ( $\theta = 0^\circ$ , Normal Viewing Angle)	680	850	--	cd/m2
Uniformity	B-uni		70	75	-	%
Contrast Ratio	CR		500	600	--	--
Response Time	Tr + Tf		--	30	40	ms
Color Chromaticity	White		Wx	0.260	0.310	0.360
		Wy	0.280	0.330	0.380	--
View angle	Horizontal	$\theta_{x+}$	70	80	--	
		$\theta_{x-}$	70	80	--	
	Vertical	$\theta_{Y+}$	70	80	--	
		$\theta_{Y-}$	70	80	--	

## Approvals

Declarations	UKCA / RoHS / REACH
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## Similar Products

Stock No.	Brand	Product Name	Attribute 1	Attribute 2	Attribute 3
254-0020	RS PRO	5" HDMI TFT	1000 cd/m2 Brightness	No Touch	IPS Technology
254-0021	RS PRO	4.3" HDMI TFT	1000 cd/m2 Brightness	Capacitive Touch	IPS Technology