

HTT50

For all variants of the HTT50

Hardware Manual

Revision 1.3



PCB Revision: 1.1 or Higher

Contents

- HTT50 Technical Specifications 3
 - Available Headers 3
 - Dimensional Drawings 4
- Characteristics..... 7
 - Optical 7
 - Power 7
 - Environmental..... 7
- Options..... 8
- Power Options 8
- Recommended Accessories 9
 - USB Cable 9
 - Power Adaptor 9
- Support 9
- Contact..... 9

Revision History

Revision	Date	Description	Author
1.3	May 29, 2018	Corrected Header Population and Drawings	Divino
1.2	May 10, 2018	Corrected Header and Mates Table	Divino
1.1	February 2, 2018	Added -TPC variant drawing	Divino
1.0	November 6, 2017	First Release	Divino

HTT50 Technical Specifications

The HTT50 is a 5.0" TFT display with an HDMI interface. The 800x480 resolution offers crisp images, and video feedback, with 24-bit Full colour capabilities. The HTT can be configured with resistive, capacitive, or non-touch panels, making this display suitable for any application.

Available Headers

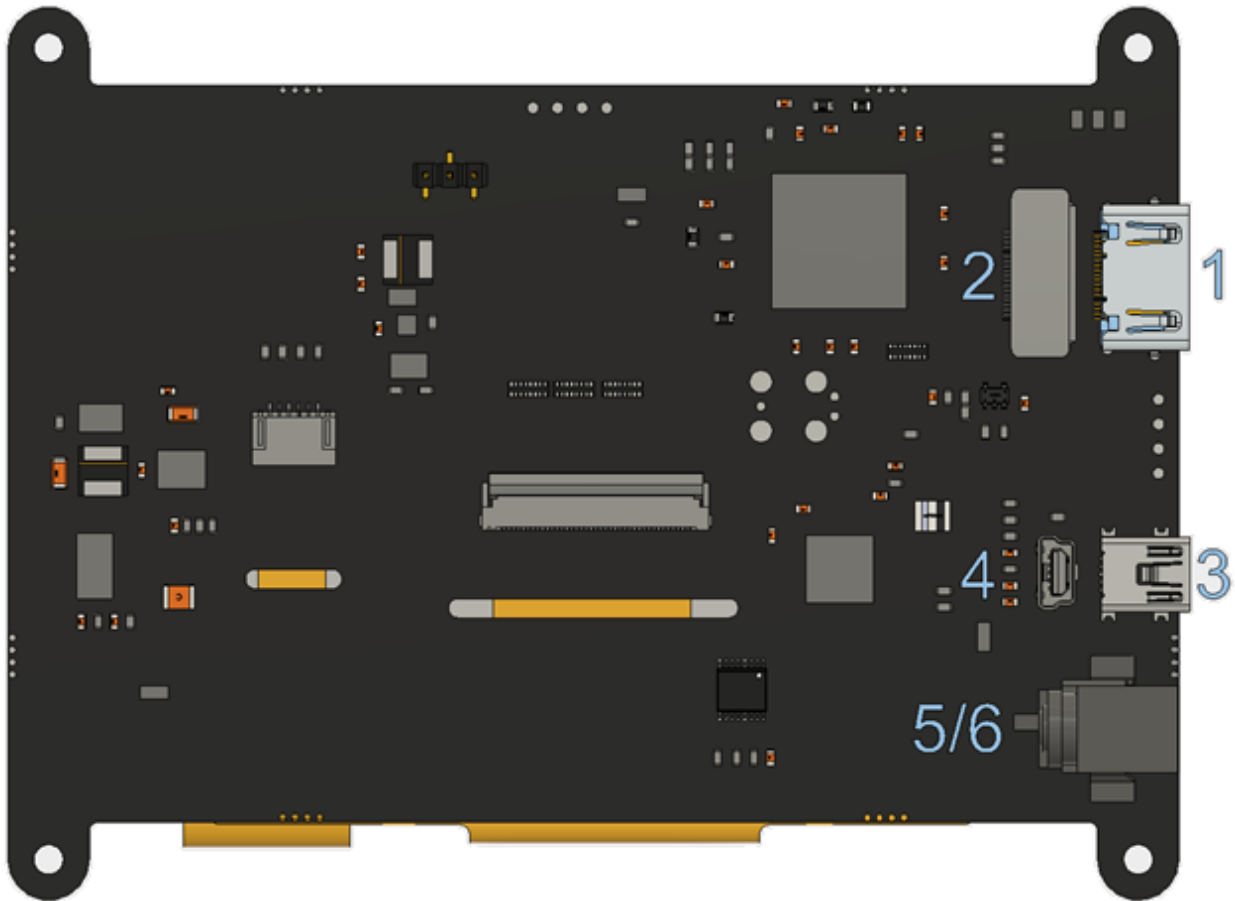


Figure 1: HTT Header Locations

Table 1: HTT50A Headers and Mates

#	Header	Standard Mate	Population
1	HDMI Port, Horizontal, Type A Standard	Type A Standard HDMI Cable	-H5
2	HDMI Port, Vertical, Type A Standard	Type A Standard HDMI Cable	-H6
3	Mini USB, Horizontal: Touch & Power	Mini-B USB Cable	-H5 (TPC and TPR only)
4	Mini USB, Vertical: Touch & Power	Mini-B USB Cable	-H6 (TPC and TPR only)
5	Barrel Jack: 2.1mm Center Positive	Power Adaptor	TPN and -VPT only
6	External Power, 2-1445057-2	Micro MATE-N-LOCK 1445022-2	Optional

