



The Baanto™ 19" ShadowSense™ based touchscreen delivers innovative, high performance multi-touch capabilities in an open frame design. This is the perfect multi-touch solution for systems and chassis designed to use the ELO 1939L family of touch monitors.

Our patented technology and position sensing algorithms provide high performance touch recognition and tracking of multiple objects. T-Sense™, a unique and proprietary ability to determine the touch area and opacity of a touch object, allows application developers to create improved gesture recognition algorithms and applications.

An industry first, the Baanto Configuration Dashboard provides customers the ability to easily adjust the performance and touch characteristics of ShadowSense touchscreens to provide spurious touch and palm rejection, fluid rejection, and touch pressure emulation.

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.

The narrow and reduced height bezel simplifies the integration of a ShadowSense product and allows for a more creative industrial design process.

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.

## Features

- True Multi-touch performance with 2 and 5 touch point options available
- Real-time touch area data provided for all touch points
- Solid touch activation
  - Senses solid objects 2 millimeters or greater in diameter
- 6 to 8 millisecond response time
- Sub-2 millimeter touch point accuracy
  - No ghosting or dead zones
- Static object detection and rejection
  - Continues to function with debris on the screen
- 3mm tempered glass with 91% optical clarity
  - 93% and 95% transmissivity options available
- IP65 rated front seal (bezel to glass)
- USB HID interface to host
  - Windows® 7 compliant
  - No drivers or CPU based algorithms
- Calibration free
  - Mechanically and thermally stable



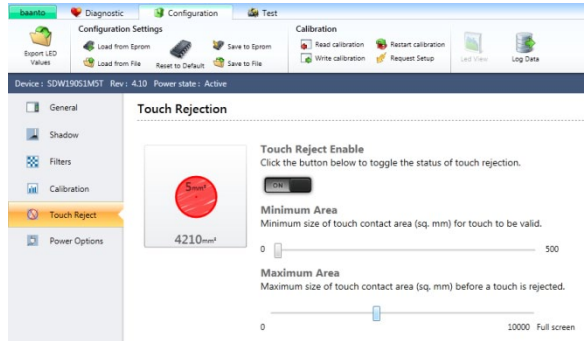
## Configuration Dashboard Overview

Enhance your control of touch screen performance and behavior with the Baanto Configuration Dashboard. Critical firmware parameters are easily adjustable through an intuitive dashboard interface, allowing developers to configure the touchscreen characteristics to meet the unique challenges faced by your systems. Easily implement and control functions such as:

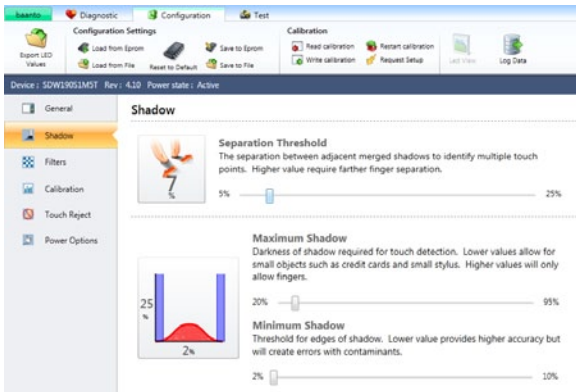
- Touch duration control
- Palm rejection
- Rain / Fluid rejection
- Power modes: Full, Standby, Sleep
- Touch pressure emulation
- Hover distance



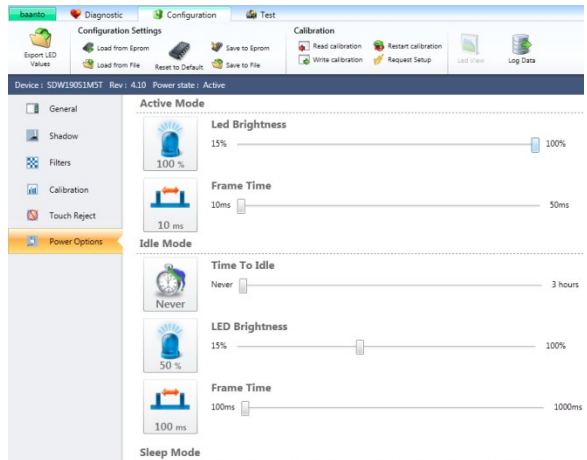
- **USB Boot Delay**
  - Supports system boot-up and sequencing requirements for test and operational modes
- **New Touch Delay**
  - Controls the delay from touch detection to touch reporting
- **Reduces spurious touches and enhances fluid rejection**



- **Touch Rejection**
  - Controls touch reporting based touch object area
    - Minimum Area gates the smallest object reported as a touch
    - Maximum Area gates the largest object reported as a touch
  - **Used for palm and spurious object rejection**

