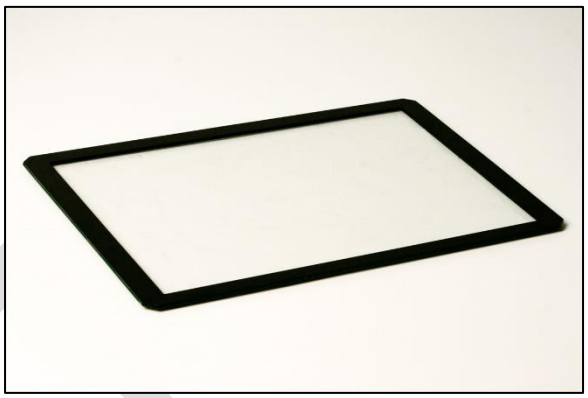
SDW-315W1-M6L-I63-S1-M0-PRD

PRODUCT DATA SHEET



Measuring just 3.4 mm from glass to frame surface, the Baanto Slim Touch is the thinnest multi-touch frame on the market. Combining the industry proven performance of ShadowSense with a minimalist bezel design allows the Slim Touch to be utilized in multi-touch applications typically exclusive to projective capacitive technology.

Baanto ShadowSense requires no drivers or touch detection applications running on the host CPU making this technology an outstanding solution for cost sensitive applications using low power CPU's and media players.

The following operating systems are supported:

- Windows XP® / XPE®
- Windows Vista®
- Windows 7® / 7 Embedded
- Windows 8®/ 8 Embedded
- Windows 10®
- Linux®
- Mac OS®
- Android™

An industry first, the Baanto Configuration Dashboard provides customers the ability to easily implement and modify the touchscreen behavior. The Dashboard allows the user to adjust the performance and touch characteristics of the touchscreen to provide spurious touch and palm rejection, debris and static object recognition, rain and fluid cancellation, and touch object characterization.

A perimeter based sensor design decouples the touch function from the protective glass providing improved optical and environmental performance, and better immunity to surface debris and scratches.

Targeted at embedded applications in Kiosk, Gaming, ATM, and Control and Monitoring, the worldwide agency approvals and certifications simplify your integration and product approval efforts.

DRAFT

1.0 Features

- True 5 Multi-touch performance
- High Performance
  - Exceptional accuracy
  - No ghosting or dead zones
  - Outstanding ambient light rejection
  - Excellent size detection
- Fully featured
  - Real-time touch area data provided for all touch points
  - Static object detection and rejection
  - Continues to function with debris on the screen
  - Configurable hover distance for touch detection
  - Configurable spurious touch and palm rejection
  - Power saving idle mode
  - Wakeup on touch input
- No drivers or touch detection processes on host CPU
  - USB HID interface to host
  - Plug and Play
  - Windows® 7, 8 and 10 compliant packet formats
- Calibration free
  - Mechanically and thermally stable

2.0 Specifications

Description	Value
Size	31.5” Diagonal
Aspect Ratio	16:9
Number of Touches	5
Touch Resolution	12 Bit X, 12 Bit Y
Sub pixel Resolution	4K
Accuracy	TBM
Data Interface	USB 2.0 (Full Speed) HID, compatible with USB 1.1, 2.0 High Speed, 3.0 & 3.1 HID compliant USB Female Type B Receptacle
Touch Method	Finger, gloved hand or any other pointer. Stylus minimum 4mm tip
Touch Activation Force	No pressure required
Touch Durability	Unlimited
Ambient Light Rejection	Direct sunlight
Mean Time To Failure (MTTF)	More than 200,000 hours

DRAFT

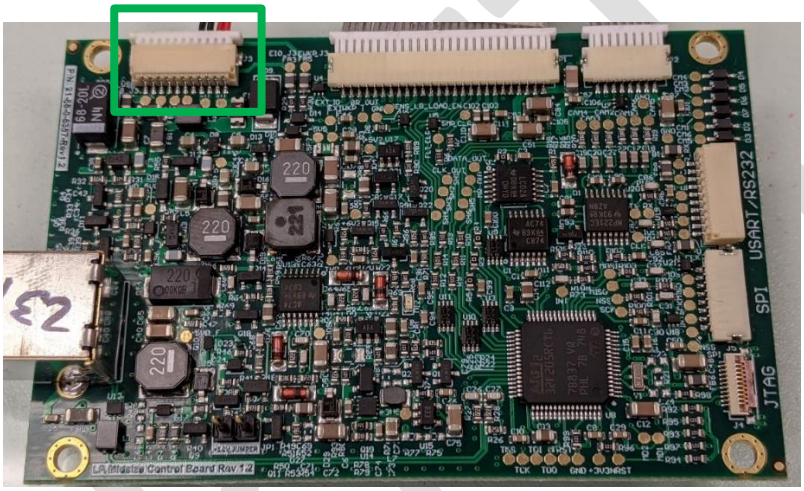
3.0 Parts List

The System consists of the following components:

- 27.0” 16:9 Thin Bezel with 3mm protective glass (BEZEL-315W1-I63-S1)
- Touch Control Board (CTRLR-315W1-M6L-RX.XX)
- 26-pin Cable (CABLE-LP-MID-4S-600)
- 8-pin Cable (CABLE-LP-MID-2S-600)

4.0 Power Supply Specifications

The touch control board is powered by applying input voltage on pin 1 & 2 (+V_EXT) and ground pins 3 & 4 (GND_EXT) on the connector J3 shown below in green.



The Board can be powered up using 12V with the following Input Voltage specs.

Control Board Connectors	Voltage	Average Current	Peak Current
11 Pin JST SH 1mm (SM11B-SRSS)	10 V – 13.2 V	0.25A	0.5A

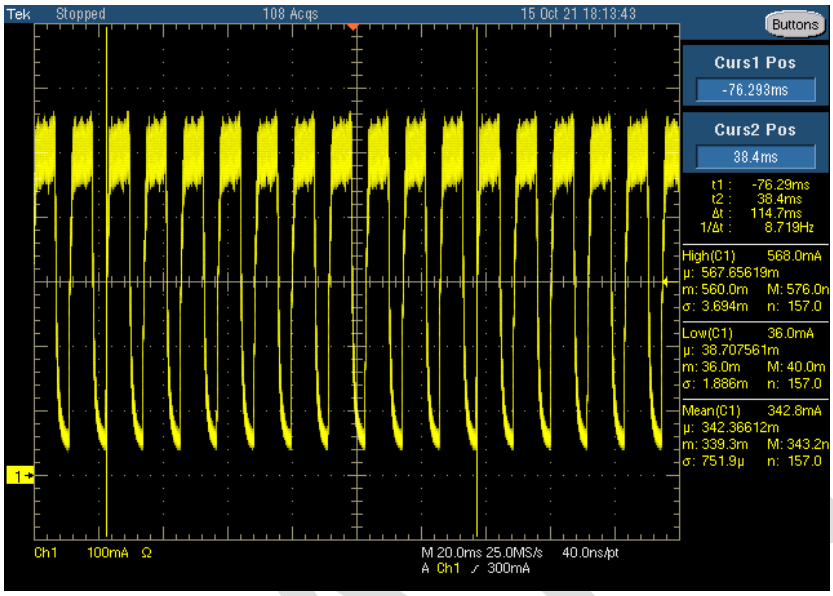
It can also operate at any input voltage from 5V to 12V Input.

