

Support Note

TRIMBLE FIELD SYSTEMS
NOVEMBER 2024

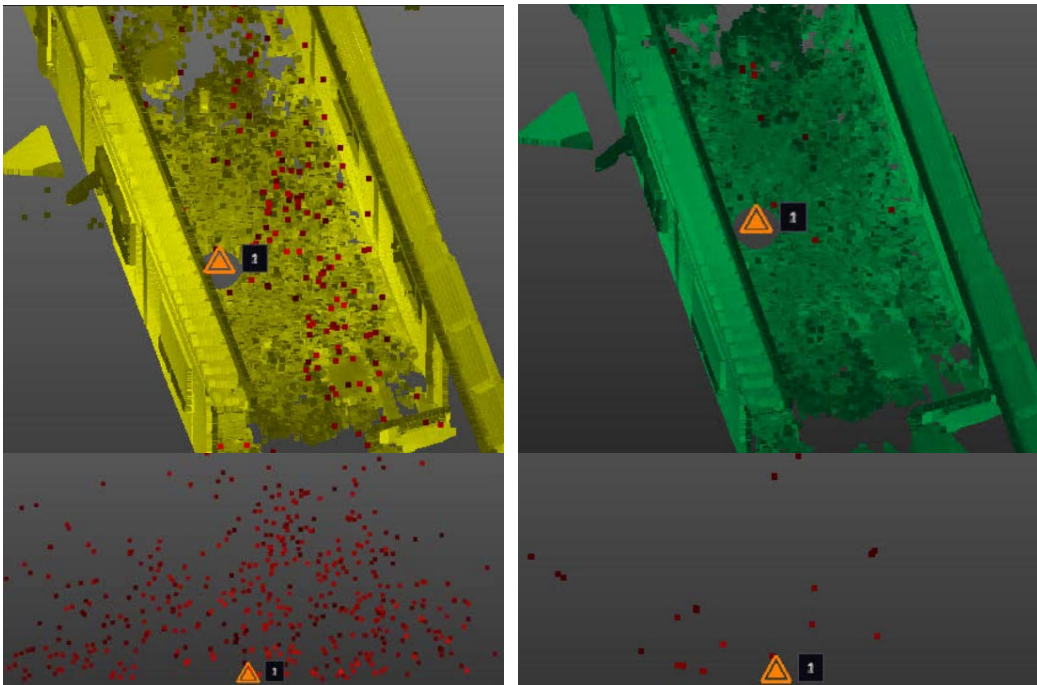
TRIMBLE X9 Noise Filter

Introduction

This support note explains the new noise filter available with X9 firmware version 1.1.1.0263 and the results you can expect when you update.

Parasitic noise reduction

The new filtering algorithm reduces parasitic noise that can appear around the X9 scanner in environments with high reflectivity. The filter reduces the noise typically seen within a range of approximately 10 meters of the scanner. A 90% reduction in noise is possible with the new filter. Below is a comparison of unfiltered noise from firmware version 1.0.5.0392 and the filtered results using firmware version 1.1.1.0263.



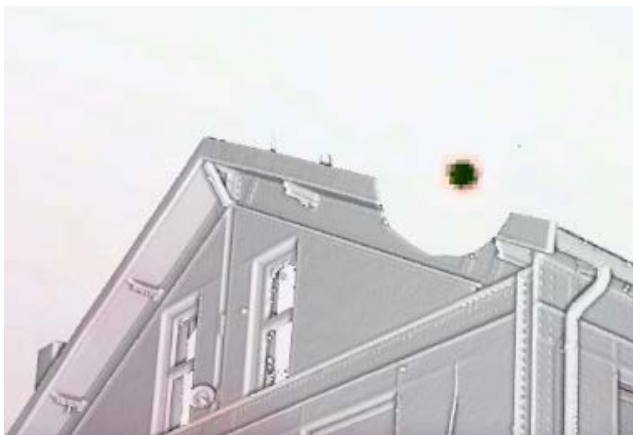
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Below are results from a 6-minute standard scan to compare the number of parasites found when using firmware 1.0.5.0392 and 1.1.1.0263.

Firmware	FW 1.0.5.0392	FW 1.1.1.0263
Total points	64683658	65266482
Parasites	610	76
1 parasite per	106039	858770

Noise from direct sunlight

When scanning outdoors in direct sunlight the X9 can produce parasites streaming toward the sun. The filtering algorithm removes a circular area of points in the direction of the sun. When the sun is directly behind an area of interest, the removal of good data is possible. Try to scan from positions where the sun is not in direct line of sight with an area of interest. If this is not possible, scan the same area from a different angle relative to the sun to fill in the data gap. Below is an example of this filtering result.



For more information

For more information, contact Trimble Support.