IMAGETEAM™ 4410 ESD
Hand Held 2D Image Readers for ESD-Sensitive and Clean Room Applications

Hand Held
PRODUCTS™

Features

Supports All Popular 2D Symbologies - IT4410ESD supports all popular matrix and stacked linear symbologies: MaxiCode, Data Matrix, QR, and PDF417. Additional symbologies will be added as emerging codes are approved by AIM.

Clean Room Ready - Cleaned and triple-bagged for class 100 environments.

ESD Labels - Labels are located either behind the optically coated, grounded, conductive reader window inside the cable well, or are manufactured from conductive material and attached with conductive adhesive.

Low Particulation and Contamination - The housing material is slough-resistant and provides excellent electrostatic and grounding with low particulation. All labels on the outside of the reader are located far from the front of the reader.

ESD-Resistant Cables - Stainless steel, grounded cables, which eliminate one more source of electrostatic build up, are available for both true RS-232 and wedge interfaces.

Omni-Directional Scanning - The video technology basis for the IT4410ESD means it can offer omni-directional scanning, even on linear codes, greatly simplifying operator training and increasing productivity.

Auto-discriminates Between Supported Symbologies and Fonts - Reads all major linear, stacked linear, and matrix bar codes, as well as machine readable fonts used in Optical Character Recognition (OCR).

2D Print Quality Assessment (PQA) - An easy and inexpensive approach to providing test results useful for 2D bar code symbol process control, and improvement of the overall 2D data acquisition system.

The Hand Held Products IMAGETEAM™ (IT) 4410ESD 2D Image Readers are high performance readers of high density linear (1D), stacked (PDF417), and matrix (2D) codes, that have been designed specifically for the stringent requirements found in clean room assembly of sensitive electronic components. With a clean room rating of 100, ESD-resistant labeling, low particulation and contamination plastics, and ESD-resistant cables, the IT4410ESD readers are the most suitable hand held 2D image readers for ESD-sensitive and clean room environments today. Together with our IT3800ESD Hand Held Linear Imager, Hand Held Products offers the most complete line of ESD-resistant readers.

Internal components of IT4410ESD 2D Image Readers are isolated from the conductive path formed by the case, output connector shield, and special shielded cable with drain wire. The 2D Image Reader is rated for discharges up to 15kV without damage. All materials are tested using the methods described in *ASTM D257, Standard Test Methods for Conductance of Insulating Materials*. The surface resistivity is rated at less than 10E5 ohms/square inch. Triboelectric residual charge measured with a no-contact electrostatic field meter is less than 5 volts on any surface.

The IT4410ESD 2D Image Reader provides omni-directional and auto-discrimination decoding for symbologies, such as Data Matrix, PDF417, QR, Aztec, Code 39, Code 128, Interleaved 2 of 5, Codabar, UPC, and EAN, as well as RSS-14, composite codes, postal codes, and MaxiCode. Additional symbologies will be added as required.

Two focal point models are available: the IT4410E-HD (2 inch (5.1 cm) focal point) which is ideal for reading matrix (2D) symbols that have cell sizes less than 10 mil (.010 in.), and the IT4410E-HD10 (3 inch (7.6 cm) focal point) for reading matrix (2D) symbols with cell sizes greater than 10 mil (.010 in.). Both are excellent readers of high density linear (1D) symbols.

To learn how the IT4410ESD can work for you, contact us at any of the locations listed on the back or visit us at **www.handheld.com**.

IMAGETEAM™ 4410ESD Specifications

Performance

4410E-HD Focal Point: 2 inches (5.1 cm) from nose
4410E-HD10 Focal Point: 3 inches (7.6 cm) from nose

HD Working Range: (typical)	6 pt OCR 20 cpi	6.6 mil QR (.017 cm)	6.6 mil Data Matrix (.017 cm)	4 mil Linear (.01 cm)
Near	2 in. (5.1 cm)	1.7 in. (4.3 cm)	1.7 in. (4.3 cm)	1.6 in. (4.6 cm)
Far	3.5 in. (8.9 cm)	2.45 in. (6.2 cm)	2.45 in. (6.2 cm)	2.7 in. (6.9 cm)

HD10 Working Range: (typical)	10 mil QR (.025 cm)	10 mil Data Matrix (.025 cm)	5 mil Linear (.013 cm)
Near	2.0 in. (5.1 cm)	2.2 in. (5.6 cm)	2.75 in. (7.0 cm)
Far	4.0 in. (10.2 cm)	3.8 in. (9.6 cm)	3.75 in. (9.5 cm)

Rotational Sensitivity: 360°
Viewing Angle: ±45°
Ambient Light: Total darkness to 100,000 lux (full sunlight)
Aiming: 660nm LEDs provide bright aiming line

Symbologies

2 Dimensional: MaxiCode, PDF417, MicroPDF417, Aztec, Aztec Mesa, Data Matrix, QR Code, Code 49, UCC Composite, Snowflake*, Vericode*, Dataglyphs*

Linear: Code 39, Code 128, Codabar, UPC, EAN, I 2 of 5, RSS-14, BC 412*, Code 93, Codablock
* available to licensed users only

Postal: Postnet (US), British Post, Canadian Post, Japanese Post, KIX (Netherlands) Post, Planet Code
OCR Fonts: OCR-A, OCR-B
Interfaces: RS232, Wedge, and HHLC (Code 128 Emulation)
Programmable Options: Baud, Parity, Data Formatting, Code Options

Mechanical/Electrical

Dimensions
Length: 4.8 in. (12.2 cm)
Width: 2.5 in. (6.4 cm)
Height: 5.6 in. (14.2 cm)
Weight w/o cord: 8 oz. (224 g) or less
Power Requirements: 4 to 9 volts
Current Draw: Lower Power Mode - average @ 5 VDC-40mA
Medium Power Mode - average @ 5 VDC-125mA
High Power Mode - average @ 5 VDC-175mA
Standby Current: < 200µA @ 5V

Environmental

Temperature
Operating: -0°C to 50°C
Storage: -40°C to +70°C
Humidity: 95% RH, non condensing at 50°C
Shock: 10 drops 5 ft. to concrete @ room temperature
ESD: Functional after 15KV discharge
Surface Resistivity: Less than 10E5 ohms/square inch as measured by ASTM D257, Standard Test Methods for Conductance of Insulating Materials
Triboelectric Residual Charge: Less than 5 volts as measured by non-contact Electrostatic Field Meter
Agency: FCC Class A, CE

CE Complies with EMC 89/336/EEC and LVD 73/23/EEC