Dimensional Drawings

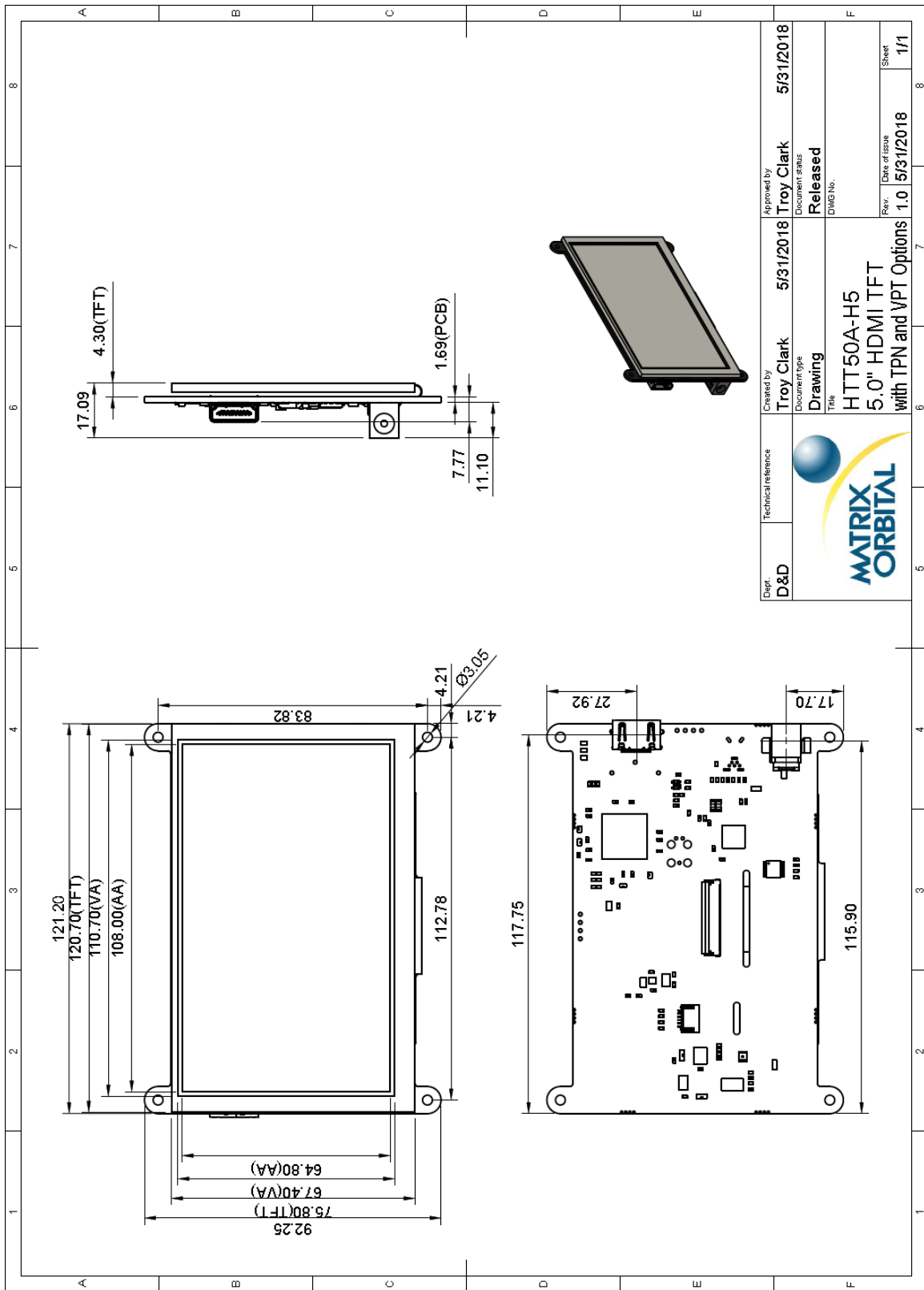


Figure 2: HTT50G with Vertical Headers Dimensional Drawing

