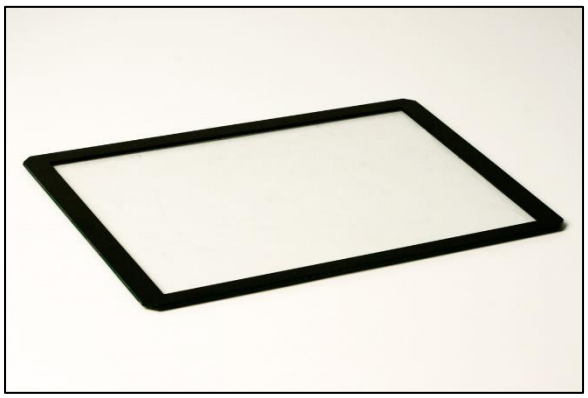
SDW-150Z1-M5T-CZ1-XX-PRD

PRODUCT DATA SHEET



Measuring just 3.2 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.

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	15” Diagonal
Aspect Ratio	4:3
Number of Touches	5
Touch Resolution	12 Bit X, 12 Bit Y
Sub pixel Resolution	4K
Accuracy	±1.46 mm (90% of screen area)
Data Interface	USB 2.0 (Full Speed) HID, compatible with USB 1.1 port, HID compliant USB A Type Receptacle Can also be plugged into a USB 3.0 port
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	Up to full sunlight
Mean Time To Failure (MTTF)	More than 200,000 hour

3.0 Parts List

The System consists of the following components:

- 15” 4:3 Thin Bezel with 3mm protective glass (BEZEL-150Z1-CZ1-XX)
- Touch Control Board (CTRLR-150Z1-M5T-RX.XX)
- Flex Cable (CABLE-Z01)

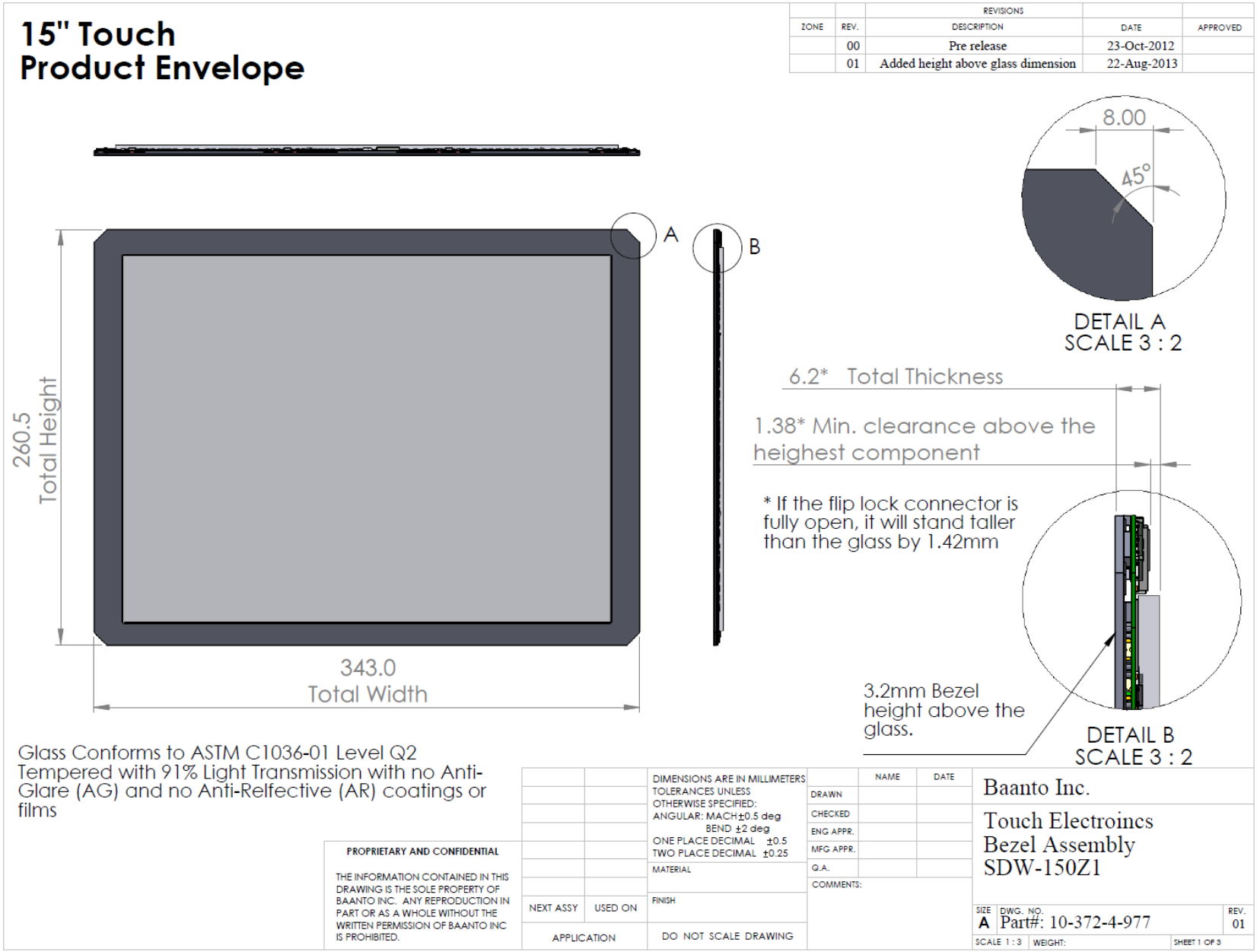
4.0 Power Supply Specifications

The touch control board is powered using a 5V input on the power in (PW_IN) pin. The power specifications for the 5V input are:

