

Features

- 21.5" TFT
- HDMI Input
- 1920x1080 Resolution
- 450 cd/m² Brightness
- IPS Panel
- Full Viewing Angles
- -10°C to +60°C Operating Temperatures
- High Contrast Ratio
- 16.7M Colours
- PCAP Touch

RS PRO 21.5,, HDMI TFT LCD Display

RS Stock No.: 7012663



RS PRO Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

Product Description

This RS PRO HDMI Display is a 21.5 (16.10) TFT LCD Display, with a high resolution of 1920x1080 (FHD), IPS technology and high brightness. This model is composed of:

- *A TFT LCD panel*
- *Backlight system*
- *HDMI interface*

Engineered for seamless integration with embedded computing systems, this TFT display connects effortlessly to any device featuring an HDMI output. Its high-brightness screen and wide operating temperature range deliver outstanding performance in both indoor and outdoor environments, making it the perfect choice for demanding applications.

General Specifications

Panel Size	21.5
Resolution	1920x1080
Display Technology	IPS
Contrast Ratio	1000
Brightness (cd/m²)	450
Video Input	HDMI
Operating Temperature	-10°C to +60°C
Storage Temperature	-20°C to +60°C
Touch Panel	PCAP
Touch Panel Interface	USB

Mechanical Specifications

Overall Dimensions WxHxD (mm)	520.64 x 312.11 x 29.5
Active Area WxH (mm)	476.06 x 267.79

Pin No.	Symbol	I/O	Function
1	12V	P	Power Supply +12V
2	GND	P	Ground

CN2 – Backlight Control - WAFER P2.0mm: 2001S-03-RTE 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	N.C.	-	No Connection (internal Control)

CN3 – 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

CN4 – PCAP USB

Pin No.	Symbol	I/O	Function
1	GND	P	Ground
2	VDD-5V	P	Power Supply Voltage, 5 Vdc
3	GND	P	Ground
4	D+	I/O	USB D+
5	D-	I/O	USB D-

Electrical Specifications

HDMI TFT LCD Module

Item	Symbol	Values			Unit
		Min	Typ.	Max.	
Supply Voltage	12V	11	12	13	V
PWM frequency		100		10K	Hz
PWM Duty		17	-	100	%
PWM Dimming Voltage	VPWM-IH	3.3		8	V
	VPWM-IL	-	0.3	-	V
LED Enable Control Voltage	VLED_EN-IH	3.3	-	12	V
	VLED_EN-IL	-	-	0.5	V
Supply Current	ICC(12V)	-	2060	2260	mA
LED life-time		3000	-	-	Hr

Optical Characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Brightness	--		360	450	--	cd/m2

Uniformity		B-uni	Note1, Note 3, ($\theta = 0^\circ$, Normal Viewing Angle)	(75)	--	--	%
Contrast Ratio		CR		800	1000	--	--
Response Time		Tr		--	12	22	ms
		Tf		--	10	20	ms
Color Chromaticity	White	Wx	0.263	0.313	0.363	--	
		Wy	0.279	0.329	0.379	--	
View angle	Horizontal	θ_{x+}	Center CR \geq 10	80	89	--	
		θ_{x-}		80	89	--	
	Vertical	θ_{Y+}		80	89	--	
		θ_{Y-}		80	89	--	

Projected Capacitive Touch Panel

Item	Specification	Unit
Screen Size	21.5	Inches
Type	Transparent Type Projected Capacitive Touch Panel	
Input Mode	Humans Finger	
Interface	USB	
Touch Number	10 Points	
Cover glass pencil hardness	7H	
Response Time	$\leq 25\text{ms}$	Ms
Controller	EE81H845680	

Approvals

Declarations	UKCA / RoHS / REACH
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Similar Products

Stock No.	Brand	Product Name	Attribute 1	Attribute 2	Attribute 3
0712662	RS PRO	21.5" HDMI TFT	500 cd/m2 Brightness	No Touch	IPS Technology
0712661	RS PRO	18.5" HDMI TFT	800 cd/m2 Brightness	PCAP Touch	IPS Technology