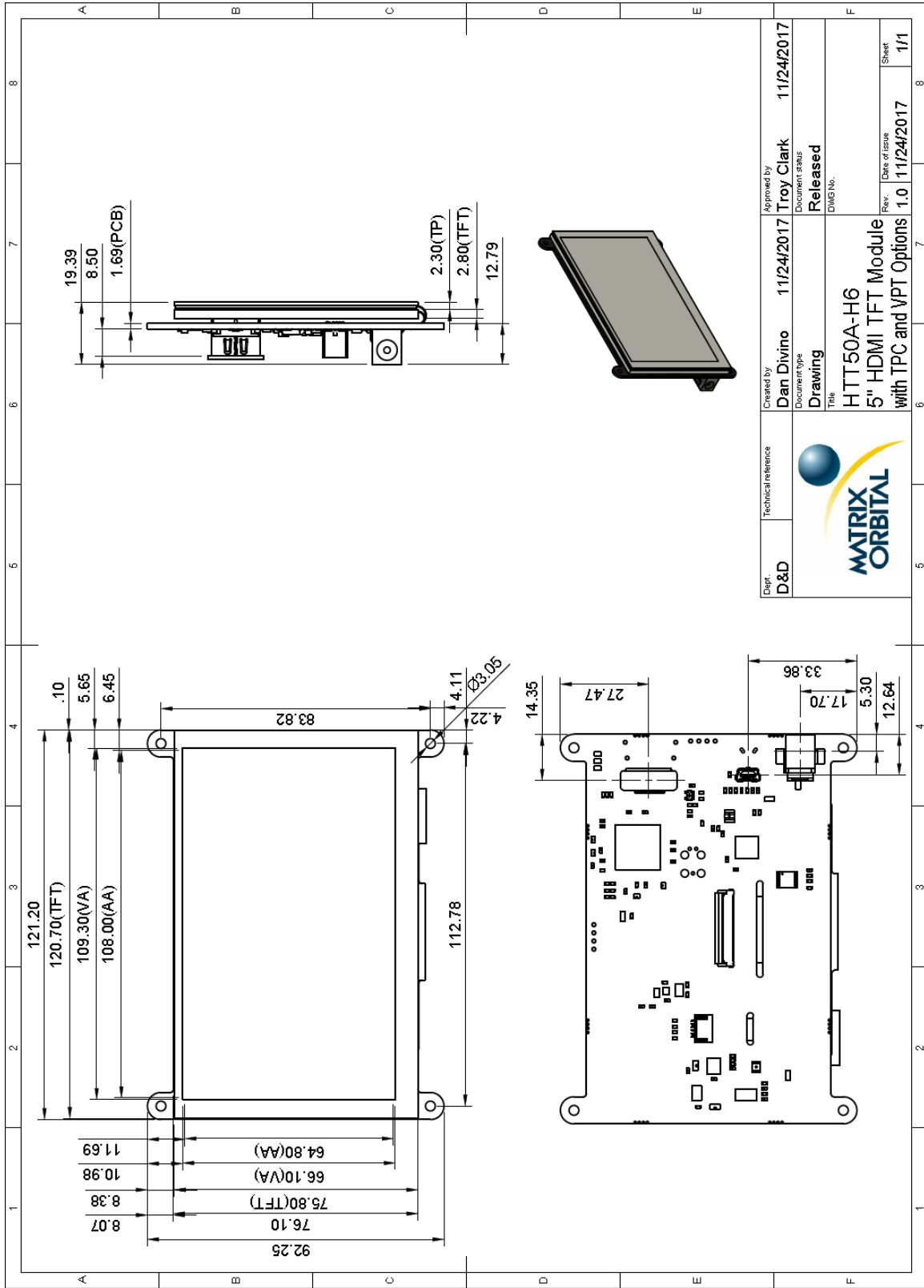


Figure 3: Capacitive Touch Panel HTT50G with Vertical Headers Dimensional Drawing