Control Board Connectors	Voltage	Average Current	Peak Current
PW_IN	4.75 V – 5.25 V	0.4A	0.8A

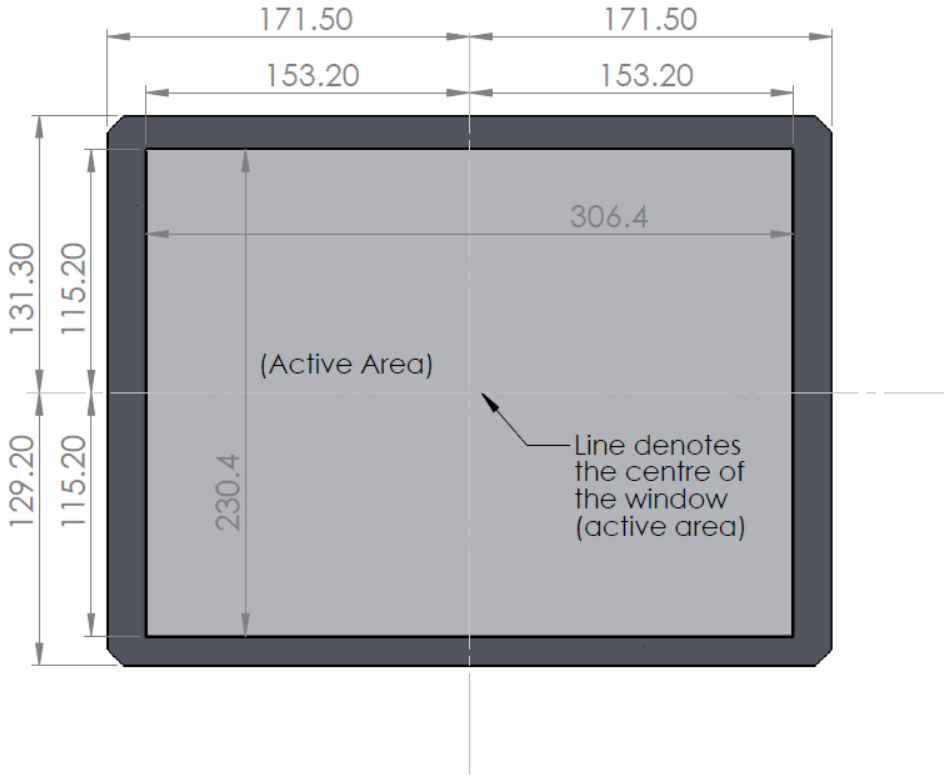
Compliance with the USB specification is not guaranteed if the board is powered via the USB only.

5.0 Mechanical Dimensions



15" Touch
Product Dimensions

ZONE	REV.	REVISIONS DESCRIPTION	DATE	APPROVED
	00	Pre release	23-Oct-2012	
	01	Added height above glass dimension	22-Aug-2013	



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NEXT ASSY	USED ON	
APPLICATION		

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

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

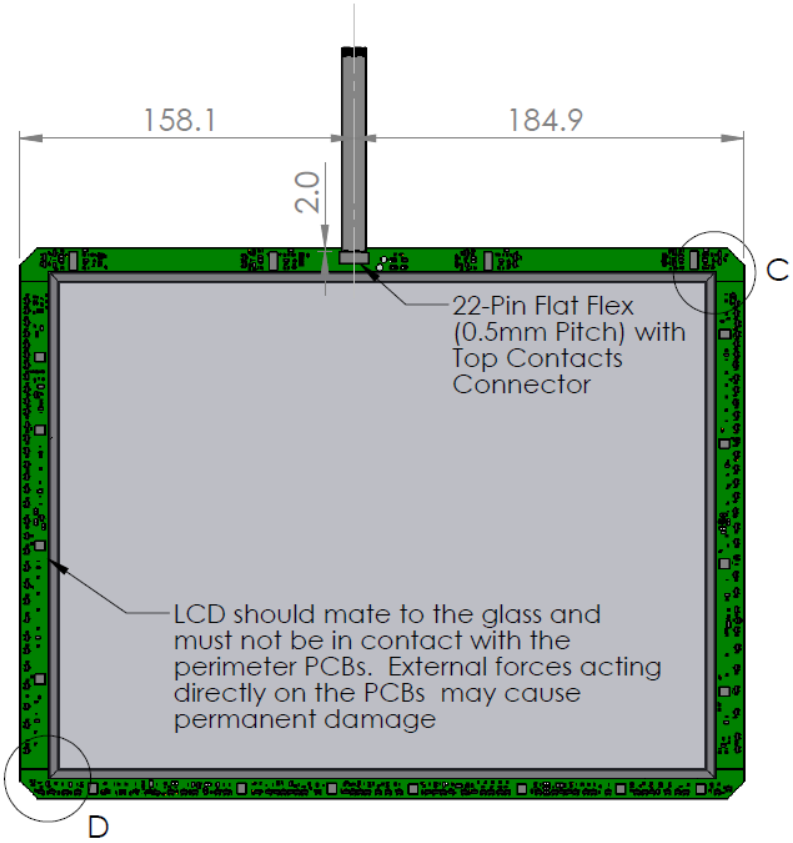
Baanto Inc.

