



NEUROBOT

Z-TRACK 2

V-2k SERIES

FACTORY CALIBRATED HIGH-PERFORMANCE
3D PROFILE SENSORS

SPECIFICATION

Function	Description
Scanning Rate	<ul style="list-style-type: none"> · AOI: Up to 10K profiles/sec
Connectors	<ul style="list-style-type: none"> · 1 x M12 17-pin: Controls · 1 x M12 8-pin X-Coded: Data Ethernet port
Image Enhancements	<ul style="list-style-type: none"> · Single scan HDR · Reflection elimination · Specular configuration · Filters: programmable median · Horizontal and vertical flip · Unified Measurement Space
Multi-Sensor Sync	<ul style="list-style-type: none"> · Single low-cost wiring using off-the-shelf network switches · Sensor grouping · Configuration wizard to ease timing setup
Lasers	<ul style="list-style-type: none"> · Red: 660 nm 2M or 3R · Blue: 405 nm 2M or 3R
Reflectance Management	<ul style="list-style-type: none"> · Time integration · Laser power control: Automatic or manual · Gain control
Output Format	<ul style="list-style-type: none"> · Individual profile, range map and 3D point cloud · Depth (Z), Lateral (X), Reflectance (R) or Laser Peak Width (W) · GenICam 3.0 (SFNC 2.3) compatible 3D Data output formats compatible with · Calibrated Z; Rectified Z; Calibrated ZR/ZR+W · Native values and world units (microns/mm/inch) · 16-bit mono (1D line-scan mode) · 10-bit mono (2D area-scan mode)
Temperature	<p>Storage:</p> <ul style="list-style-type: none"> · - 40°C to +80°C (-4°F to +176°F) temperature · 20% to 80% non-condensing relative humidity <p>Operating:</p> <ul style="list-style-type: none"> · 10° C (50°F) to 50° C (122°F) · Relative Humidity: up to 90% (non-condensing)
System Requirements	<ul style="list-style-type: none"> · 1 Gigabit Ethernet · 4 GB or higher system memory
I/O	<ul style="list-style-type: none"> · 2 opto-isolated input · Configurable as a trigger input or as a start/stop trigger · 2 opto-isolated output · Serial communication port or Analog output: 4 – 20 mA
Encoder Input	<ul style="list-style-type: none"> · Quadrature (AB) shaft-encoder inputs · RS422/TTL · Up to 5 MHz (20M tick rate) · Backlash compensation

Function	Description
Scan Control	<ul style="list-style-type: none"> · Profile Trigger · Encoder input; Internal timer/counter · Fixed Scan · External input; Software; Timer/counter · Variable Scan · Part in place; Start/Stop pulse
Unified Measurement Space	<ul style="list-style-type: none"> · Intuitive GUI for rapid setup · Up to 16 sensors · Supports multiple sensors in side-by-side, circular and in-line configurations · Combine red and blue laser models · Supports models with different measurement ranges
Power Supply	<ul style="list-style-type: none"> · PoE via 8-pin X-code circular connector (optional) · Separate power via 12M 17-pin connector · +12V to 36VDC +/-10% with surge protection
Enclosure	<ul style="list-style-type: none"> · Machined aluminum · IP67 · 4 x mounting holes
Software	<ul style="list-style-type: none"> · Microsoft Windows10 (32/64-bit) compatible · Linux 32/64-bit: <ul style="list-style-type: none"> · Ubuntu/Debian, RHEL/CentOS/Fedora, SLES/openSUSE · Kernel: 2.6.32 or higher · Fully supported by Teledyne DALSA's software packages (bundled free): · Free Software <ul style="list-style-type: none"> · Sherlock 8.0 · Sapera LT 8.60 (or higher), Sapera Processing 8.0 (or higher) RTL · Linux: Teledyne DALSA GevAPI Framework (SDK) ver. 2.40 or higher · 3rd party software: <ul style="list-style-type: none"> · MVTec Halcon · NI Max/Labview · Cognex VisionPro · Stemmer CVB · Application development using C++ and Microsoft .Net (C++, C# or Visual Basic)
Markings	<ul style="list-style-type: none"> · FCC Class B, CE, ICE · ROHS, China RoHS

SPECIFICATION

Models	V2K-0004-B3 ²	V2K-0015-B3	V2K-0030-B3	V2K-0100-B3
Z-Range (mm)	4	15	30	100
Standoff Distance (mm)	33.15	32.7	43.7	64.5
Data Interface	1 GigE			
Z-Resolution (μm)	1 - 1	1 - 2	3 - 5	8 - 14
NFOV-FFOV (mm)	14.3 - 15.3	27 - 32	53 - 72	97 - 185
X-Resolution (μm)	7.03 - 7.80	14 - 17	27 - 37	50 - 95
Repeatability (+/-μm)	0.15 - 0.15	0.25 - 0.25	0.3 - 0.4	0.5 - 0.75
Linearity (% of F.S.)	<0.05%	<0.04%	<0.03%	<0.02%
Laser (nm)	405	405	405	405
Laser Class	2M / 3R	2M / 3R	2M / 3R	2M / 3R
Housing Type	T10	T20	T20	T20

Models	V2K-0150-R3	V2K-0250-R3	V2K-0300-R3	V2K-0400-R3 ²	V2K-0650-R3 ²
Z-Range (mm)	150	250	300	400	650
Standoff Distance (mm)	140	180	200	450	550
Data Interface	1 GigE				
Z-Resolution (μm)	14 - 25	22 - 45	34 - 74	43 - 71	81 - 156
NFOV-FFOV (mm)	129 - 228	157 - 325	230 - 508	400 - 659	624 - 1211
X-Resolution (μm)	66 - 117	81 - 167	118 - 261	206 - 339	321 - 623
Repeatability (+/-μm)	1 - 1.5	1.5 - 2	2 - 4	3 - 10	4 - 12.5
Linearity (% of F.S.)	<0.02%	<0.02%	<0.02%	<0.02%	<0.02%
Laser (nm)	660	660	660	660	660
Laser Class	2M / 3R	2M / 3R	2M / 3R	2M / 3R	2M / 3R
Housing Type	T30	T30	T30	T40	T40

Housing Type	Size (L x H x W) (mm)
T10	165 x 97 x 49
T20	116 x 83 x 49
T30	177 x 83 x 49
T40	380 x 83 x 49

CONTACT INFO

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