



SIERRA-OLYMPIA

TECHNOLOGIES INC.



QUICK START GUIDE

VIENTO 10 AND HD10 GIGE

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Product Export Classification Control Number (ECCN): 60/30Hz: 6A003.b.4.b 9Hz: 6A993 This document does not contain export-controlled technology



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1 SAFETY CONDITIONS

Read all instructions prior to use.

Observe ESD (electrostatic discharge) precautions when handling.

The camera requires reasonable thermal sinking when operating. Use stirred air and conduction to outside environment when installed in an enclosure.

The camera must be operated within the environmental limits.

Repairs and service are to be completed only by Sierra Olympia Technologies. Please refer any issues to your sales representative.

2 EXPORT NOTICE

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3 REFERENCE DOCUMENTS

Document Number	Document Title
S-D11514	ICD, Viento 10 GigE
20-70058	ICD, Viento HD10 GigE
S-D11517	User Guide, Viento GUI

4 INTRODUCTION

The Viento 10 GigE is a fixed focal length, GigE Vision LWIR imager designed for integrators and OEMs. This quick start guide will cover basic operation of this product. More detailed technical information can be found in the documentation referenced in section 5.

The Viento 10 GigE is ready to operate out of the box.

The Viento 10 GigE complies with GigE Vision 2.0, GenICam, and IEEE 802.3af PoE (power-over-Ethernet) standards. The Ethernet connector provides power, camera control, and video feed for simple installation and operation. A Molex PicoBlade connector is provided for Genlock-style frame synchronization. Background information on Genlock operation is covered in the SOTI Engineering Application Note 03, included on the delivery drive.

The camera has been preconfigured to obtain an IP address automatically from a DHCP server or from link-local addressing. The lens has been focused to infinity. The lens is threaded which allows for focus adjustment by twisting the lens.

The developer's kit includes sensor-level documentation, GigE interface documentation/SDK, and sensor-level interface software. It is not required for normal operation of the camera. Please contact Sierra Olympia Technologies Inc. for advanced direction.

5 INCLUDED ITEMS

Packaging contains the following items:

- Viento 10 GigE camera
- Delivery drive
 - Quick Start Guide (this document)
 - Viento GUI Software
 - GigE drivers and support files
 - Interface control documents and application notes

6 REQUIRED EQUIPMENT

- Ethernet cable (Cat5e or better)
- PoE switch/hub or PoE injector

7 CONNECT CAMERA TO SOFTWARE – SETUP PROCEDURE

7.1 Connect the hardware in accordance with configuration in either step 7.1.1 or step 7.1.2 below.

7.1.1 Connect the Ethernet cable directly from the camera to a PoE injector and then connect the injector to your computer with a second Ethernet cable.



Figure 1 Ethernet Connection with PoE Injector

7.1.2 Connect the Ethernet cable from the camera to a network switch/router.

NOTE: The network device must be PoE capable, or a PoE injector must be used on the camera-side of the device.



Figure 2 Ethernet Connection with PoE Switch

- 7.2 Install the Viento GUI software.
- 7.3 Start the software from the Start Menu or the installation folder.
- 7.4 To establish a connection with the camera, click **Select / Connect**.

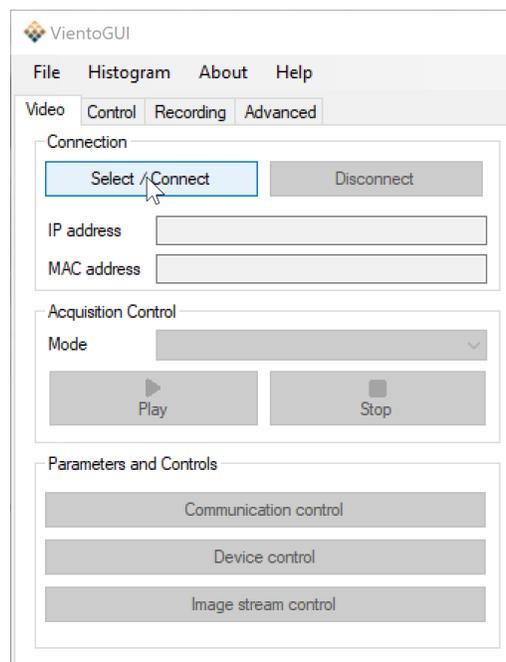


Figure 3 Viento-GUI Video Tab

- 7.5 In the Device Selection section in the Available Devices window, select the camera entry from the list.