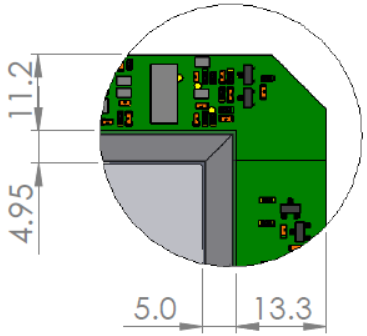
Touch Electroincs
Bezel Assembly
SDW-150Z1

SIZE	DWG. NO.	REV.
A	Part#: 10-372-4-977	01
SCALE 1 : 3	WEIGHT:	SHEET 2 OF 3

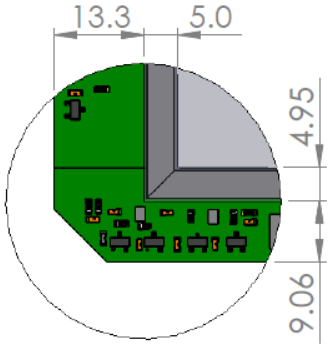
15" Touch
Product Details

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	00	Pre release	23-Oct-2012	
	01	Added height above glass dimension	22-Aug-2013	





DETAIL C
SCALE 1 : 1



DETAIL D
SCALE 1 : 1

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APPLICATION		DO NOT SCALE DRAWING

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TOLERANCES UNLESS
OTHERWISE SPECIFIED:
ANGULAR: MACH ±0.5 deg
BEND ±2 deg
ONE PLACE DECIMAL ±0.5
TWO PLACE DECIMAL ±0.25
MATERIAL
FINISH

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

Baanto Inc.

Touch Electroincs
Bezel Assembly
SDW-150Z1

SIZE	DWG. NO.	REV.
A	Part#: 10-372-4-977	01
SCALE 1 : 3	WEIGHT:	SHEET 3 OF 3

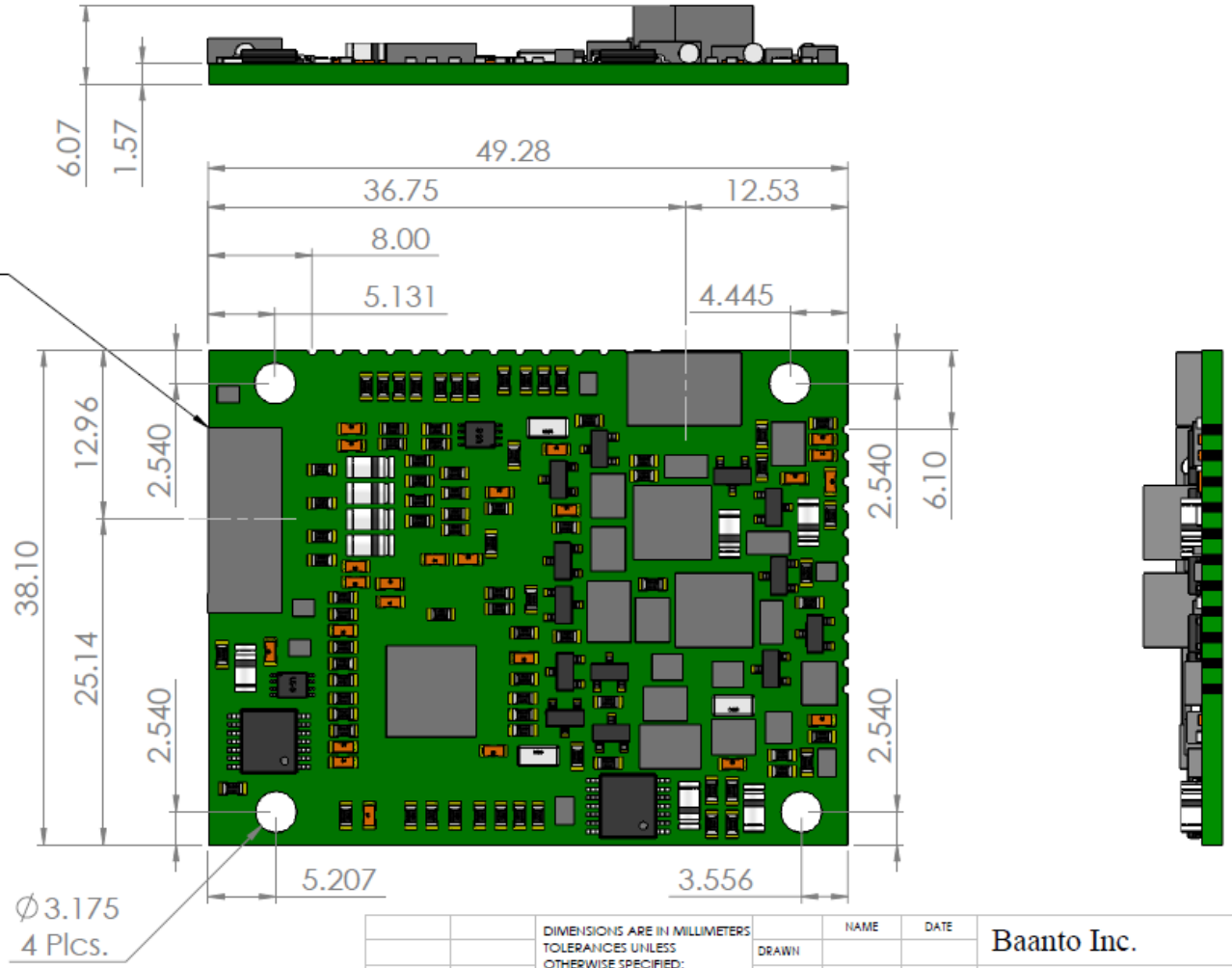
Touch Control Board Module Assembly, Small