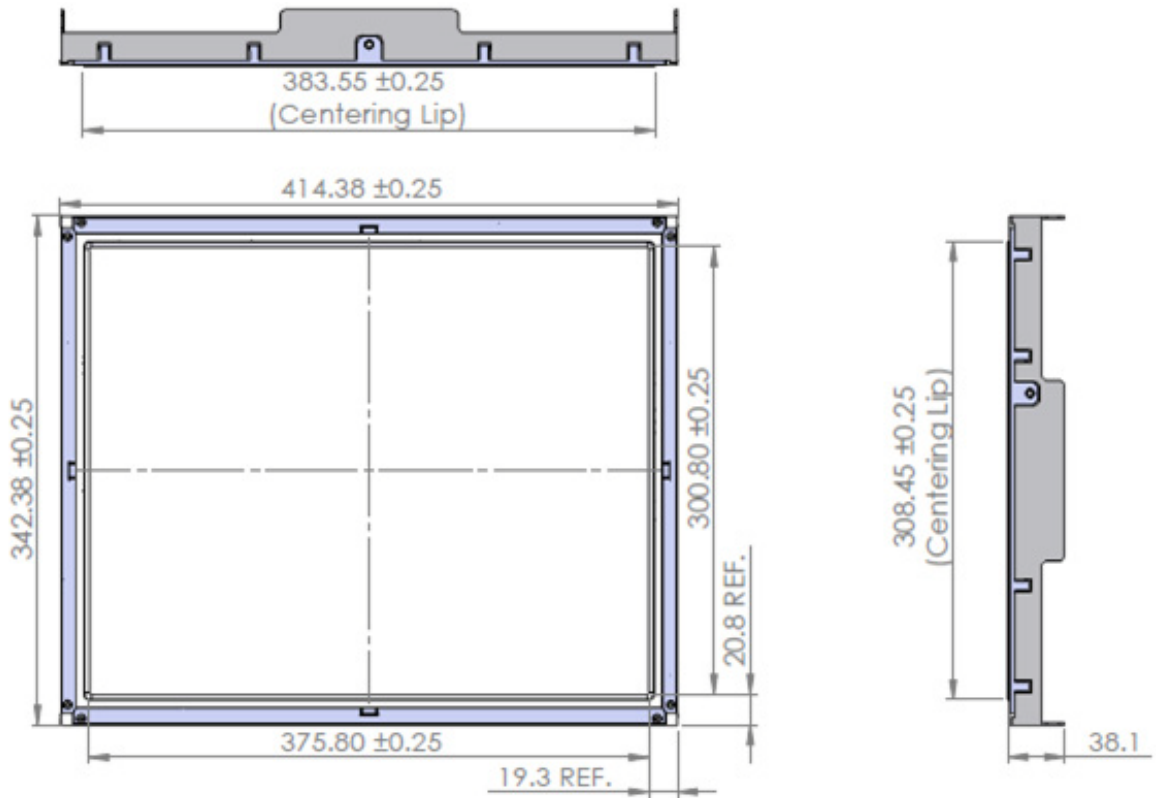


- **Shadow Characteristics**
  - Separation Threshold
    - Controls the minimum distance between two touch points
  - Maximum Shadow / Minimum Shadow
    - Adjusts the sensitivity of touch detection based upon the measured shadow density
- **Controls hover distance and Rain / Fluid rejection**



- **Power Options**
  - Adjust power consumption in Active, Idle, and Sleep modes
  - **Supports “Wake on Touch” and advanced power control across multiple modes**

## Mechanical Overview



## Environmental Specifications

- **Temperature**
  - Operating:  $0^{\circ}\text{C}$  to  $40^{\circ}$ 
    - If your requirements exceed these limits consult your BAANTO sales representative for information on commercial and industrial operating temperatures
  - Non-Operating:  $-20^{\circ}\text{C}$  to  $80^{\circ}\text{C}$
- **Humidity**
  - Operating: 5% to 90% RH non-condensing
  - Non-Operating: 5% to 90% RH non-condensing
- **Altitude**
  - Operating: sea level to 10,000 feet
  - Non-Operating: sea level to 30,000 feet
- **Shock**
  - Operating: 40 g per IEC 60068-2-27, half sine, 11ms duration, 3 axis
  - 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
  - Non-Operating: 5 g per IEC 60068-2-64 at 5 to 500Hz, 1 octave/min, 3 axis

All specifications and data presented herein are subject to change without advance notice. Please ensure you have the latest detailed specifications and drawings from Baanto prior to commencing any design with or use of Baanto products.