For 5V input it is necessary to short out the **5.0V Jumper** shown below in red.

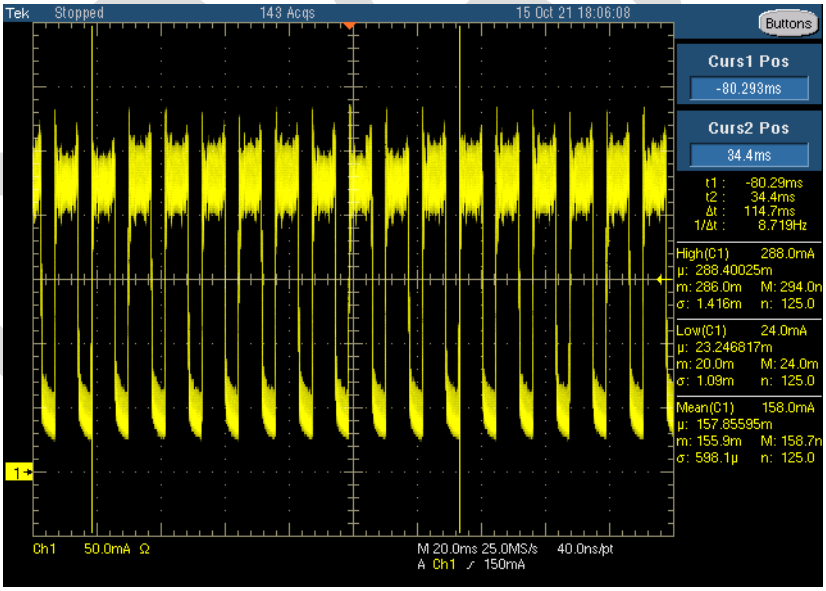
DRAFT

Screen shot below shows the current measurement when the touch screen is operated at 5V or 12V input power supply during the normal (Active) mode of operation.