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	00	Pre release	25-Oct-2012	
	01	Included Cabling P/N and Improved Descriptions in Signal Table	22-Aug-2013	

22-Pin Flat Flex
Connector
0.5mm Pitch
Bottom Contacts

Mating Cable:
17-112-1-992

Cable from Control
Board to Bezel



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APPLICATION	

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BEND ±2 deg
ONE PLACE DECIMAL ±0.5
TWO PLACE DECIMAL ±0.25
MATERIAL
FINISH
DO NOT SCALE DRAWING

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

Baanto Inc.

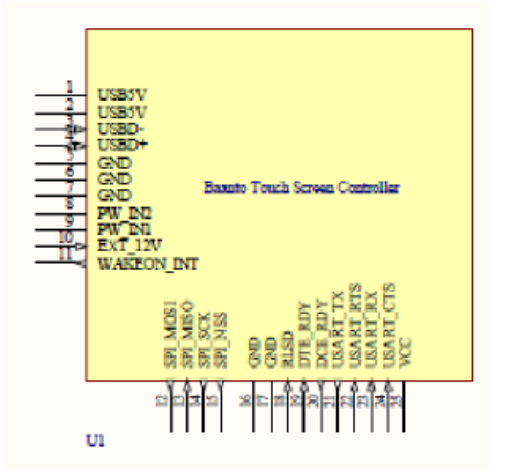
Touch Control Board
Module Assembly
SDW-150Z1

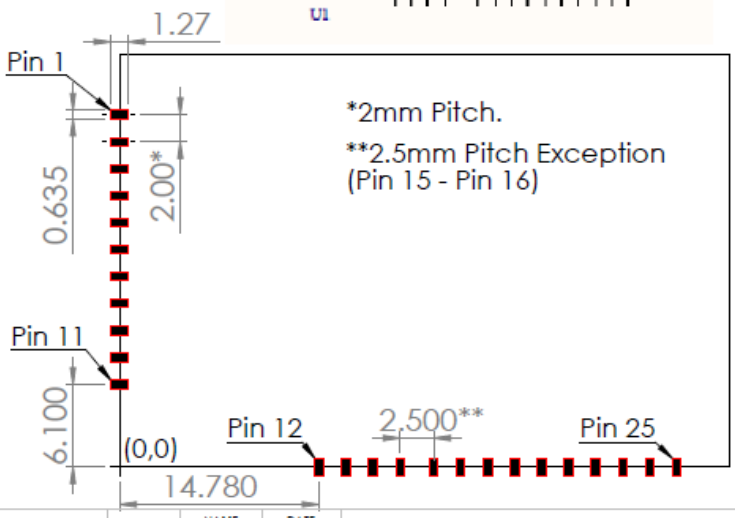
SIZE	DWG. NO.	REV.
A	Part#: 21-121-2-989	01
SCALE 2:1	WEIGHT:	SHEET 1 OF 2

Control Module Footprint Details

Group	Pin Num.	Signals	Note
Power & USB Signals	1	N/C	N/C
	2		
	3	USBD_N	USB Data (differential pair)
	4	USBD_P	
	5	GND	USB and External 5V Ground Signal (Group with PW_IN)
	6		
	7		
	8	PW_IN	External 5V (4.75-5.25V) Peak Current: 0.8A Average Current: 0.4A *PWR_IN must be bipassed with a 100uF capacitor with an ESR<150mohms
	9		
	10	N/C	N/C
	11	N/C	N/C
SPI	12	N/C	N/C
	13	N/C	N/C
	14	N/C	N/C
	15	N/C	N/C
USUART	16	N/C	N/C
	17		
	18	N/C	N/C
	19	N/C	N/C
	20	N/C	N/C
	21	N/C	N/C
	22	N/C	N/C
	23	N/C	N/C
	24	N/C	N/C
	25	N/C	N/C

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	00	Pre release	25-Oct-2012	
	01	Included Cabling P/N and Improved Descriptions in Signal Table	22-Aug-2013	





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BEND ±2 deg
ONE PLACE DECIMAL ±0.5
TWO PLACE DECIMAL ±0.25
MATERIAL
FINISH
NEXT ASSY | USED ON
APPLICATION
DO NOT SCALE DRAWING

