DEFENDER IM SERIES

MANAGING LIFT TRUCK IMPACTS IN REAL TIME

IVDT
INTEGRATED VISUAL DATA TECHNOLOGY INC.
Solutions that lift your business

The simplest most productive lift truck impact monitoring system for the material handling industry.

DEFENDER IM SERIES LIFT TRUCK SAFETY AND IMPACT MANAGEMENT SYSTEMS

Creating safe and cost responsible work environments Defender onboard vehicle management systems will help drive accountability and productivity to your lift truck fleet. Modular in design, allows you to select only options that benefits your business today and add when needed for tomorrow.

DEFENDER VEHICLE MANAGEMENT: MORE THAN JUST IMPACTS

A DIFFERENT APPROACH TO IMPACT MANAGEMENT

Impacts are a common occurrence in most material handling applications. When they are not managed, they can adversely affect both safety and operating costs as a result of downtime and damage. Vehicle impact systems have been on the market for several years with limited success. The reason that most systems fail is that focusing entirely on impacts alone does not solve core problems.

WHY DO TRADITIONAL SYSTEMS FAIL?

1. Lift Truck is **Shut Down** after impact which creates gap in productivity and a safety liability.
2. Systems are too **Difficult** to properly adjust, and the sensitivity does not reflect the application.
3. Too much **Time** is required by managers and supervisors to restart the system and manage disruptions.
4. **Operators** are not involved in the process which affects acceptance and accountability.

Defender vehicle management systems provide more than just impact recognition. They introduce tools to promote accountability, safety awareness and productivity. Beginning with empowering the operator Defender and SkidWeigh Plus systems will allow you to manage and control the following:

PROPERTY DAMAGE

- Material Handling Equipment Damage
- Pallet Racking Damage
- Product Damage
- Docks and Door Damage
- Infrastructure Damage

HEALTH AND SAFETY

- Ensure Compliance with OSHA
- Keep Record of Performed Pre-Shift Safety Checks
- E-Mail and Webpage Notification and Reporting*

OPERATOR BEHAVIOR

- Ensures Individual Accountability with Asset Assignment
- Creates Best Practice Safety Culture
- Provides Operators Tools to Avoid Investigative Situations

OPERATIONAL PRODUCTIVITY

- Reduce Equipment Downtime
- Utilization and Productivity Tools Available*
- Ability to Remain Connected to Fleet Through E-Mail and Webpage*

*Available on the SkidWeigh ED4-IM and Defender IM3 (Requires Base Station Communication Hub)

DEFENDER VEHICLE MANAGEMENT

FOR FLEETS OF 1 TO 100 PLUS

DATA COMMUNICATION PLATFORMS AND A MULTITUDE OF OPTIONS

When looking to secure your fleet with safety and productivity event notifications, the ability to access data is key to a successful and continuous implementation. The Defender IM series offers 2 data communication platforms that fit fleets of all sizes and accessibility. The IM2 series is designed for smaller fleets of lift trucks that are easier to access on a regular basis making USB data extraction practical and affordable. The IM3 series provides the same safety and productivity suite of options with the ability to not only download the data via USB but to receive data in real time to a LAN webpage and or email notification. The ability to receive data as it happens to a PDA device means that you can stay connected to your fleet wherever you are and create data specific reports as needed on the website. This is perfect for larger multi-shift operations where approaching individual lift trucks would be to time consuming.

DEFENDER IM2

- Keypad or RFID Access Control
- OSHA/MOL Pre-Shift Safety Check
- Low and High Impact Notification
  - Sonic Safety Strobe
- Vehicle Number Identification
- (Option) SkidWeigh ED3 Weighing Suite**
- Data Reporting
  - USB Extraction
  - Formatted Reports

DEFENDER IM3

- Keypad or RFID Access Control
  - OSHA/MOL Pre-Shift Safety Check
- Low and High Impact Notification
  - Sonic Safety Strobe
- Vehicle Number Identification
- (Option) SkidWeigh ED4 Weighing Suite**
- Data Reporting
  - USB Extraction
  - Formatted Reports
  - LAN Webpage
  - FTP Archive
  - SMTP Email Relay Notification

**SkidWeigh ED Weighing Suite ED3-IM2/ED4-IM3

If your business and or fleet grow over time the IM2 can be upgraded to the IM3 simply and cost effectively.