5V Input

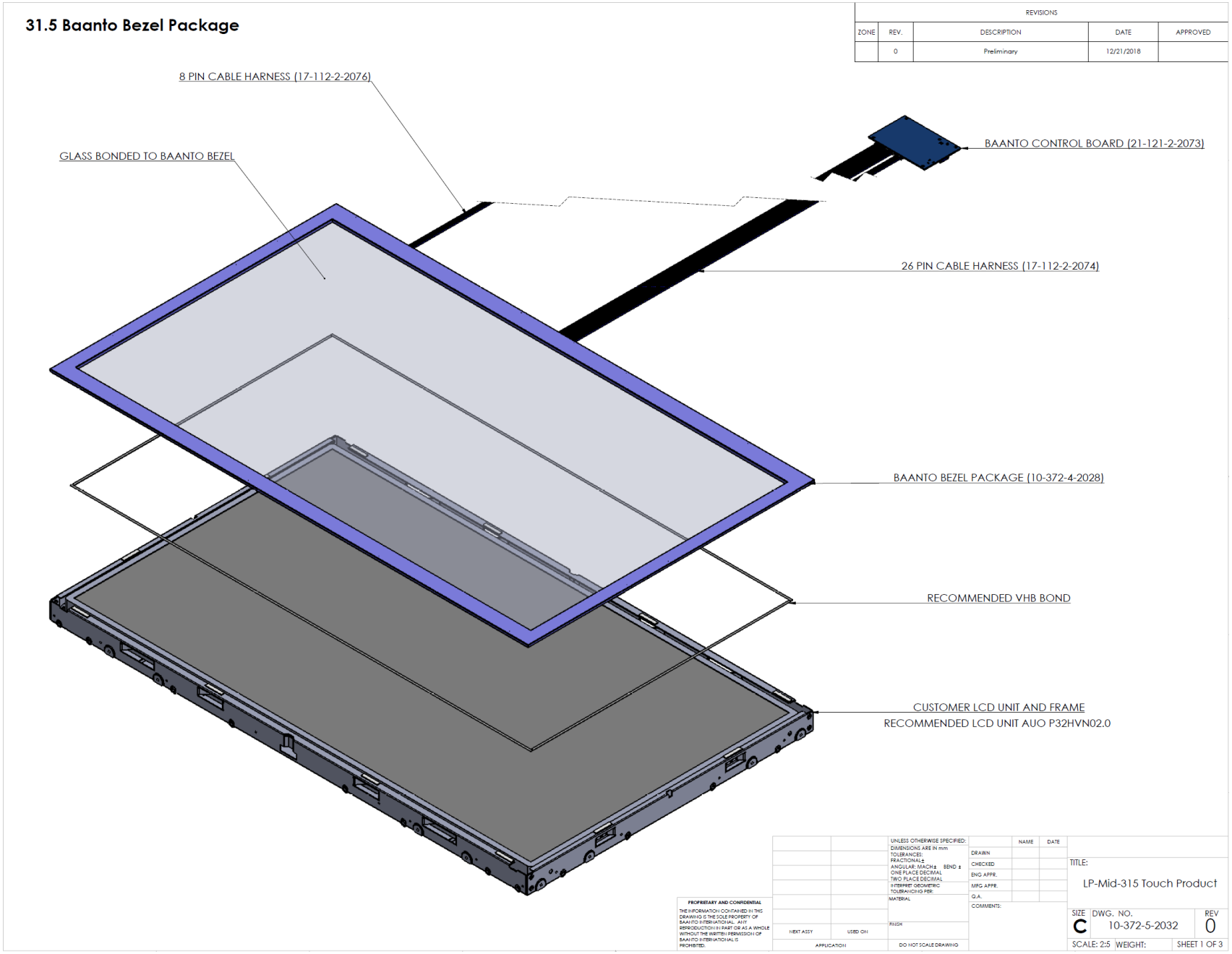


12V Input



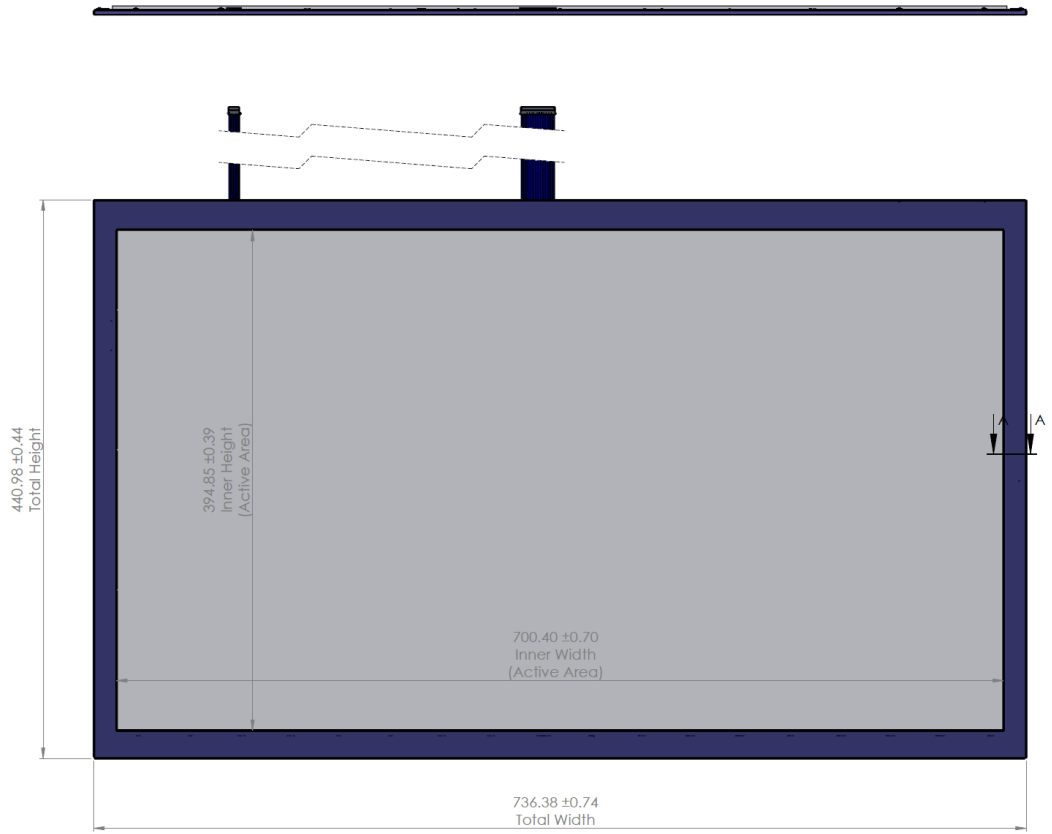
Current Consumption	Max (mA)	Min (mA)	Average (mA)
5V Input	568	36	343
12V Input	288	24	158

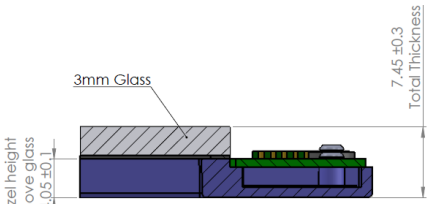
5.0 Mechanical Dimensions



31.5" TOUCH PRODUCT ENVELOPE

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	0	Preliminary	12/21/2018	





SECTION A-A
SCALE 3 : 1

Minimum clearance between glass and tallest component: 1.22mm

Optical Glass conforms to ASTM C1036-01 Q2
Tempered with 91% optical clarity
No anti-glare or anti-reflective coatings or films

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DIMENSIONS ARE IN mm
TOLERANCES:
FRACTIONAL ±
ANGULAR: MACH ± BEND ±
ONE PLACE DECIMAL ±0.5
TWO PLACE DECIMAL ±0.25
INTERPRET GEOMETRIC TOLERANCING PER:
MATERIAL
FINISH
NEXT ASSY | USED ON
APPLICATION
DO NOT SCALE DRAWING

	NAME	DATE
DRAWN		
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		

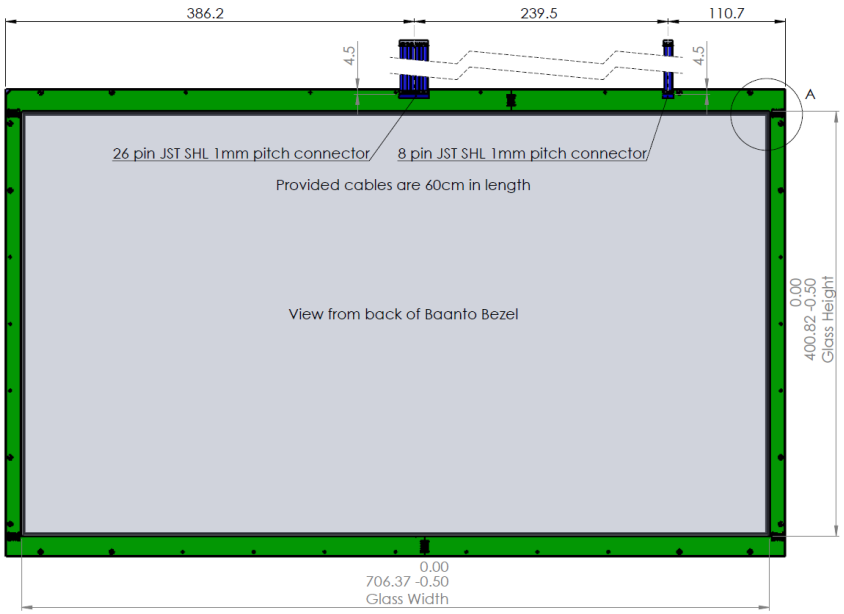
TITLE:
LP-Mid-315 Touch Product

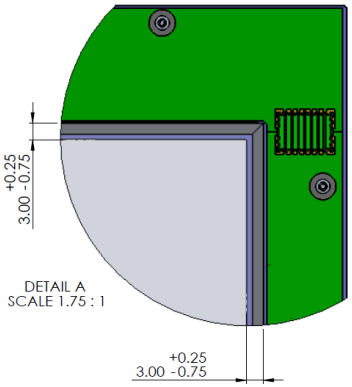
SIZE	DWG. NO.	REV
C	10-372-5-2032	0

SCALE: 2:5 | WEIGHT: | SHEET 2 OF 3

31.5" TOUCH PRODUCT MOUNTING DETAILS

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	0	Preliminary	12/21/2018	

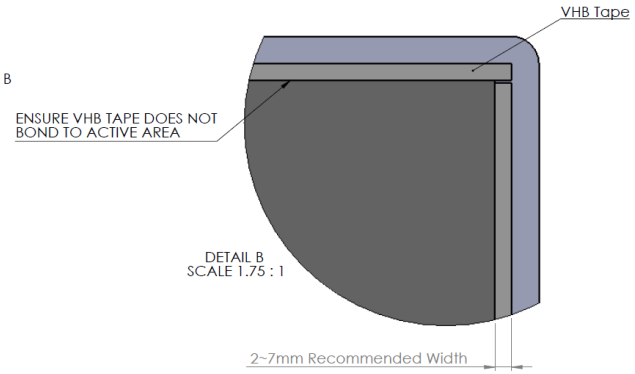




Expected Glass landing
on Baanto Bezel

LCD PANEL SHOULD MATE TO THE GLASS AND
MUST NOT BE IN CONTACT WITH ANY OF THE PCBs

RECOMMENDED LCD PANEL: AUO P320HVN02.0 (SHOWN ABOVE)