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

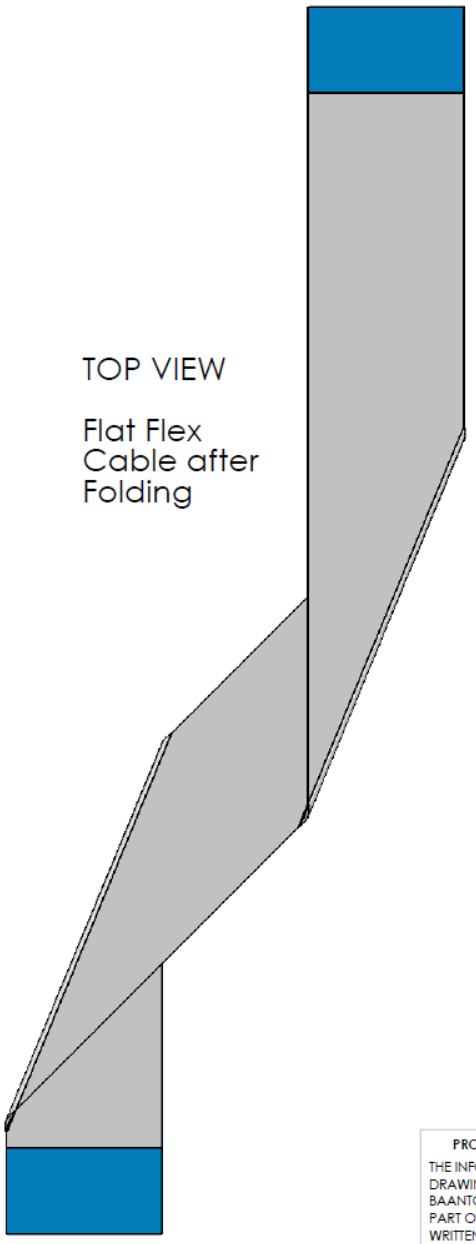
Baanto Inc.

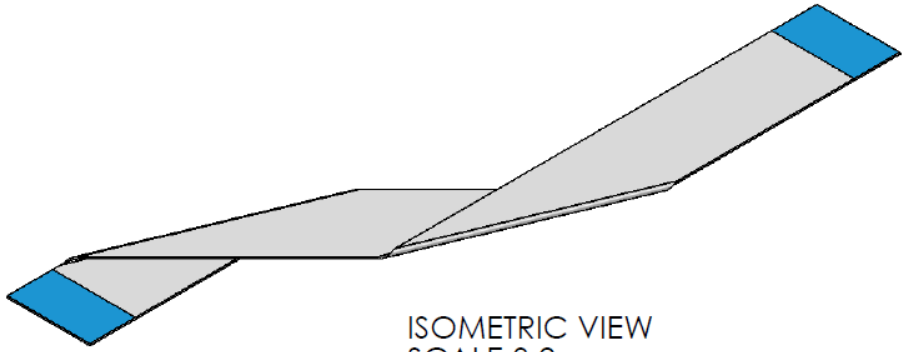
Touch Control Board Module Assembly SDW-150Z1

SIZE A | DWG. NO. Part#: 21-121-2-989 | REV. 01
SCALE 2 : 1 | WEIGHT: | SHEET 2 OF 2

6.0 Cable Assembly Specifications

		REVISIONS		
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	0	Pre release	25-June-2012	JC
	01	Added Sheet 3	8-Mar-2013	JC
	02	Updated vendor list. Changed to metric	6-Sep-2013	JC





ISOMETRIC VIEW
SCALE 3:2

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				NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS TOLERANCES unless specified:	DRAWN		
		TWO PLACE DECIMAL ±0.254 THREE PLACE DECIMAL ±0.127	CHECKED		
			ENG APPR.		
			MFG APPR.		
		MATERIAL Flat Flex Cable	Q.A.		
		FINISH	COMMENTS:		
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			