ONLY THE SAFETY AND PRODUCTIVITY OPTIONS THAT YOU NEED

Only IVDT's modular design allows you to take advantage and pay for only those functions that will benefit your business and budget.

KEYPAD OR RFID ACCESS CONTROL

Control who is allowed to use the equipment by way of standard 3-digit keypad access control or RFID card or fob reader. Simple to program and ensures that every vehicle asset has an authorized and identifiable operator during operation.

OSHA/MOL PRE-SHIFT SAFETY CHECK

Pre-shift safety checks are not only mandatory before commissioning a lift truck into operation but also a great way to determine current status of equipment. Whether it's daily, continental or rolling eight the Defender IM series provides a programmable safety check, which times the operator start to finish.

LOW & HIGH IMPACT NOTIFICATION

The Defender IM series doesn't seek to entrap operators when external forces mount. The system first provides on-board notification to the operator when a potentially unsafe force occurs. After that the system records and notifies using the patented sonic safety strobe and or email alerts.

VEHICLE IDENTIFICATION NUMBER

When an event occurs not only is it important to know who was on the truck but also what truck is involved. With the ability to program vehicle numbers the data provides the complete story.

SKIDWEIGH ED WEIGHING SUITE

Only IVDT offers a vehicle management system that combines the safety functions of the Defender IM series and integrates them into the ED series weighing suite, which offers the following benefits. Lift-N-Weigh 4 second weight read out, Accumulative Totaling, Tare / Net Weight, Parts Count, and Waybill Load Weight Identification.

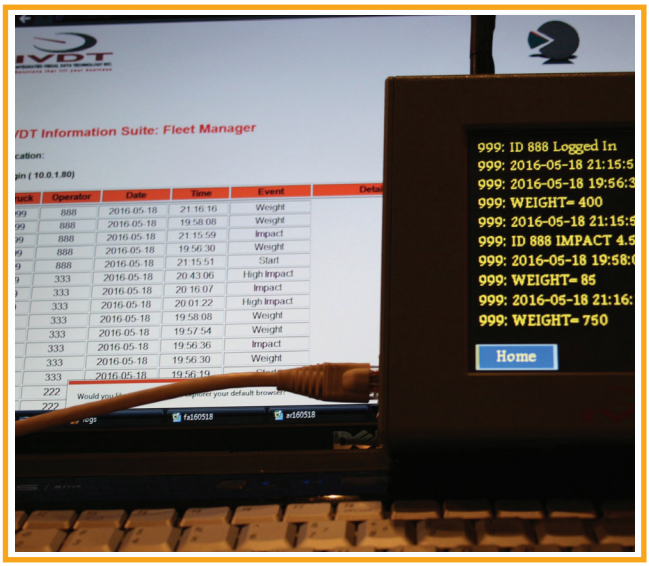
DATA ON DEMAND

DATA SIMPLICITY IS BUILT INTO BOTH THE DEFENDER IM2 AND THE IM3

The Defender series provides a number of data options for both small and large fleets. The IM2, provides a downloadable USB data extraction with formatted reports. The IM3 provides the same with the ability to connect to your network and provide a LAN webpage, FTP data archival, and SMTP email relay notification in real time.