Example of VHB Tape used to bond Baanto Bezel to LCD face
Recommended width 2~7mm

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ANGULAR: MACH ± BEND ±
ONE PLACE DECIMAL ±0.5
TWO PLACE DECIMAL ±0.25
INTERPRET GEOMETRIC TOLERANCING PER:
MATERIAL
FINISH
NEXT ASSY | USED ON
APPLICATION | DO NOT SCALE DRAWING

	NAME	DATE
DRAWN		
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		

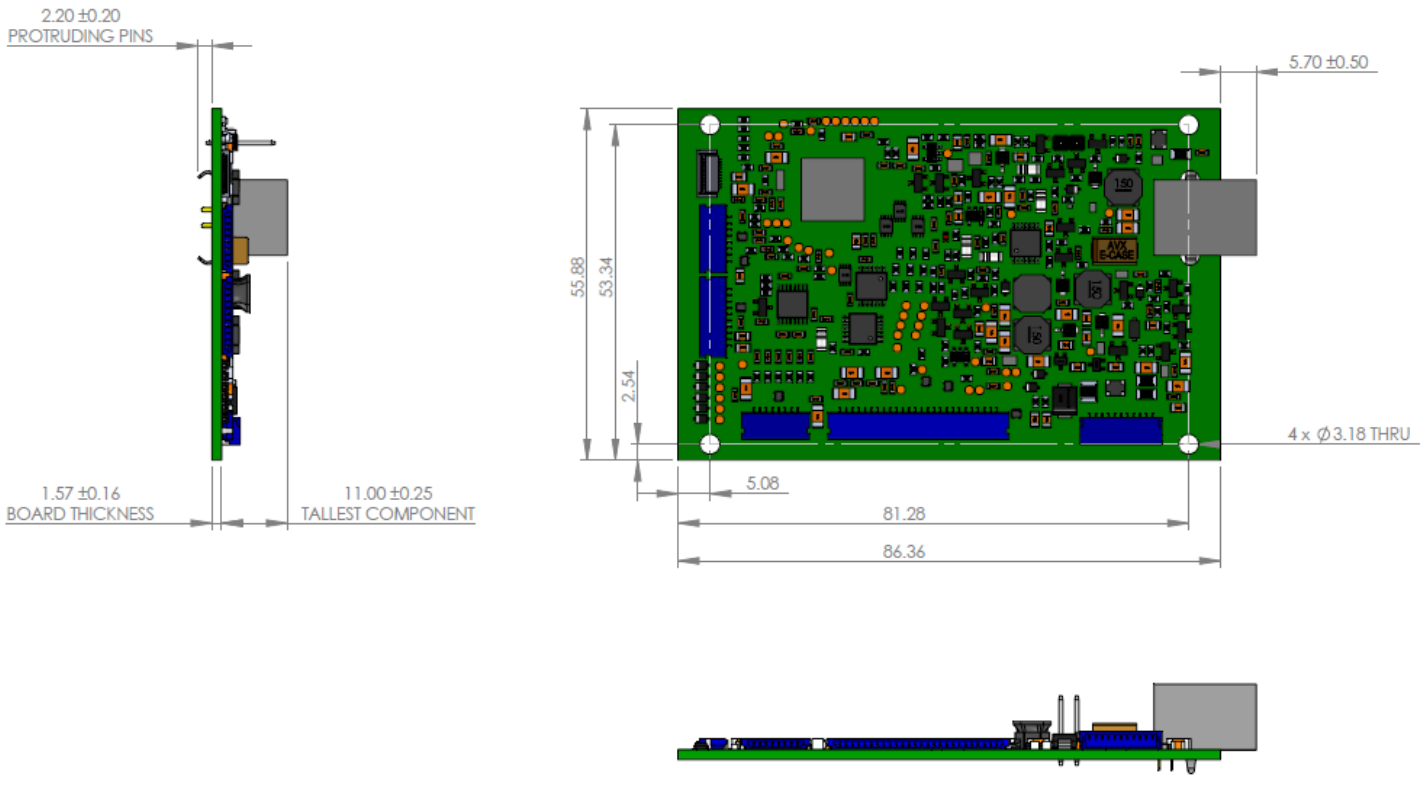
TITLE: LP-Mid-315 Touch Product

SIZE	DWG. NO.	REV
C	10-372-5-2032	0

SCALE: 1:3 | WEIGHT: | SHEET 3 OF 3

PACKAGE DIMENSIONS

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	0	Preliminary	04/02/2019	



		DIMENSIONS ARE IN mm TOLERANCES UNLESS OTHERWISE SPECIFIED: ANGULAR: MACH±0.5 deg BEND ±2 deg TWO PLACE DECIMAL ±0.2 THREE PLACE DECIMAL ±0.1		NAME	DATE
			DRAWN		
			CHECKED		
			ENG APPR.		
			MFG APPR.		
		MATERIAL	Q.A.		
			COMMENTS:		
NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			

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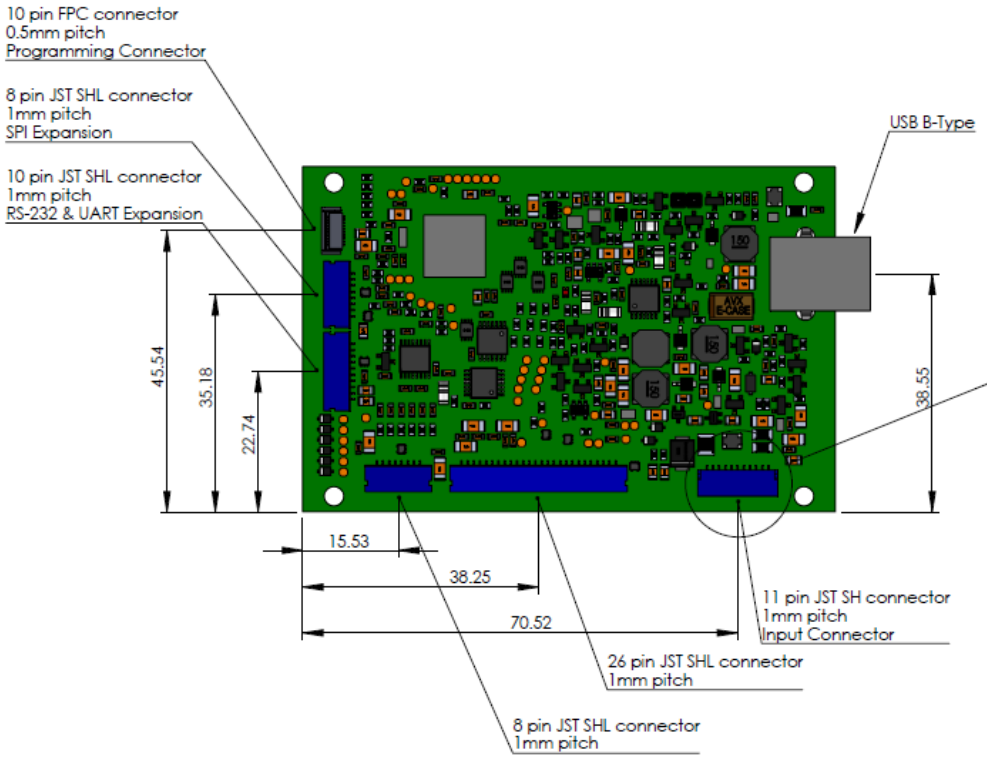
LP Mid Control
PCB Assembly

