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# LERITY

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ALCEN

## VIRTAMS DUAL 4K

Multi-sensor Vision System  
with Real-time Algorithms

[Image of system available under NDA]

### APPLICATIONS

Observation

- Intelligence

Security

- Area surveillance
- Threat detection and identification

Assistance

- Railway driving aid
- Railway security assistance

### INNOVATIONS & FEATURES

- Digital continuous zoom from 1 to 64
- Low-light conditions
- Embedded image enhancement algorithms
- 2 × 4K Sensors
- IFOV < 50 μrad
- 2 simultaneous HD-SDI videos
- Athermalized camera
- Ultra high resistance to vibration and shock
- Very low RS immunity
- Low RE signature

Digital Zoom Camera without Actuator  
**Merging Monochrome and Color  
Sensor Information in Real Time**

**cameras & vision systems**

**ELECTRO-OPTIC CHARACTERISTICS**

FOV / IFOV/FOCUS DEPTH OF FIELD SENSITIVITY ZOOM SPECTRAL BAND SENSOR FTM FOCAL F# SUN PROTECTION	Field of View	Focus	Input Light Range	Spectral Band (nm)
	2° to 29° in Horizontal	Thermal compensated	0.01 to 100,000 Lux	Sensor 1 = 350-650 Sensor 2 = 330-950
	Continuous Digital Zoom	Depth of Field	Sensitivity	IFOV
	×1 to ×64 zoom range in 40 ms	50 m to ∞	0.015 lux on target (exposure = 40ms)	< 50 µrad
	Sensor 1	Sensor 2	Format	Pixel Size
	CMOS 4K Color Global shutter	CMOS4K monochrome Global shutter	3840 × 2160 – 16/9	3.45 µm × 3.45 µm
	FTM (D65)	Focal Length	Numerical Aperture	Sun Protection
>25% @ 11cyc/mrad	75 mm & 35 mm	2.8	> 6 mn (1 kW/m²)	

**DSP/FUNCTIONS**

FPGA DDR VIRTAMS COLOR DSP BIT GAIN TIME EXPOSURE H-V Flip VIDEO A&B CODING A&B DRC	FPGA	DDR	VIRTAMS	
	Ultrascale 5+ KU5P	DDR4 32 bits	Geometric transform	Photometric transform
	Color Saturation	Color Compensation	White Balance	Debayer
	Manual or Automatic	3×3 Color conversion 5600K, 3700K, 3100K, D65	Manual or Automatic	LHDI or Bilinear
	Built-in Test	Gain	Time Exposure	H-V Flip
	PBIT– IBIT–CBIT	MGC -AGC	MEC-AEC	Yes with no latency
	Video SDI A	Video SDI B	Coding A&B	DRC
SMPTE 292 1080p – 25 Hz	SMPTE 292 1080p – 25 Hz	YCrCb 4:2:2 10 bit	Contrast enhancer	

**DRI PERFORMANCE\***

TARGET	Vehicle			Human			License Plate	Facial Recognition
TRM4 VI=20km	D	R	I	D	R	I		
Day	Under NDA							
Up to quarter moon								

**INTERFACE/POWER**

WEIGHT DIMENSION VIDEO REMOTE POWER/VOLTAGE CONNECTOR EXT SYNC	Weight	Dimensions	2 Video Output	Control/GPIO
	1,100g	120 × 120 × 70 mm³	Video HD SDI A&B	RS485 2XGPIO
	Power Consumption	Input Voltage MIL-STD-1275D	Connector	External Synchro
	<11 W	+18V to +32 V	CMM221T16F22H	RS485

**ENVIRONMENTAL**

TEMPERATURE HUMIDITY VIBRATION SHOCK EMI/EMC MTBF ACCEPTABILITY	Temperature MIL-STD-810-F	Humidity MIL-STD-810-F	Vibration STANAG 4370	Shock STANAG 4370
	[-40°C – +71°C] functional	85% at 25°C	Tactical Wheeled Vehicle	80g 11 ms half sinus
	EMI STANAG 4370	EMC STANAG 4370	MTBF FIDES	Acceptability
	RE01-RE02 RS01-RS02	CE05-CS01-CS02- CS07-CS08-CS09- CS12	> 45,000 H	ROHS/REACH/CE

**PART NUMBER**

P/N	S0080013751
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\*This information is available under NDA. Please contact us.

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