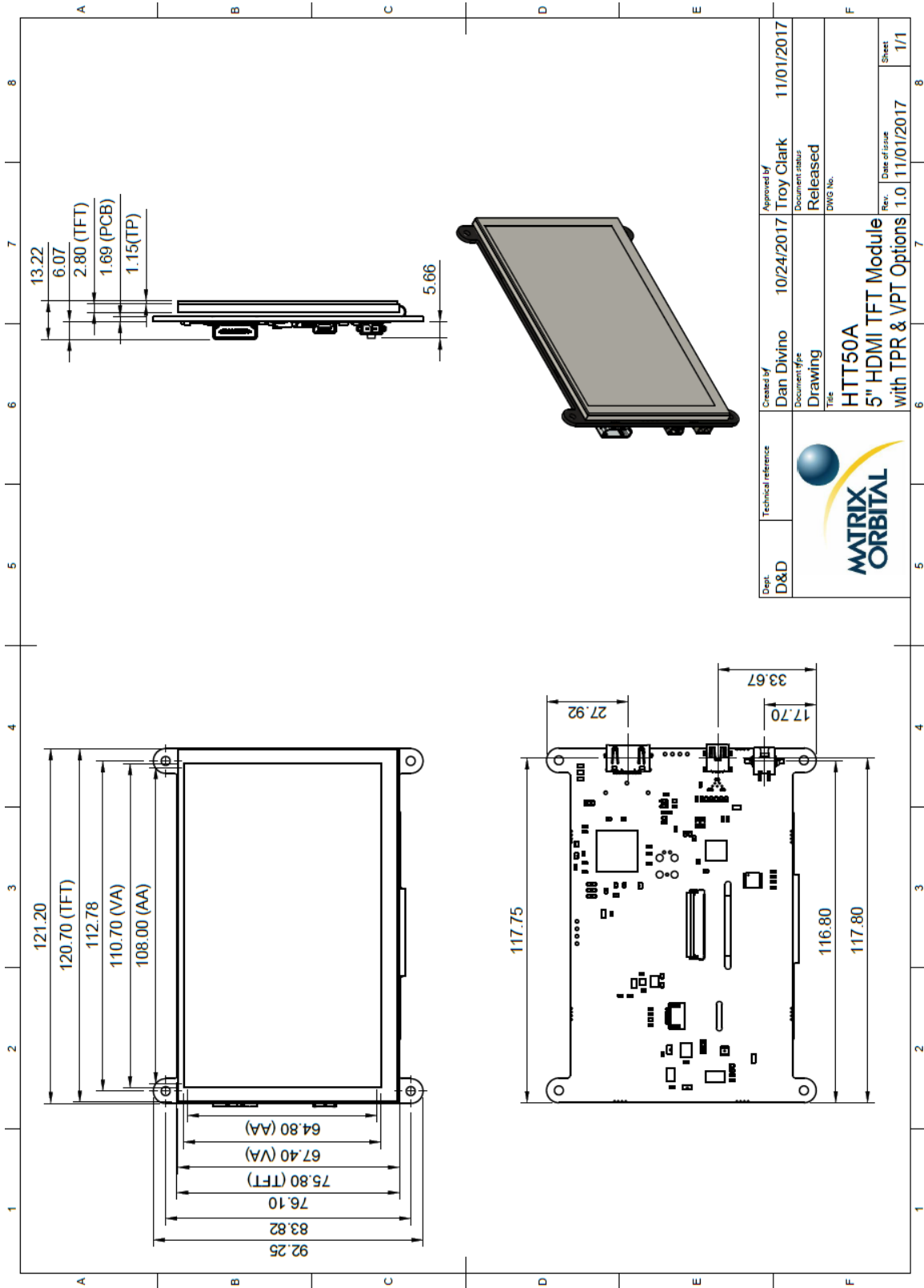


Figure 4: Resistive Touch Panel HTT50A with Horizontal Headers Dimensional Drawing

Characteristics

Optical

Table 2: HTT50 Optical Characteristics

Module Size	121.20 x 92.25 x 12.07	mm
Viewing Area	110.70 x 67.40	mm
Active Area	108.00 x 64.80	mm
Pixel Pattern	800 x 480 x 24bit RGB	
Pixel Pitch	0.135 x 0.135	mm
Luminance	380	cd/m ²
Viewing Angle	70° Left, Right, Up 50° Down	
Contrast Ratio	500:1	
Backlight Half-Life	20,000 hours	

Power

Table 3: HTT50 Current Characteristics (5V)

Parameter	Min	Typ	Max	Unit	Remarks
Logic	-	275	-	mA	Backlight Off
Backlight	0	-	225	mA	Off, Mid, Max

Table 4: HTT50 Supply Voltage Characteristics

Parameter	Min	Typ	Max	Unit	Remarks
Supply Voltage	4.75	5.0	5.25	V	Standard Voltage (V5)
	5.0	12.0	35.0	V	Wide Voltage (VPT)

Environmental

Table 5: HTT50 Environmental Characteristics

Operating Temperature	0°C to +70°C
Storage Temperature	-30°C to +80°C
Operating Relative Humidity*	90% (T < 60°C)

***Note:** No condensation at any temperature

Options

Table 6: Part Numbering Scheme

HTT	50	A	-TPR	-BLM	-B0	-H5	-CH	-V5
1	2	3	4	5	6	7	8	9

Table 7: Display Options

#	Designator	Options
1	Product Type	HTT: Graphic TFT Display
2	Display Size	50: 5.0"