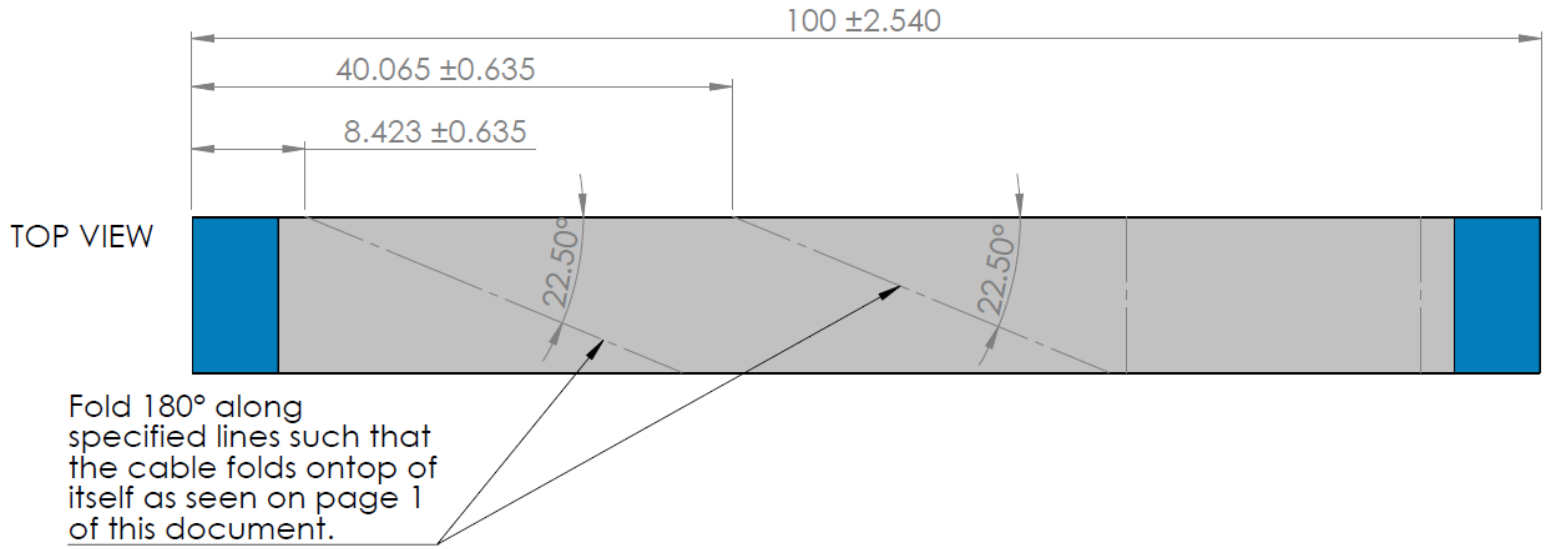
Baanto Inc.

Touch Module Cable Assembly
SDW-150Z1

SIZE	DWG. NO.	REV.
A	Part#:17-112-1-992	02
SCALE 2:1	WEIGHT:	SHEET 1 OF 3

Part ID	Mfg. Part	Description
17-227-0-4642	Wurth 687622100002	22 Pos x 100mm, 0.5mm pitch flat flex cable Type A, same side

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	0	Pre release	25-June-2012	JC
	01	Added Sheet 3	8-Mar-2013	JC
	02	Updated vendor list. Changed to metric	6-Sep-2013	JC



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DIMENSIONS ARE IN MILLIMETERS
TOLERANCES unless specified:
TWO PLACE DECIMAL ±0.254
THREE PLACE DECIMAL ±0.127

MATERIAL: Flat Flex Cable
FINISH

NEXT ASSY | USED ON

APPLICATION | DO NOT SCALE DRAWING

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

Baanto Inc.

Touch Module Cable Assembly
SDW-150Z1

SIZE A | DWG. NO. Part#:17-112-1-992 | REV. 02

SCALE 2:1 | WEIGHT: | SHEET 2 OF 3

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
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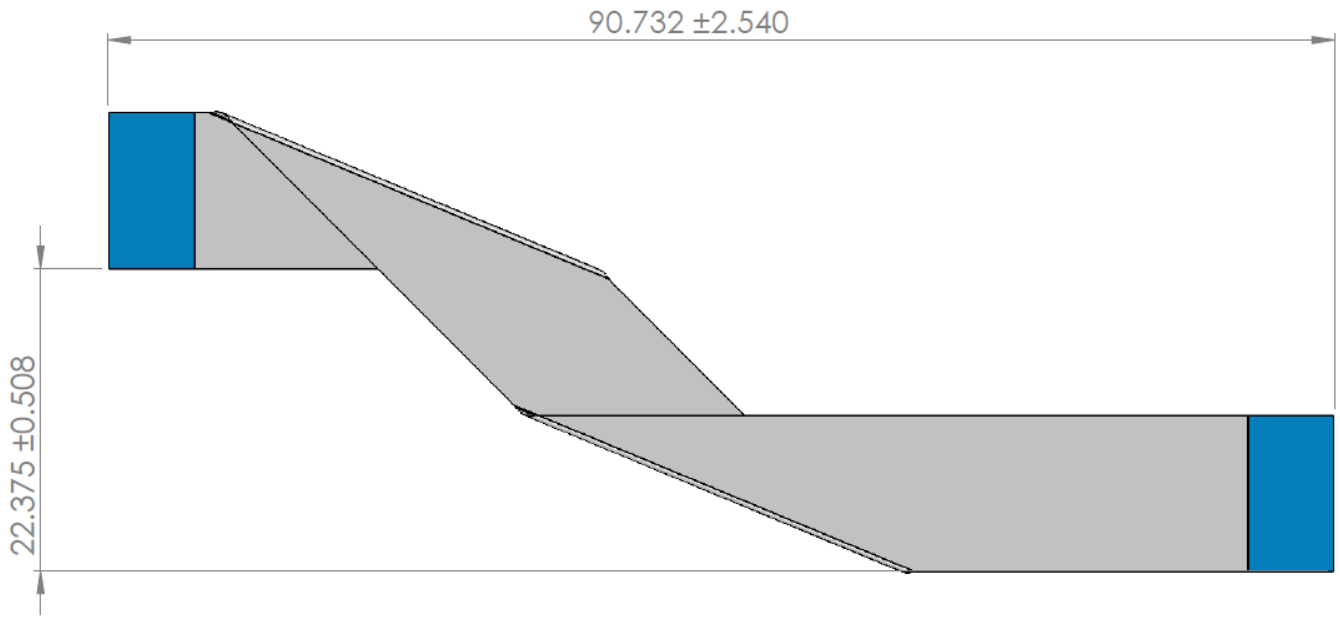
	01	Added Sheet 3	8-Mar-2013	JC
	02	Updated vendor list. Changed to metric	6-Sep-2013	JC



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NEXT ASSY	USED ON
APPLICATION	

DIMENSIONS ARE IN MILLIMETERS
TOLERANCES unless specified:

TWO PLACE DECIMAL ±0.254
THREE PLACE DECIMAL ±0.127

MATERIAL: Flat Flex Cable

FINISH

DO NOT SCALE DRAWING

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

COMMENTS:

Baanto Inc.