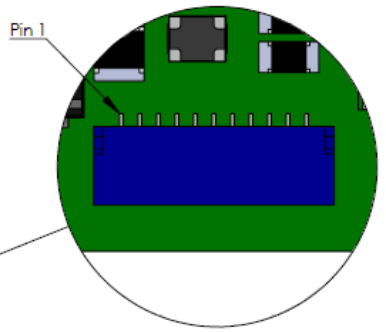
SIZE	DWG. NO.	REV.
A	21-121-2-2071	0
SCALE:1:1	WEIGHT:	SHEET 1 OF 2

CONNECTOR PLACEMENTS

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	0	Preliminary	04/02/2019	



DETAIL B
SCALE 3 : 1



Control Board Pinout		
Pin	Signal	Description
1	+V_EXT	Input Power 10V-13.2V, 0.5A
2	+V_EXT	
3	GND_EXT	Input Power Ground
4	GND_EXT	
5	SHIELD_USB	Optional Internal USB
6	USB D-	
7	USB D+	
8	GND USB	
9	EXT IO	Optional I/O Expansion
10	GND IO	Optional I/O Ground
11	WKP IO	Optional I/O Expansion

Contact: JST SSH-003T-P0.2-H
Housing: JST SHR-11V-S

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NEXT ASSY	USED ON	
APPLICATION		

DIMENSIONS ARE IN mm
TOLERANCES UNLESS OTHERWISE SPECIFIED:
ANGULAR: MACH±0.5 deg
BEND ±2 deg
TWO PLACE DECIMAL ±0.5
THREE PLACE DECIMAL ±0.25
MATERIAL
FINISH
DO NOT SCALE DRAWING

	NAME	DATE
DRAWN		
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		

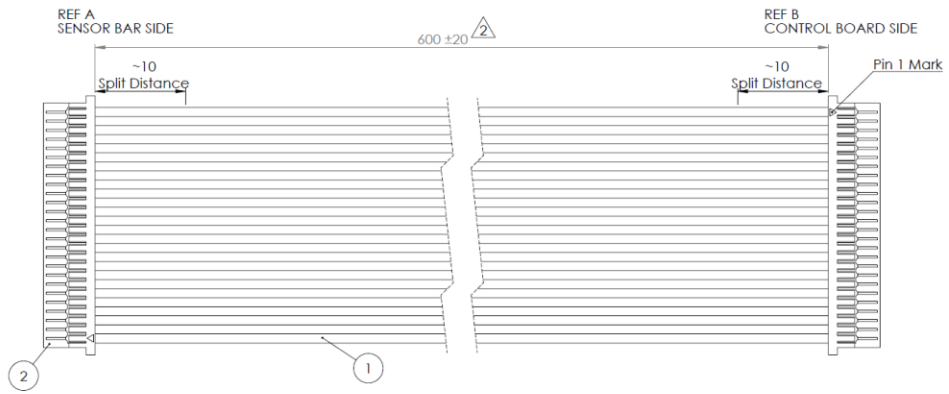
LP Mid Control
PCB Assembly

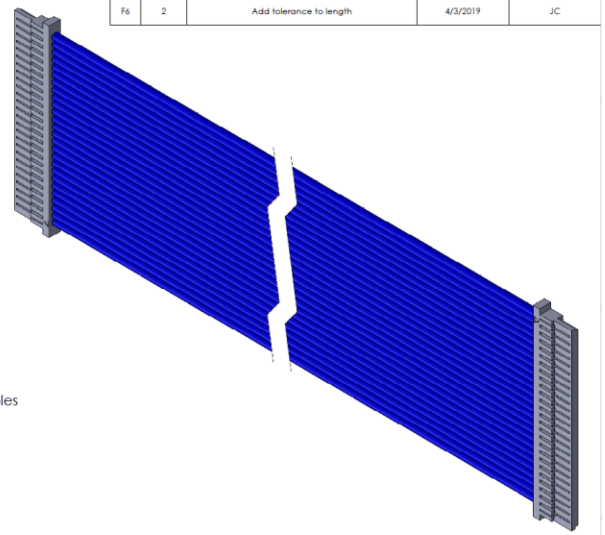
SIZE	DWG. NO.	REV.
A	21-121-2-2071	0
SCALE:1:1	WEIGHT:	SHEET 2 OF 2

6.0 Cable Assembly Specifications

LOW PROFILE CABLE HARNESS, 26 PIN, 600mm

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	0	Preliminary	8/16/2018	
C8	1	Changed signal names	12/10/2018	
F6	2	Add tolerance to length	4/3/2019	JC



