





# Questionnaire for potential buyers of systems for testing VIS-NIR cameras

The TVT series systems are specialized test systems optimized for testing high end surveillance VIS-NIR electronic cameras sensitive in both visible and near infrared spectral band and used for medium/long range surveillance at both day and night conditions.

Dear customer, please note that the higher number and ranges of the requirements marked in this questionnaire will have direct influence on the price of proposal version of TVT test system.

1. What is list of main types of imaging systems to be tested?

Type	Image of exemplary device
<input type="checkbox"/> Space VIS-NIR cameras (satellite optical payloads),	
<input type="checkbox"/> Long/ultra long range surveillance VIS-NIR cameras for Earth applications,	
<input type="checkbox"/> Blocks for medium/long range multi sensor imaging/laser system TVT ,	
<input type="checkbox"/> High end CCTV security cameras,	
<input type="checkbox"/> other:.....,	

If it is possible please attach the images of systems similar to your system (internet data).

2. What is minimal diameter of a circle that overlaps totally optics of the biggest VIS-NIR imager to be tested?  
.....

3. Please fill in the table with informations about imaging systems to be tested:

Spectral range	Maximum aperture	Nyquist frequency	Parameters to be measured	
<input type="checkbox"/> VIS	.....	Min.: Max.:	<input type="checkbox"/> Resolution	<input type="checkbox"/> Sensitivity
<input type="checkbox"/> VIS-NIR			<input type="checkbox"/> MRC	<input type="checkbox"/> SNR
			<input type="checkbox"/> MTF	<input type="checkbox"/> Responsivity
			<input type="checkbox"/> FOV	<input type="checkbox"/> Bad pixels
			<input type="checkbox"/> NEL/NEI/NEIR/NER	<input type="checkbox"/> GRD
			<input type="checkbox"/> FPN	<input type="checkbox"/> EMVA1288 tests
			<input type="checkbox"/> Distortion	<input type="checkbox"/> Other:.....
			<input type="checkbox"/> 3D Noise	
<input type="checkbox"/> Other: .....	.....	Min.: Max.:	<input type="checkbox"/> Other: .....	

4. What are simulated illuminance conditions when testing VIS-NIR imagers?
- Day
  - Night
  - Day & Night
5. What is preferable spectrum of light source used to test VIS-NIR imagers?
- Halogen Polychromatic, 2856K,
  - Multi LED Polychromatic, >5000K,

*Halogen source offers wider spectral band. LED source offers more realistic day illuminance conditions and much longer life time.*

6. What are types of alignment of VIS-NIR imagers are to be tested?
- Zoom-through boresight: angular shift of target marked by imager line of sight (indicated by aiming mark) when zooming,
  - Focus-through boresight: angular shift of target marked by imager line of sight (indicated by aiming mark) when focusing (at different range of focusing depending on version).
7. Please fill in the table with informations about other informations about systems to be tested:

Monochromatic mode tests	Calibration of light source	Simulated distance	Testing camera cores
<input type="checkbox"/> Up to four manually regulated spectral bands <input type="checkbox"/> Motorized change of narrow bands <input type="checkbox"/> Custom: .....	<input type="checkbox"/> Photometric units <input type="checkbox"/> Radiometric units <input type="checkbox"/> Silux units	<input type="checkbox"/> Fixed infinity <input type="checkbox"/> Continous regulation	<input type="checkbox"/> Noise parameters <input type="checkbox"/> EMVA1288 parameters
Video interface (up to four)	Optical table	Budget preferences	General customization
<input type="checkbox"/> Analog <input type="checkbox"/> USB 2.0 (DirectShow) <input type="checkbox"/> USB 3.0 (DirectShow, Gemicam) <input type="checkbox"/> Camera Link <input type="checkbox"/> HD-SDI/HDMI <input type="checkbox"/> LVDS <input type="checkbox"/> GigE <input type="checkbox"/> CoaXPress <input type="checkbox"/> Custom: .....	<input type="checkbox"/> No <input type="checkbox"/> Optical table for test system <input type="checkbox"/> Optical table for test system and tested system: Required space for tested system: .....	<input type="checkbox"/> Cheapest option <input type="checkbox"/> Typical option comparable to offered on the world market <input type="checkbox"/> Advanced option	<input type="checkbox"/> Space application <input type="checkbox"/> Temperature chamber <input type="checkbox"/> Cleanroom compatibility