

Understanding the Capacitive Touchscreen

This article helps to explain the different ways to use the new Windows 10 versions of the TRIO Controller tablet. This article will discuss the different touchscreen modes and the different input methods such as bare finger, gloved finger, hard-tipped stylus, soft-tipped stylus, and active stylus.

CAPACITIVE vs RESISTIVE TOUCHSCREENS

As opposed to the **resistive** touchscreen, which relies on the mechanical pressure made by the finger or stylus, the **capacitive** touchscreen makes use of the electrical properties of the human body.

Resistive Touch (Legacy TRIO)

The first and second generations of TRIO C-series tablets used resistive touchscreens. A specialized stylus was not required, a simple touch-input (plastic) stylus was included. Because resistive touch senses input pressure, a finger, glove or basic stylus is all that's needed.



A resistive touch, however, can only register one point of contact, therefore multi-touch gestures are not possible. They can also lose sensitivity when touching same areas repeatedly and can lose resistance requiring more frequent touch calibrations and harder touch input.

The original CA6, CA7, and first and second generation TRIO C10 had plastic screen that were subject to being scratched and had a bezel around the screen which could accumulate debris. These two factors made the TRIO subject to erroneous input until cleaned or repaired.

Capacitive (2019 TRIO Line)

The three latest TRIOs, introduced in 2018 for the 2019 TRIO catalog all use Windows 10 OS and the latest technology in capacitive touchscreens.

Capacitive touchscreens are brighter given there are fewer layers needed for input. The input has less interference from debris, scratches or small cracks than resistive touchscreens. They are also not subjective to dead spots from frequent, repeated use or the need to re-calibrate.



Technology for capacitive touchscreens can account for various modes of operations, such as when using the device in the rain or with gloves. Capacitive touchscreens can operate with various input stylus pens ranging from basic hard-tipped stylus to soft-tipped stylus, or active (powered) stylus.

WHAT'S INCLUDED WITH TRIO

For the 2019 line-up of TRIO® Controllers, all TRIOs operate on Windows® 10 and use a capacitive touchscreens. The TRIO C8, TRIO C10, and TRIO H8 all have some pros and cons, which I will cover next.

TRIO C8

The **TRIO C8** is an 8" TRIO Controller made by Handheld (Handheld Algiz 8X). The 8-inch platform is intended to be used mostly as an easily-portable and lightweight data collector in field. There is no standard stylus that is incorporated into the tablet. A pen holster is provided with the palm strap and an off-the-shelf, soft-tipped stylus pen can be easily added if desired. NOTE: A hard-tipped stylus (simple plastic pen), does not work with the TRIO C8. This TRIO works best with bare fingers. Normal mode is default setting.

TRIO C8-Series		Touch screen modes		
Algiz 8X		Normal	Rain	Glove
Touch input methods				
Finger	Bare skin	✓	✓	✓
	In glove	○	○	✓
Capacitive stylus	Soft tipped	✓	✓○	✓
	Hard tipped	○	○	○

TRIO C10

The **TRIO C10** is a 10" TRIO Controller made by Handheld (Handheld Algiz 10Xv3). The 10-inch platform is a great size for performing setup and analysis in-field, in addition to data collection. There is a basic, hard-tipped stylus pen incorporated into the back of the tablet. The stylus will work when in Normal mode, but not when in rain or glove mode. This TRIO works best with bare fingers. Normal mode is default setting.

TRIO C10-Series		Touch screen modes		
Algiz 10XV3		Normal	Rain	Glove
Touch input methods				
Finger	Bare skin	✓	✓	✓
	In glove	○	○	✓
Capacitive stylus	Soft tipped	✓	✓○	✓
	Hard tipped	✓	○	○

TRIO H8

The **TRIO H8** is an 8-inch, HAZLOC-rated TRIO Controller made by Getac (Getac T800, including an Active Stylus). This 8-inch platform offers the most flexibility for input modes. The tablet includes an active stylus (digitizer) that provides the most precision when inputting onto the screen. A user can toggle the TRIO to operate with only the active stylus input, preventing any other touch input. The TRIO H8 is the preferred tablet when working outdoors, in the elements. Glove mode is default setting.

TRIO H8-Series		Touch screen modes			
Getac T800 w/ Active Pen		Touch/Rain	Glove	Pen	Pen-only
Touch input methods					
Fingertip	Bare skin	✓	✓	✓	○
	In glove	○	✓	○	○
Capacitive stylus	Soft tipped	○	✓	✓	○
	Hard tipped	○	✓	✓	○
Getac active stylus		✓	✓	✓	✓

Legend:	
✓	touch screen reliably detects input
○	touch screen does not reliably detect input
✓○	touch screen reliably detects inputs if you press hard

GETTING THE RIGHT STYLUS

Azima offers the most common used items from the OEM's optional accessories list when building a TRIO. Other accessories are available from the manufacturer or from other third-party retailers. Azima can source special-order accessories as required.

There are many stylus pens on the market, ranging from cheap to very expensive. Not all stylus devices work with all tablets. However, the majority of smartphones and tablets made today have capacitive touchscreens. Obtaining your own, preferred stylus can be easily integrated into your TRIO system.



Operate at capacity

For more information, contact Azima Sales or Support at +1-781-938-0707