

# HALOGEN™ DE210X MICRO



## THE ULTRA-THIN UNDECODED AREA IMAGER ENGINE

The Halogen™ DE210X Micro is the next generation of ultra-thin high performance 2D imager scan engines. With a typical height of only 6.5mm and two camera models available, the opportunities to incorporate scanning into new applications are endless.

The Halogen™ DE2102 scan engine features a megapixel sensor optimized for scanning high density and difficult to read codes. The dual-color LED illumination can be programmed for white or red illumination which is useful for DIGIMARC compatibility and specialized needs. The 4-Dot & Cross Laser Aimer is identical to the Halogen™ DE2X1X scan engine family.

The Halogen™ DE2101 scan engine has a VGA camera with a wider field of view optimized for everyday scanning and Blue LED aiming for simple integration without the need for Laser certification or labelling.

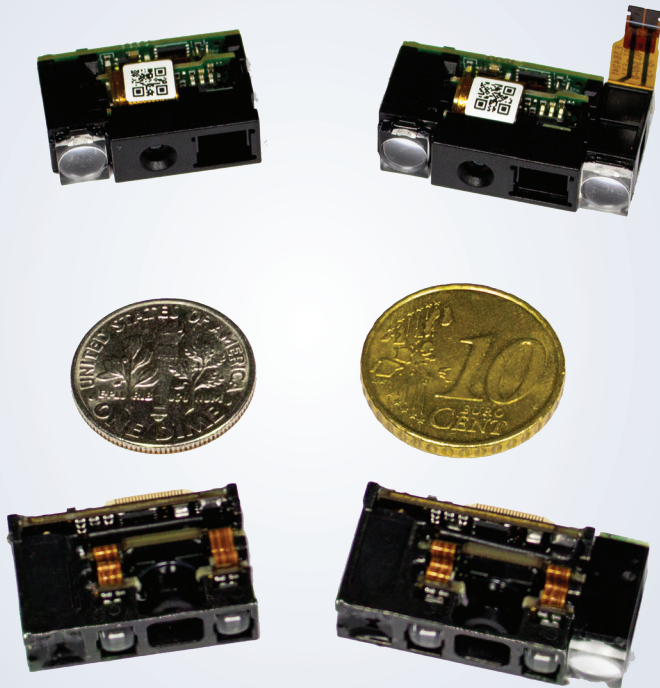
The DE210X delivers outstanding motion tolerance and decodes poorly printed bar codes as well as bar codes displayed on mobile devices.

Datalogic's 'Green Spot' technology for good-read feedback is an optional feature that provides customers with visual confirmation of a good read.

## EASY INTEGRATION

Each model uses the industry standard MIPI video interface. All Halogen DE210X Models can be connected to the DB0431 OEM Decoder Board to form a high performance Decoded Solution with both USB and RS-232 Interfaces. This provides Datalogic industry-leading decoding capability in a compact and versatile form factor.

With the use of the Datalogic Software Decoder for Engines (DSDE), customers can integrate the undecoded Halogen DE210X OEM scan engine into their device. The DSDE is available for Windows, WinCE, Linux and Android operating systems.



## FEATURES

- Thinnest 2D scan engine on the market. Able to fit into space constrained application environments
- Common footprint and mounting hole positions
- Laser center cross with four corner dots or blue LED aiming systems
- White illumination (DE2101) or programmable red/white illumination (DE2102)
- Industry standard MIPI interface
- Snappy reading performance with high motion tolerance
- Excellent reading of 1D or 2D codes on printed materials or displayed on mobile devices and computer screens
- Low power consumption
- Global Shutter Sensor for excellent motion tolerance. Same connection cable as DE211X.
- Datalogic's 'Green Spot' technology for visual good-read feedback (optional)
- Compatible with DB0431 OEM Decoder Board
- Datalogic's Software Decoder for Engines (DSDE) includes: Datalogic Decoding Library for Engines (DDLE) with decoding algorithms and engine control functions
  - API documentation and includes files for DDLE
  - Source code of referenced drivers for I2C and camera interface
  - Source code of Demo Application program
- Sold in packages of 10

## Industry - Application

- OEM Applications:
  - Self-Service Kiosks
  - Medical / Laboratory Devices
  - Lottery Terminals
  - POS Terminals
  - Access Control Devices
  - Small Wireless Scanning Devices
  - Handheld Terminals and PDAs
  - Automated Data Capture Devices



# HALOGEN DE210X MICRO

## TECHNICAL SPECIFICATIONS

DECODING CAPABILITY	
<b>1D / Linear Codes</b>	Auto discriminates all standard 1D codes including GS1 DataBar™ linear codes.
<b>2D Codes</b>	Aztec Code; China Han Xin Code; Data Matrix; MaxiCode; Micro QR Code; QR Code
<b>Postal Codes</b>	Australian Post; British Post; China Post; IMB; Japanese Post; KIX Post; Korea Post; Planet Code; Postnet; Royal Mail Code (RM4SCC)
<b>Stacked Codes</b>	EAN/JAN Composites; GS1 DataBar Composites; GS1 DataBar Expanded Stacked; GS1 DataBar Stacked; GS1 DataBar Stacked Omnidirectional; MacroPDF; MicroPDF417; PDF417; UPC A/E Composites