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## Part Numbering and Ordering Information

### Standard Protective Glass

| <u>Ordering Part Number</u> | <u>Touchscreen size</u> | <u>Aspect Ratio</u> | <u>Number of Touchpoints</u> | <u>Frame Options</u> | <u>Protective Glass</u> | <u>Product Definition</u> |
|-----------------------------|-------------------------|---------------------|------------------------------|----------------------|-------------------------|---------------------------|
| SDW-190S1-M2T-EE1-S1-PRD    | 19" Diagonal            | 5:4                 | Two (2)                      | ELO 1939L            | 3mm                     | Production Kit            |
| SDW-190S1-M5T-EE1-S1-PRD    | 19" Diagonal            | 5:4                 | Five (5)                     | ELO 1939L            | 3mm                     | Production Kit            |
| CTRLR-190S1-M2T-R4.11       | 19" Diagonal            | 5:4                 | Two (2)                      | ELO 1939L            | N/A                     | 2 Touch Controller only   |
| CTRLR-190S1-M5T-R4.11       | 19" Diagonal            | 5:4                 | Five (5)                     | ELO 1939L            | N/A                     | 5 Touch Controller only   |
| BEZEL-190S1-EE1-S1          | 19" Diagonal            | 5:4                 | N/A                          | ELO 1939L            | 3mm                     | 19" 5:4 Bezel/Sensor only |
| CABLE-MID                   | N/A                     | N/A                 | N/A                          | N/A                  | N/A                     | Mid-size Cable Kit only   |

### Anti-Glare Protective Glass (1 side A/G, 75 gloss units)

| <u>Ordering Part Number</u> | <u>Touchscreen size</u> | <u>Aspect Ratio</u> | <u>Number of Touchpoints</u> | <u>Frame Options</u> | <u>Protective Glass</u> | <u>Product Definition</u> |
|-----------------------------|-------------------------|---------------------|------------------------------|----------------------|-------------------------|---------------------------|
| SDW-190S1-M2T-EE1-G1-PRD    | 19" Diagonal            | 5:4                 | Two (2)                      | ELO 1939L            | 3mm                     | Production Kit            |
| SDW-190S1-M5T-EE1-G1-PRD    | 19" Diagonal            | 5:4                 | Five (5)                     | ELO 1939L            | 3mm                     | Production Kit            |
| CTRLR-190S1-M2T-R4.11       | 19" Diagonal            | 5:4                 | Two (2)                      | ELO 1939L            | N/A                     | 2 Touch Controller only   |
| CTRLR-190S1-M5T-R4.11       | 19" Diagonal            | 5:4                 | Five (5)                     | ELO 1939L            | N/A                     | 5 Touch Controller only   |
| BEZEL-190S1-EE1-G1          | 19" Diagonal            | 5:4                 | N/A                          | ELO 1939L            | 3mm                     | 19" 5:4 Bezel/Sensor only |
| CABLE-MID                   | N/A                     | N/A                 | N/A                          | N/A                  | N/A                     | Mid-size Cable Kit only   |

### Anti-Reflective Protective Glass (1 side A/R, 95% transmittance)

| <u>Ordering Part Number</u> | <u>Touchscreen size</u> | <u>Aspect Ratio</u> | <u>Number of Touchpoints</u> | <u>Frame Options</u> | <u>Protective Glass</u> | <u>Product Definition</u> |
|-----------------------------|-------------------------|---------------------|------------------------------|----------------------|-------------------------|---------------------------|
| SDW-190S1-M2T-EE1-R1-PRD    | 19" Diagonal            | 5:4                 | Two (2)                      | ELO 1939L            | 3mm                     | Production Kit            |
| SDW-190S1-M5T-EE1-R1-PRD    | 19" Diagonal            | 5:4                 | Five (5)                     | ELO 1939L            | 3mm                     | Production Kit            |
| CTRLR-190S1-M2T-R4.11       | 19" Diagonal            | 5:4                 | Two (2)                      | ELO 1939L            | N/A                     | 2 Touch Controller only   |
| CTRLR-190S1-M5T-R4.11       | 19" Diagonal            | 5:4                 | Five (5)                     | ELO 1939L            | N/A                     | 5 Touch Controller only   |
| BEZEL-190S1-EE1-R1          | 19" Diagonal            | 5:4                 | N/A                          | ELO 1939L            | 3mm                     | 19" 5:4 Bezel/Sensor only |
| CABLE-MID                   | N/A                     | N/A                 | N/A                          | N/A                  | N/A                     | Mid-size Cable Kit only   |

All protective glass is per ASTM 1036-01, Quality Level 2

Production kits consist of: Sensor assembly, touchscreen controller, wiring harnesses, and mounting clips

- Minimum Ordering Quantity (MOQ) = Five (5) units
- Five (5) units per carton
- Carton dimension: H: 53cm L: 45cm W: 33cm
- Carton Weight: 8.7KG

To find out more about Baanto ShadowSense touch solutions, go to [www.baanto.com](http://www.baanto.com)



UL and cUL approvals are in process

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