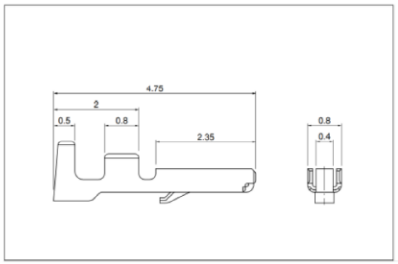


REF B CONTROL BOARD SIDE			REF A SENSOR BAR SIDE	
Signal	Pin	Crimp Terminal	Pin	Crimp Terminal
+6V3	1	SSHL-003T-P0.2	26	SSHL-003T-P0.2
+5V2	2	SSHL-003T-P0.2	25	SSHL-003T-P0.2
+5V0	3	SSHL-003T-P0.2	24	SSHL-003T-P0.2
+5V0	4	SSHL-003T-P0.2	23	SSHL-003T-P0.2
LGND	5	SSHL-003T-P0.2	22	SSHL-003T-P0.2
LGND	6	SSHL-003T-P0.2	21	SSHL-003T-P0.2
-5V5	7	SSHL-003T-P0.2	20	SSHL-003T-P0.2
-12V0	8	SSHL-003T-P0.2	19	SSHL-003T-P0.2
SAMPLE CLEAR	9	SSHL-003T-P0.2	18	SSHL-003T-P0.2
FILTER CLEAR	10	SSHL-003T-P0.2	17	SSHL-003T-P0.2
SHUTTER1	11	SSHL-003T-P0.2	16	SSHL-003T-P0.2
SHUTTER2	12	SSHL-003T-P0.2	15	SSHL-003T-P0.2
SHUTTER3	13	SSHL-003T-P0.2	14	SSHL-003T-P0.2
SHUTTER4	14	SSHL-003T-P0.2	13	SSHL-003T-P0.2
PWR ENABLE	15	SSHL-003T-P0.2	12	SSHL-003T-P0.2
GND	16	SSHL-003T-P0.2	11	SSHL-003T-P0.2
GND	17	SSHL-003T-P0.2	10	SSHL-003T-P0.2
CH OUT1	18	SSHL-003T-P0.2	9	SSHL-003T-P0.2
CH OUT2	19	SSHL-003T-P0.2	8	SSHL-003T-P0.2
CH OUT3	20	SSHL-003T-P0.2	7	SSHL-003T-P0.2
CH OUT4	21	SSHL-003T-P0.2	6	SSHL-003T-P0.2
GND	22	SSHL-003T-P0.2	5	SSHL-003T-P0.2
MR OUT	23	SSHL-003T-P0.2	4	SSHL-003T-P0.2
DATA OUT	24	SSHL-003T-P0.2	3	SSHL-003T-P0.2
CLK OUT	25	SSHL-003T-P0.2	2	SSHL-003T-P0.2
BR OUT	26	SSHL-003T-P0.2	1	SSHL-003T-P0.2

*Split refers to the seperation of ribbon cable into individual cables

3

Contact



Model No.	Applicable wire			Q'ty/ reel
	mm²	AWG#	Insulation O.D. (mm)	
SSHL-003T-P0.2	0.032~0.08	32~28	0.4~0.8	41,000

Material and Finish
Phosphor bronze, tin-plated (reflow treatment)

RoHS compliance
Note: Contact JST for gold-plated products.

Contact	Crimping machine	Applicator		
		Crimp applicator	Dies	Crimp applicator with dies
SSHL-003T-P0.2	AP-K2N	MKS-L-10-3	MK/SSH/L-003-02	APLMK SSH/L003-02
		*MKS-SC	SC/SSH/L-003-02	APLSC SSH/L003-02

*Note: *Strip-crimp applicator*
Contact JST for applicable wires in case that it is not usable due to wire size.

Ref	Baanto Part #	Mfg	Mfg Part #	Description	Qty
①	7-140-0-6386	Tungwille	UL1061#28/26P GRY 7/0.127	UL1061 #28AWG 26P Ribbon Cable, GRY PVC 300V>80C, Pitch=1mm, Ins OD=0.4~0.8mm	1
②	16-339-0-6242	JST	SHLP-26V-S-B	Connector Housing, 26 pos, JST SHL	2
③	16-313-0-4695	JST	SSHL-003T-P0.2	Crimp Contact for SHL housing	52

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ONE PLACE DECIMAL ±0.2
TWO PLACE DECIMAL ±0.1
INTERPRET GEOMETRIC TOLERANCING PER:
MATERIAL
FINISH
NEXT ASSY | USED ON
APPLICATION | DO NOT SCALE DRAWING

	NAME	DATE
DRAWN		
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		

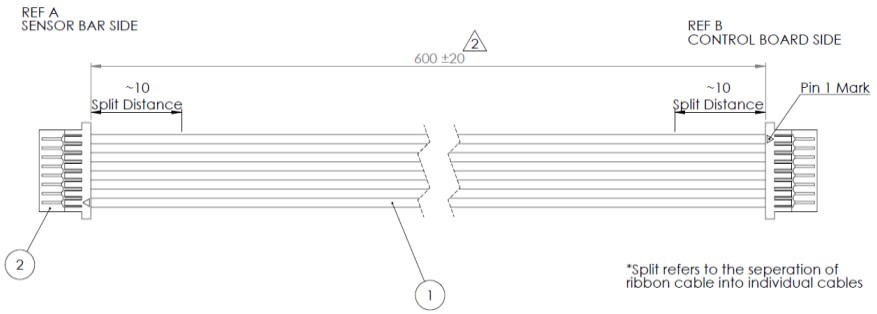
TITLE:
LP-Mid-4S-600
Cable Harness Assembly

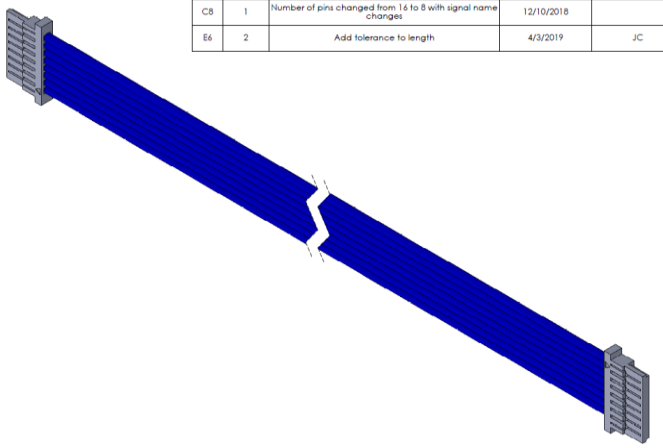
SIZE	DWG. NO.	REV
C	17-112-2-2074	2

SCALE: 3:1 | WEIGHT: | SHEET 1 OF 1

LOW PROFILE CABLE HARNESS, 08 PIN, 600mm

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	0	Preliminary	8/16/2018	
C8	1	Number of pins changed from 16 to 8 with signal name changes	12/10/2018	
E6	2	Add tolerance to length	4/3/2019	JC



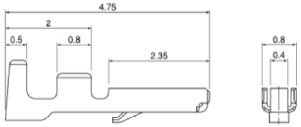


3

REF B CONTROL BOARD SIDE			REF A SENSOR BAR SIDE	
Signal	Pin	Crimp Terminal	Pin	Crimp Terminal
+5V0	1	SSHL-003T-P0.2	8	SSHL-003T-P0.2
+5V0	2	SSHL-003T-P0.2	7	SSHL-003T-P0.2
LGND	3	SSHL-003T-P0.2	6	SSHL-003T-P0.2
LGND	4	SSHL-003T-P0.2	5	SSHL-003T-P0.2
SHUTTER5	5	SSHL-003T-P0.2	4	SSHL-003T-P0.2
SHUTTER6	6	SSHL-003T-P0.2	3	SSHL-003T-P0.2
CH OUT5	7	SSHL-003T-P0.2	2	SSHL-003T-P0.2
CH OUT6	8	SSHL-003T-P0.2	1	SSHL-003T-P0.2

1

Contact



Model No.	Applicable wire			Q'ty/ reel
	mm²	AWG#	Insulation O.D. (mm)	
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Material and Finish
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RoHS compliance
Note: Contact JST for gold-plated products.