ELECTRICAL	
<b>Current</b>	DE2101 <ul style="list-style-type: none"> <li>Operating (RMS Typical): 135 mA</li> <li>Standby / Idle (RMS Typical): 12 mA</li> <li>Low Power (RMS Typical): 1mA</li> </ul> DE2102 <ul style="list-style-type: none"> <li>Operating (RMS Typical): 200 mA</li> <li>Standby / Idle (RMS Typical): 25 mA</li> <li>Low Power (RMS Typical): 0.2 mA</li> </ul>
<b>Input Voltage</b>	Sensor+Digital (Vcc1): 3.0V-3.6V Illumination (Vcc2): 3.0V-5.5V I/O (Vcc3): 1.7V-3.6V

ENVIRONMENTAL	
<b>Ambient Light</b>	0 - 100,000 lux
<b>Humidity (Non-Condensing)</b>	5 - 95%
<b>Shock</b>	2500 G at 23 °C at 0.85 m sec.
<b>Temperature</b>	Operating: -30 to 55 °C / -22 to 131 °F Storage/Transport: -40 to 70 °C / -40 to 158 °F

INTERFACES	
<b>Interfaces</b>	MIPI video port on a 21 pin ZIF connector

PHYSICAL CHARACTERISTICS	
<b>Dimensions</b>	Nominal: 6.5 H x 21.0 W x 14.0 D mm / 0.26 H x 0.83 W x 0.55 D in Maximum: 6.8 H x 21.3 W x 14.5 D mm / 0.27 H x 0.84 W x 0.57 D in
<b>Dimensions with Green Spot</b>	Nominal: 6.5 H x 26.0 W x 14.0 D mm / 0.26 H x 1.02 W x 0.55 D in Maximum: 6.8 H x 26.5 W x 14.5 D mm / 0.27 H x 1.04 W x 0.57 D in
<b>Weight</b>	DE2101: 2.0 ± 0.2 g (no Green Spot); 2.3 ± 0.2 g (with Green Spot) DE2102: 4.2 ± 0.5 g (no Green Spot); 4.5 ± 0.5 g (with Green Spot)

READING PERFORMANCE	
<b>Imager Sensor</b>	DE2101: 640 x 480 pixels DE2102: 1280 x 800 pixels
<b>Frame Rate</b>	DE2101: 100 Frames/Sec DE2102: 60 Frames/Sec
<b>Light Source</b>	DE2101: Aiming: Blue LED Illumination: White LEDs DE2102: Aiming: 650 nm VLD Illumination: Software configurable for White or Red LEDs
<b>Print Contrast Ratio</b>	25%
<b>Field Of View</b>	DE2101: 48°H x 34°V DE2102: 42°H x 26°V
<b>Reading Angle</b>	Pitch: +/- 60°; Roll (Tilt): +/-180°; Skew (Yaw): +/- 60°
<b>Reading Indicators</b>	Datalogic 'Green Spot' Technology for visual good-read confirmation (Optional)
<b>Resolution (Maximum)</b>	1D linear: 2.5 mils (DE2102) -4 mils (DE2101) Data Matrix: 6 mils (DE2102) - 7.5 mils (DE2101) PDF417: 3 mils (DE2102) - 6.6 mils (DE2101)

READING RANGES	
<b>Typical Depth of Field</b>	Minimum distance determined by symbol length and scan angle. Printing resolution, contrast, and ambient light dependent.
<b>1D / 2D Codes: DE2101</b>	5 mils Code 39: 5.0 - 19.0 cm / 2.0 to 7.5 in 10 mils Data Matrix: 5.0 - 13.0 cm / 2.0 to 5.1 in 13 mils EAN-13: 4.0 - 33.0 cm / 1.6 to 13.0 in 20 mils Code 39: up to 46.0 cm / up to 18.1 in
<b>1D / 2D Codes: DE2102</b>	3 mils Code 39: 8.0 - 18.0 cm / 3.1 to 7.1 in 5 mils Code 39: 4.0 - 29.0 cm / 1.6 to 11.4 in 10 mils Data Matrix: 5.0 - 26.0 cm / 2.0 to 10.2 in 13 mils EAN-13: 4.5 to 55.0 cm / 1.7 to 21.7 in 15 mils Data Matrix: 5.5 - 35.0 cm / 2.2 to 13.8 in 20 mils Code 39: up to 90.0 cm / up to 35.4 in

SOFTWARE INTEGRATION	
<b>Operating System Support</b>	WinCE; Android; Windows; Linux
<b>Tools</b>	Datalogic Software Decoder for Engines (DSDE)

SAFETY & REGULATORY	
<b>Environmental Compliance</b>	Complies to China RoHS; Complies to EU RoHS
<b>Laser Classification (DE2102)</b>	Caution Laser Radiation - Do not stare into beam; IEC 60825 Class 2

WARRANTY	
<b>Warranty</b>	18-Month Factory Warranty

### DIMENSIONS OF SCAN ENGINE (MEASUREMENTS IN MILLIMETERS)