3	Screen Type	A: A Type G: G-Type
4	Touch	-TPN: No touch panel -TPR: Resistive touch panel -TPC: Capacitive touch panel -CTB: Bezel-less capacitive touch panel
5	Backlight	-BLM: 300 Nit < Brightness < 600 Nit -BLH: 600 Nit < Brightness < 1000 Nit -BLD: Brightness > 1000 Nit
6	Bezel	-B0: None
7	Headers	-H5: Horizontal Connectors -H6: Vertical Connectors
8	Protocol	-CH: HDMI interface
9	Voltage	-V5: 5.0V Input Voltage -VPT: Regulated 5V - 35V Input Voltage

Power Options

Table 8: Powering Options

Option	Voltage Input
V5	USB Header
VPT	Barrel Jack/External Power Header

Recommended Accessories

USB Cable



Figure 5: EXTMUSB3FT

Part Number:
EXTMUSB3FT

Description:
3ft (1m) Mini-B USB Cable

Power Adaptor



Figure 6: PWR-ACDC-5V2A

Part Number:
PWR-ACDC-5V2A

Description:
9ft (2.7m) AC to DC power adapter with 2.1mm center positive barrel jack.

Input Voltage: 100-240V AC
Output Voltage: 5V DC @ 2A

AC Plugs Included: North American (NEMA), Europlug (Type C), UK (Type G), Australia/China/New Zealand/Argentina (Type I)

Support

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Manuals: <http://www.matrixorbital.ca>

Forums: <http://www.lcdforums.com/forums>

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