Contact	Crimping machine	Applicator		
		Crimp applicator	Dies	Crimp applicator with dies
SSHL-003T-P0.2	AP-K2N	MKS-L-10-3	MK/SSH/L-003-02	APLMK SSH/L003-02
		*MKS-SC	SC/SSH/L-003-02	APLSC SSH/L003-02

*Note: *Strip-crimp applicator*
Contact JST for applicable wires in case that it is not usable due to wire size.

Ref	Baanto Part #	Mfg	Mfg Part #	Description	Qty
①	7-140-0-4697	Tungwille	UL1061#28/08P GRY 7/0.127	UL1061 #28AWG 08P Ribbon Cable, GRY PVC 300V>80C, Pitch=1mm, Ins OD=0.4~0.8mm	1
②	16-339-0-6387	JST	SHLP-08V-S-B	Connector Housing, 08 pos, JST SHL	2
③	16-313-0-4695	JST	SSHL-003T-P0.2	Crimp Contact for SHL housing	16

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DO NOT SCALE DRAWING

	NAME	DATE
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ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		

TITLE:
LP-Mid-2S-600
Cable Harness Assembly

SIZE	DWG. NO.	REV
C	17-112-2-2076	2
SCALE: 3:1	WEIGHT:	SHEET 1 OF 1

7.0 Glass Specification

Description	Value
Plain Glass Material	Tempered Glass
Light Transmission	91%
Anti-Glare Glass Material	Low Iron Tempered Glass
Light Transmission	87% to 90%
Single Sided Anti-Glare Gloss	80% ± 10% at 60°
Flatness Tolerance for Plain and Anti-Glare Glass	0.03 inches

8.0 Environmental Specification

Description	Value
Operating Temperature	0°C to +70°C
Non-Operating Temperature (Storage)	-20°C to +80°C
Operating Humidity	5% to 90% RH non-condensing
Non-Operating Humidity	5% to 90% RH non-condensing
Operating Altitude	sea level to 10,000 feet
Non-Operating Altitude	sea level to 30,000 feet
Shock Operating	40 g per IEC 60068-2-27, half sine, 11ms duration, 3 axis
Shock Non-Operating	50 g per IEC 60068-2-27, half sine, 11ms duration, 3 axis (in approved packaging)
Vibration Operating	1 g per IEC 60068-2-64 at 5 to 500Hz, 1 octave/min, 3 axis
Vibration Non-Operating	5 g per IEC 60068-2-64 at 5 to 500Hz, 1 octave/min, 3 axis
Electrostatic Discharge Protection Per Standard	IEC 61000-4-2:2008
Air Discharge	±8KV
Contact Discharge	±4KV

9.0 Regulatory Test Standards

Below is a list of regulatory standards the touch screen complies with and the certification marks.

Description	Value
Information technology equipment. Radio disturbance characteristics	EN 55022:2010/AC:2011
FCC EMC Conducted & Radiated Emission	FCC Part 15 B
Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements	EN 61326-1:2006
Industrial, Scientific and Medical Equipment – Radio Frequency disturbance Characteristics – Limits and Methods of Measurement	EN 55011:2011
Electromagnetic compatibility (EMC). Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	EN 61000-3-2:2006+A1+A2
Electromagnetic compatibility (EMC). Limitation of Voltage Fluctuations and Flicker	EN 61000-3-3:2008
Information technology equipment. Immunity characteristics	EN 55024:1998+A1+A3
Information Technology Equipment - Safety, Part 1: General Requirements	UL 60950-1

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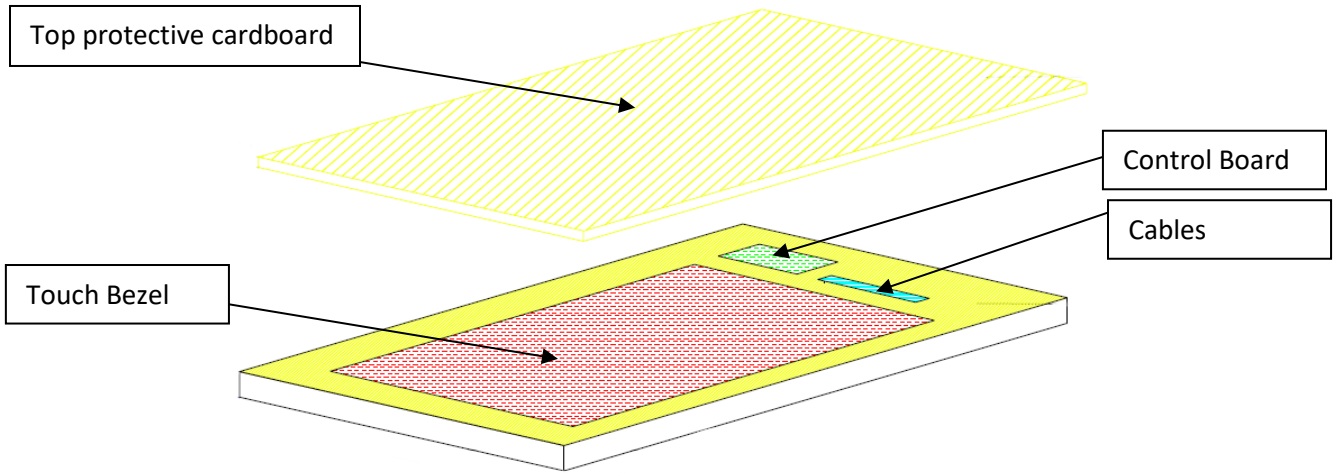
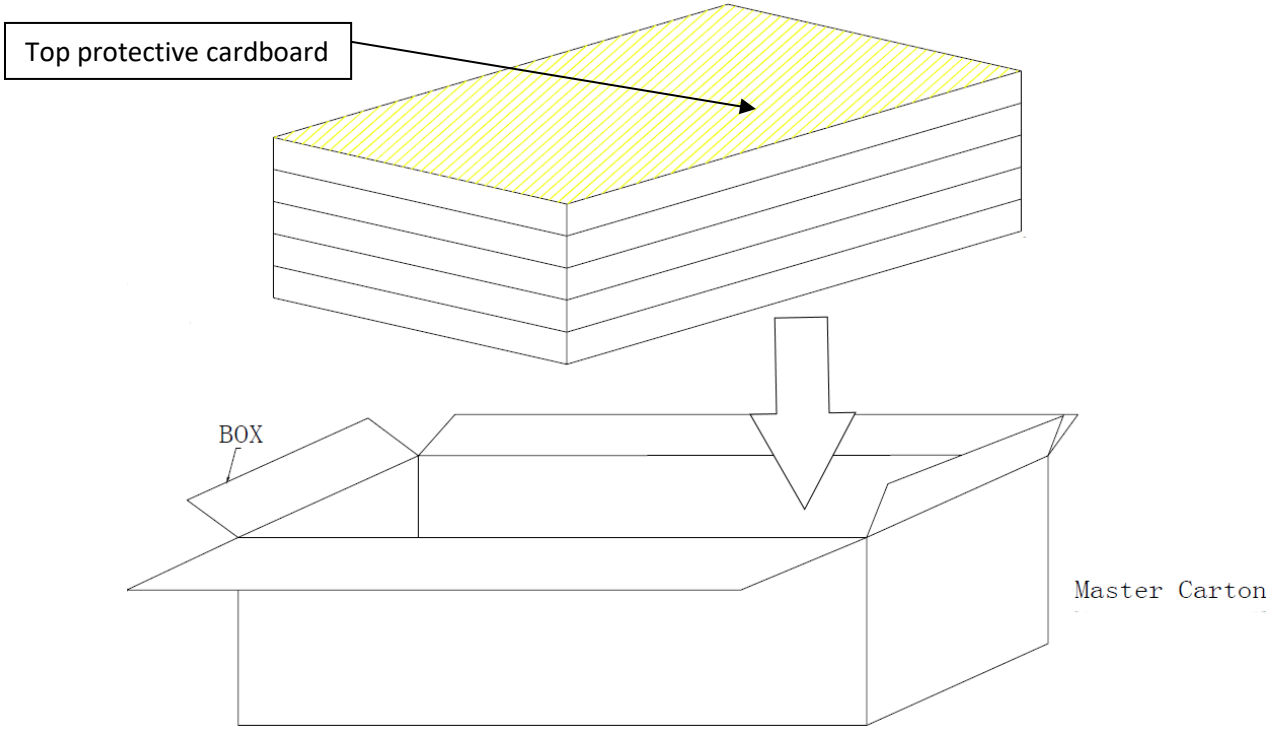
10.0 Packing Information