Touch Module Cable Assembly SDW-150Z1

SIZE	DWG. NO.	REV.
A	Part#:17-112-1-992	02

SCALE 2:1 | WEIGHT: | SHEET 3 OF 3

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

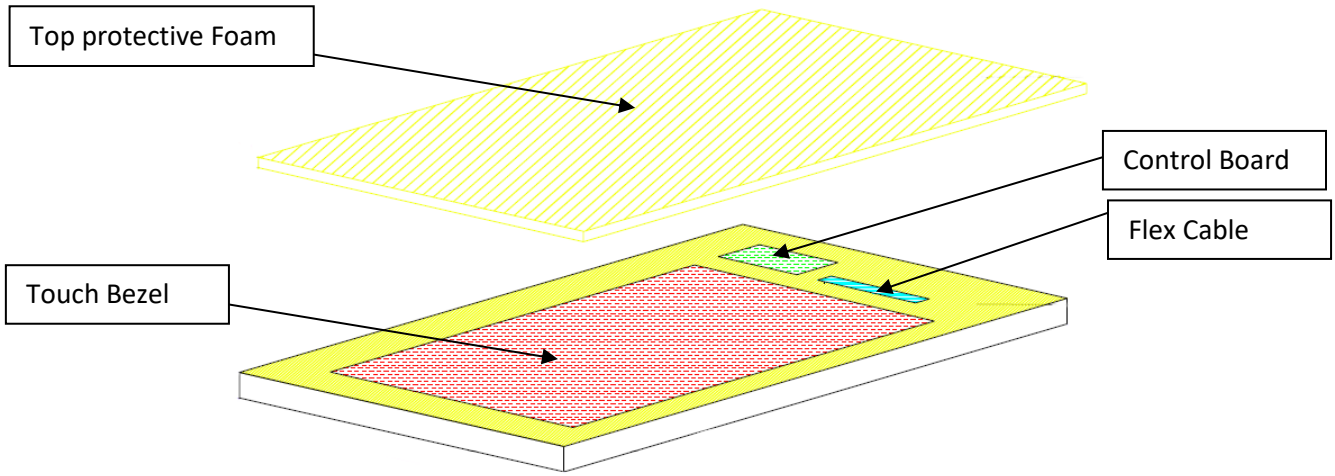
9.0 Regulatory Test Standards

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

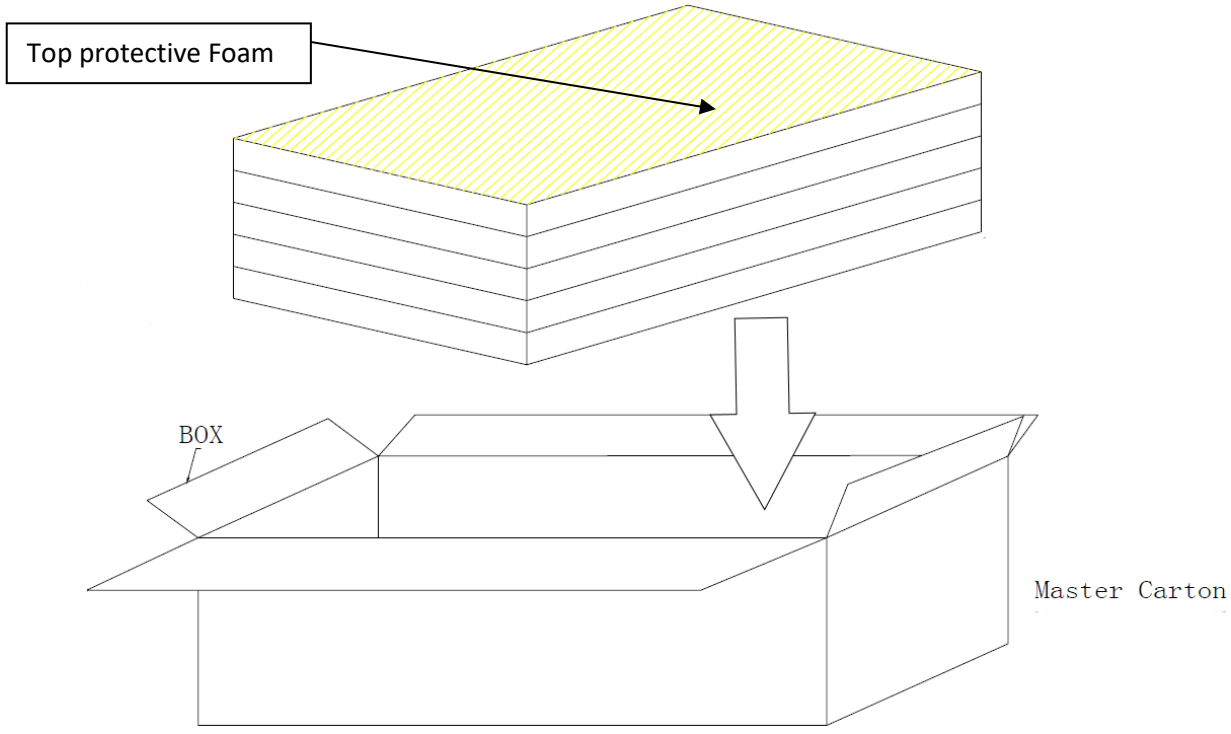
Description	Value
Information technology equipment. Radio disturbance characteristics	EN 55022:2010/AC:2011
FCC EMC Conducted & Radiated Emission	FCC Part 15 B
Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements	EN 61326-1:2006
Industrial, 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

