LANEHAWK™ LH4000

⊕DATALOGIC

REDUCING SHRINK

The LaneHawk™ LH4000 unit is a loss prevention solution that turns the bottom-of-basket (BOB) into profits in real-time. The LaneHawk LH4000 unit detects and recognizes items as part of the transaction, making sure stores get paid for their BOB items.

The LaneHawk unit solves the BOB loss problem in a way that other products cannot by including BOB items as part of the transaction. The LaneHawk LH4000 unit reduces shrink, increases revenue and is designed to pay for itself in less than 12 months.

HOW THE LANEHAWK LH4000 UNIT WORKS

A smart camera is flush-mounted in the checkout lane at foot level, continuously watching for items on the bottom of shopping carts. Using Visual Pattern Recognition (ViPR™) software, the camera is able to detect and recognize items that pass by the camera and then send the UPC information directly to the POS. At tender time, the cashier verifies the items that were found under the basket, scans those items and then finalizes the transaction. When using the LaneHawk LH4000 unit, the retailer is assured to get paid for those items.

INSTALLATION

The LaneHawk LH4000 unit consists of an 'Intelligent Lighting and Camera Unit' (iLCU), an ethernet cable and mounting hardware for each lane. The components mount on the inside of the lane so they do not interrupt customer throughput. A LaneHawk back-office server processes grocery item images and is integrated with the store's POS controller. The LaneHawk unit has been ruggedly designed to work in the demanding retail checkout environment.

ADVANTAGES

- **Reduced Shrink and Rapid ROI:** Helps boost profits per lane (per day) by up to 10%, leading to a quick return on investment (ROI) of less than 12 months.
- **Integration with Your POS System in Real-time:** No other BOB solution is able to recognize a BOB item and then automatically send the item description and UPC information directly to the POS.
- **Flexible, Cost-effective Scalability:** The LaneHawk LH4000 BOB loss prevention unit leverages open, industry-standard technologies to allow you to easily incorporate next-generation retail technologies into your store infrastructure.
- **Tighter Business Controls:** The LaneHawk LH4000 unit captures transaction data and BOB images to enable detailed reporting on what is going through the checkout lanes under the cart.
- **Training of Cashiers:** The LaneHawk LH4000 unit requires minimal cashier training and operates within the transaction workflow. The cashier is not interrupted until he/she is ready to process the BOB items. Productivity is enhanced and BOB items cannot be ignored.

ViPR™ SOFTWARE

How the ViPR Software Works

- First, a database of high resolution images (called a modelset) is created containing the product packaging of common BOB items. ViPR software extracts key points (feature points) from these images that create a unique identifying pattern for each UPC, similar to a fingerprint.
- When a product passes the LaneHawk unit, an image is captured of the product and the ViPR software is used to extract feature points from that image. The ViPR software is then able to identify the product by matching the pattern of feature points in the image to the patterns of feature points stored in the modelset. These computations are streamlined to produce results in a fraction of a second, which allows the recognition to happen in real-time.

LANEHAWK™ LH4000

TECHNICAL SPECIFICATIONS

ELECTRICAL

AC POWER REQUIREMENTS	AC Input: 100 - 240 VAC, 50-60 Hz Power Consumption: Operating (Nominal): 6 Watts
POWER OVER ETHERNET REQUIREMENTS	Complies with IEEE 802.3af-2003 Power Consumption (Nominal): 7 Watts

ENVIRONMENTAL

AMBIENT LIGHT	0-86,080 lux
HUMIDITY (NON-CONDENSING)	5 - 95%
ESD PROTECTION (AIR DISCHARGE)	25kV
TEMPERATURE	Operating: 10 to 40 °C / 50 to 104 °F Storage/Transport: -40 to 70 °C / -40 to 158 °F

INTERFACES

PRIMARY AUXILIARY PORTS	USB Host (Type A) (x2); USB Device Port
INTERFACE	100 MBit Ethernet
REMOTE MANAGEMENT CAPABILITIES	LaneHawk™ Admin Console allows the customer remote access to the LaneHawk camera.

PHYSICAL CHARACTERISTICS

DIMENSIONS	Depth (in Check Stand): 10.0 cm / 3.9 in Height (Outer Frame): 20.1 cm / 8.2 in Length (Outer Frame): 31.9 cm / 12.6 in
INDICATORS	Visual: Power; Network Activity; IP Address obtainment/Server Connection; Optical Flow detection; Heartbeat

RECOGNITION PERFORMANCE

IMAGE CAPTURE	1280 x 1024, JPEG 8-bit grayscale
ILLUMINATION	Multiple Diffused LEDs: Orientation optimized for eye comfort
RECOGNITION COVERAGE	Capable of recognizing items up to 91.4 cm / 36.0 in from glass

SAFETY & REGULATORY

AGENCY APPROVALS	The product meets necessary safety and regulatory approvals for its intended use. The Quick Reference Guide for this product can be referred to for a complete list of certifications.
ENVIRONMENTAL COMPLIANCE	Complies to China RoHS; Complies to EU RoHS; Complies to REACH – EC1907/2006

SERVER SPECIFICATIONS

SUPPORTED OPERATING SYSTEMS	Ubuntu 10.04 and 12.04 SLES 9.3 and 11 Windows Server 2003 and 2008 Windows 7 Professional
TYPICAL HARDWARE REQUIREMENTS FOR A 15-LANE STORE	Dual core i3 3.0 gHz CPU (or similar) 4 GB RAM 80 GB hard drive DVD drive (optional) 10/100 ethernet card (2 ethernet cards preferred)

VALUE ADDED FEATURES

RISK REPORTS	Risk reporting provides an audit trail to deter collusion and 'Sweethearting', providing powerful forensic data to loss prevention personnel when investigating suspicious behavior.

WARRANTY

WARRANTY	90 Days