Each touch screen bezel is individually sandwiched between two brown moisture absorbing paper. The screen, control board and cables are placed in a foam cutout as shown below. A cardboard piece is placed on the topmost foam cutout.



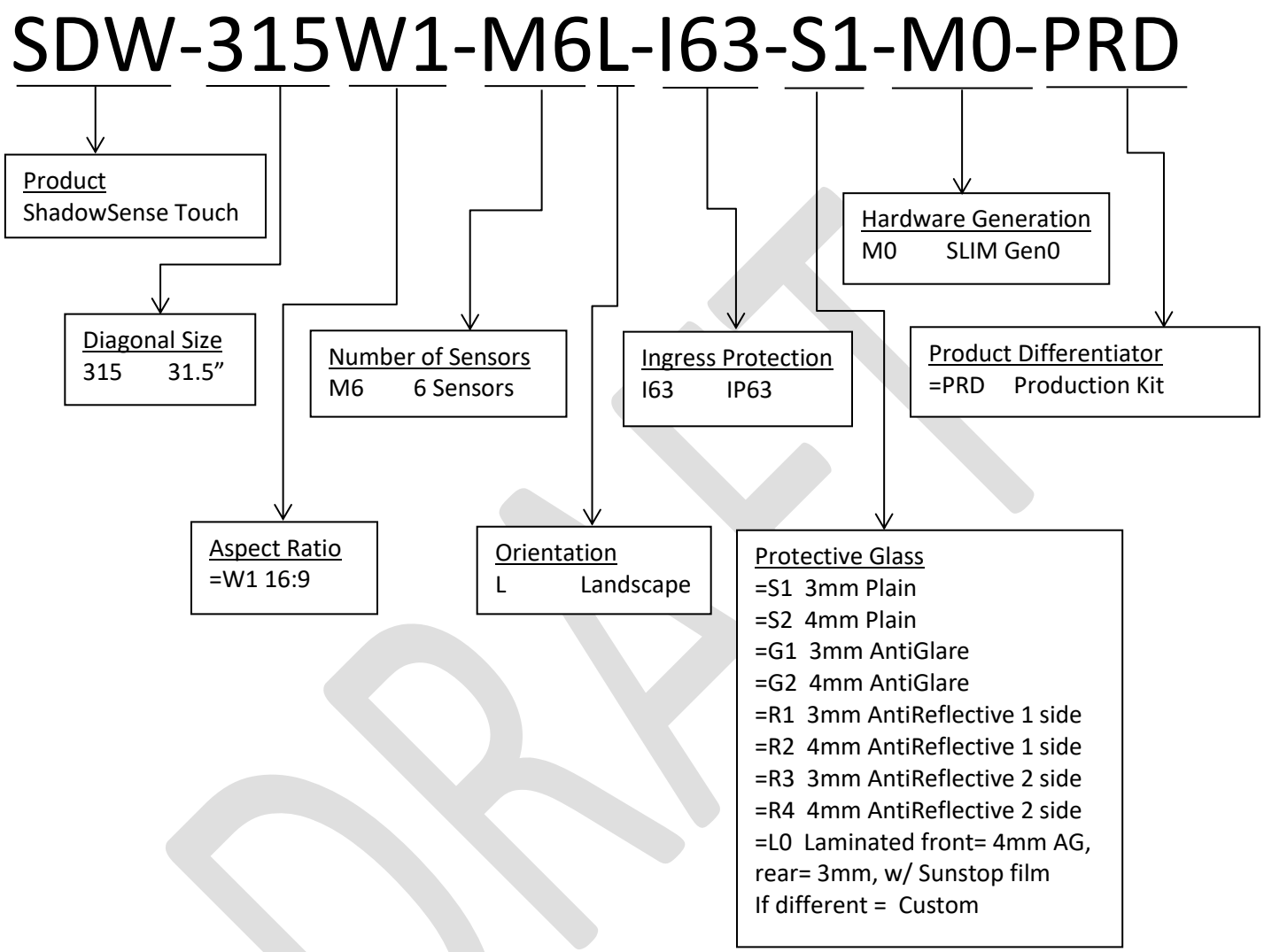
Five frames are stacked on top of each other and placed in the Master Carton



Description	Length	Width	Height	Weight
Master Carton	946 mm	572 mm	165 mm	16 Kg

11.0 Ordering Information

Currently can order the 31.5” Slim Bezel Multi-Touch screen from Baanto using the Part Number stated below. The description of each field within the part number is shown below. As more options become available then the list below will be updated. There is a minimum order quantity of 5 units.



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