NOTE: The camera entry will begin with “iPORT-NTx-GigE”.

NOTE: Multiple cameras may be identified by their MAC address or DHCP-assigned IP address at the end of the string.

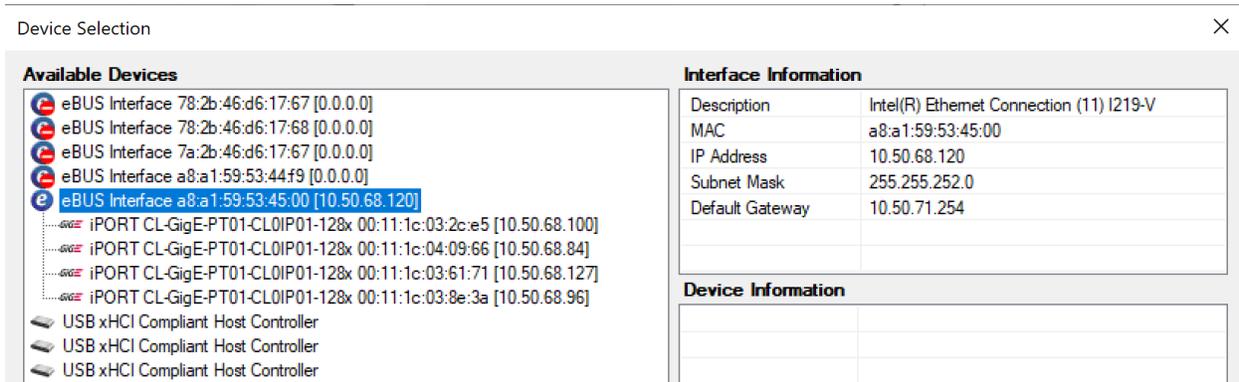


Figure 4 Viento GUI Device Selection Window

- 7.6 Click **OK** to connect.
- 7.7 To initialize the camera to 14-Bit Mono mode navigate to File > Open > **14-Bit-Mono**.

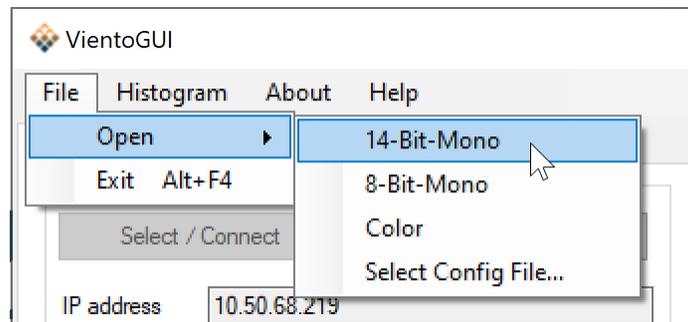


Figure 5 Viento GUI Configuration File Selection

- 7.8 Click **Play** to begin streaming.
- 7.9 Refer to *S-D11517 User Guide, Viento GUI* for more information about how Viento GUI works.
- 7.10 Non-Volatile parameters can be set in Viento GUI, see *S-D11517 User Guide, Viento GUI* section 6 for more information.

8 NOISE FILTERING

DRS offers two different noise filtering options to improve image quality, Temporal Noise Reduction (TNR) and Spatial Noise Reduction (SNR). TNR compares pixels from frame to frame and replaces them if their value is less than a specified threshold. SNR compares each pixel's value to its neighbors and ensures the intensity is bounded within the range of its neighbors. TNR and SNR are toggles that can be enabled and disabled through both DRS Camera Control Software (CCS) and serial commands. The combination of both is called the 3D noise filter by DRS, enabling 3D noise filtering results in substantial lowering of NETD. The Viento 10 and HD10 GigE is configured with both TNR and SNR on.

Serial commands:

NVP #89 – TNR Enable: 0 = Disable, 1 = Enable.

NVP #90 – TNR Threshold: range 0 to 32. Any value larger than 32 would cause significant motion lag (trailing image) on moving objects in the image.

NVP #185 – Spatial noise enable 1: 0 = Disable, 142 = Enable.

NVP #186 – Spatial noise enable 2: 0 = Disable, 293 = Enable

Note: Spatial noise enable 1 and 2 should be enabled or disabled together.

9 REVISION HISTORY

Revision	Date	Description	ECO
Rev A	2021-12-22	Initial Release	1115
Rev B	2023-10-27	Add section 8	1436
Rev C	2024-06-24	Update Images and section 3 reference documents, update section 6, update 7.1.1, add 7.10	1765