10.0 Packing Information

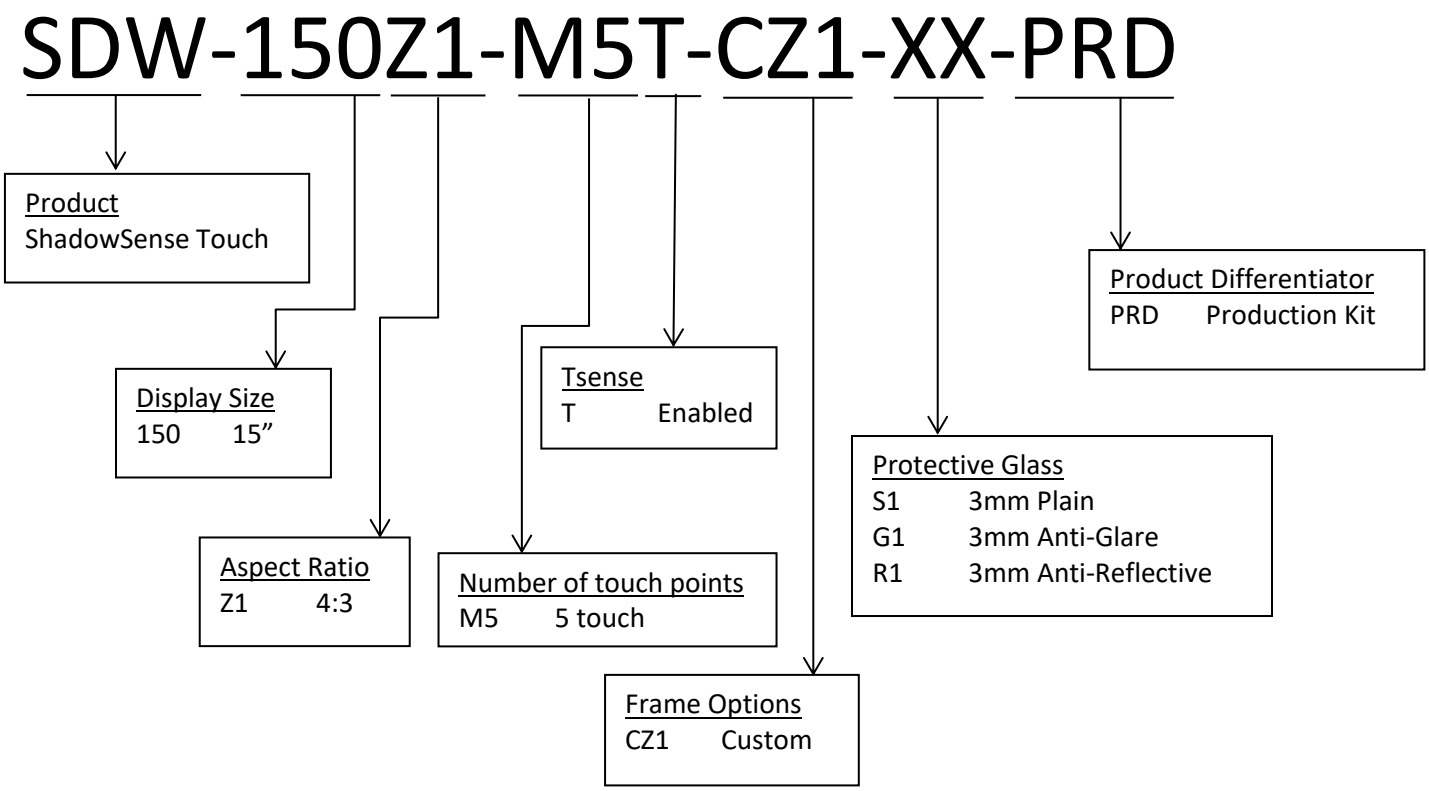
Each touch screen is individually sandwiched between two brown moisture absorbing paper. The screen, control board and flex cable are placed in a foam cutout as shown below. A foam piece is placed on the top most foam cutout.



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



Description	Length	Width	Height	Weight
Master Carton	505mm	355mm	290mm	5 KG

11.0 Ordering Information

Currently can order the 15” 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.