

ADVANTAGE ENGINE

Embedded Image Engine | OEM Smart Camera

- Powerful and reliable vision and identification tools from the industry leader in machine vision technology
- Best-in-class 1-D and 2-D code reading
- Easy and powerful application development software
- Flexible optics
- Exceptionally compact design



The Cognex Advantage™ engine products offer original equipment manufacturers (OEMs) the ability to leverage the power of Cognex vision and barcode reading tools in a product that is exceptionally compact, flexible but also cost effective. The Advantage OEM product family from Cognex delivers best-in-class 1-D and 2-D code reading, plus a full suite of industry-proven vision tools to locate, analyze and inspect parts or features. The Advantage engines include proven, easy-to-use application software and are designed for deep integration into OEM products.

Solve the Most Challenging Applications

The power of industry-proven Cognex vision tools can locate, inspect and analyze parts accurately and reliably. Whether the application is to identify the pattern of a part, count objects, read text (OCR), read a barcode, or measure distances, Cognex Advantage engines provide OEMs with a reliable and easy-to-implement solution.

Read the Most Challenging Codes

Cognex is the leader in industrial barcode reading technology and the Advantage engines benefit from our market leadership and experience. Advantage engines include the advanced 1DMax® with Hotbars® and 2DMax® code reading algorithms allowing them to read the most difficult codes. Cognex code reading technology provides superior performance even on codes with scratches, voids, low contrast, rotation or specular reflection.

Flexible Integration, Optics and Communications

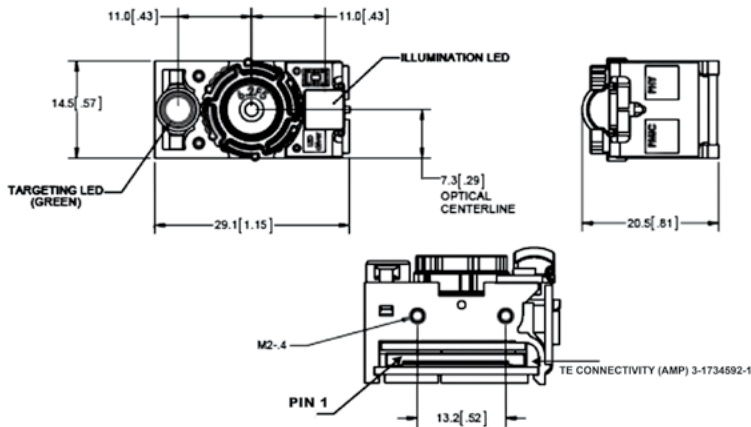
The Advantage engines allow maximum flexibility for OEMs to custom design Cognex smart camera technology into their product. The Advantage engines provide two communication options—connect, communicate and transfer images via Ethernet or send data with RS-232. The Advantage engines can be integrated with the standard Cognex I/O board with a RJ-45 connection for Ethernet and a cable with DB-15 connector for power, I/O and RS-232 communication. The modular lens design provides the ability to use different lenses for optimal working distance and field-of-view requirements. Plus, the built-in illumination simplifies integration requirements.

Simple Application Development Software

Advantage engines include easy-to-use Cognex application software to quickly test and develop the vision and barcode reading tools needed for specific requirements. Cognex software and vision tools provide unmatched flexibility, ease of use and control.

SPECIFICATIONS

Dimensions	14.5 mm (H) x 29.1 mm (W) x 20.5 mm (L)
Weight	9.5 g
Power	4.5 to 5.5 VDC (2.5 W maximum)
Operating Temperature	0 °C to 40 °C (32 ° to 104 °F)
Illumination	Integrated red LED illumination
Imager	AE2: 752 x 480, 1/3 inch CMOS AE3: 1280x960, 1/3 inch CMOS
Optics	M12 6.2 mm 3-focal position lens standard Optional lenses available
Communication	Ethernet 10/100 (configuration plus data and image output) RS-232 (data output)
Connections	Without I/O Board: 31 Pin ZIF Connector With I/O Board: RJ-45: Ethernet DB15: power, I/O and serial
Inputs	2 digital (1 general purpose, 1 trigger, 3.3V LV TTL)
Outputs	3 digital (2 general purpose, 1 external strobe, 3.3V LV TTL)
Environmental	RoHS and WEEE Compliant Humidity: 95% (non-condensing)
Symbologies	2-D: Data Matrix, QR Code; 1-D: Code 128, Code 39, Interleaved 2 of 5, Pharmacode, UPC/EAN, Code 93, Codabar, GS1-128, POSTNET, PLANET, Japan Post, Australia Post, UPU, USPS OneCode; Composite: PDF417, Micro PDF417, GS1/Databar
Vision and ID Tools (partial list)	IDMax, 2DMax, PatMax®, PatQuick®, normalized correlation, edge, caliper, geometry tools, blob, histogram, OCR, OCV, image filtering tools



ZIF PIN NUMBER	SIGNAL
1	Status LED 0/ ENET Link Status LED 0
2	Status LED 1/ ENET Link Status LED 1
3	Power On Reset_L
4	Input
5	Power (5V @ 2.5W max)
6	LED illumination Strobe
7	LED Illumination PWM (Intensity)
8	Ground
9	UART_RX
10	UART_TX
11	UART_CTS
12	UART_RTS
13	Output 1
14	Output 2
15	Output 0
16	Reserved
17	Trigger
18	SPI1_MISO
19	SPI1_MOSI
20	SPI1_CLK
21	SCL
22	SDA
23	Power (5V @ 2.5W max)
24	Reserved
25	Reserved
26	Ground
27	Ethernet 10/100 TX+
28	Ethernet 10/100 TX-
29	Ground
30	Ethernet 10/100 RX+
31	Ethernet 10/100 RX-

COGNEX

Companies around the world rely on Cognex vision and barcode reading solutions to optimize quality, drive down costs and control traceability.

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