IM2 WITH USB DATA EXTRACTION

From the moment you turn on the vehicle and enter an authorized access control code or RFID card the Defender IM2 is recording usage event data. Along with a 'Real Time' clock all usage events are date stamped and chronologically logged in the IM2's SDRAM built in hard drive. Whenever information is needed all that is required is to access the Admin Menu via a password insert a USB flash drive and follow the download instructions. Within seconds a date encoded file is on the USB with all event notification present in an .xls format. Insert into any computer terminal and you can access and manipulate the data to focus on what's important at the time. Store in a file folder and the date encoded file provides complete history on and up to that date. With an SDRAM hard drive capable of approximately 2 years of circle write space the Defender IM2 is perfect for smaller fleets.



- **Not Cloud or Cellular Based (No Monthly Fees)**
- **Does not rely on Wi-Fi (No Security Compromise)**
- **Connects in seconds to any network (Similar to a Digital Copier)**
- **Provides LAN webpage portal**
- **Email notification on critical events**
- **FTP archive backup**

IM3 WITH THE BASE STATION COMMUNICATION HUB

For larger fleets with more shift demand accessing data requires a more practical approach. The Defender IM3 along with the Base Station Communication Hub allows you to retrieve your data in 'Real Time' when you want on your network supported computer terminal. Using 900 Mhz, RF license free technology, the onboard IM3 units are in constant communication with the Base Station Communication Hub repeatedly sending and acknowledging all vehicle data. The Base Station's primary function is twofold, the first it serves as the systems information center archiving all the data mentioned above. The secondary and most dynamic function is that it is a dedicated data server that connects to your network through an I.P. address and the setup of an SMTP mail server. The system acts independent and does not rely on or compromise host network utility space, does not utilize cloud based external platforms and does not rely on wi-fi and the security compromise that is often associated with. Simply assigning a DHCP or static IP and the setup of a mail server will get you connected to your fleet in seconds. Once connected you can access your fleet in 'Real Time' through a password protected LAN webpage where you can sort and arrange all event data specific to your query. Once you have created the report required you can download and archive. Critical response data that is vital to your productivity and the safety of your business can be sent automatically to your email and subsequently your cell phone or PDA device.

1

SPECIFICATION DETAILS

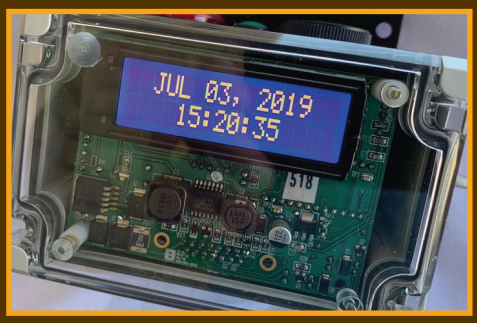
- Voltage 12 to 55 VDC (90V Available)
- Operating Current < 75mA
- A/D Converter 10 Bit Resolution
- Real Time Clock with Battery Backup
- 16 Bit Micro Controller
- 64 Mbit Flash Memory
- Output Relay 2A, SPDT
- Audio / Visual Strobe Light Alert
- LCD Display, Low Temperature Version
- Technology: Flash Microcontroller
- ABS Enclosure: (120 x 80 x 55mm)
- Weight 350g without bracket
- IP65 NEMA 4X, UL Listed Silicon Sponge Gasket
- Operating Temperature -40C to +75C
- **Transducer Stainless Steel AIDI303**
- Port Connection: Male ¼"-18 NPT
- Built in Pressure Snubber
- Reverse Polarity Protection
- Voltage/Short Circuit Protection
- Shock: IEC 60068-2-6
- Insulation Voltage: 500 VDC
- Response Time <1 ms
- Load Cycle: < 1 00Hz
- EMC Conformity

2

DEFENDER IM SERIES ADVANTAGES

- Installs in Approximately 2 hours or less
- Does not Require Maintenance of Ongoing Calibration
- No Monthly Fees
- No Security Risks
- Self-Reliant Communication Protocol
- End User Sustainable
- Modular Design Allows for Enhanced Option and Additions
- Operator Friendly / No Obstruction
- Real Time Event Stamp
- Web Portal Interface
- IP65 Suitable for Harshest Environments
- 'Lift-N-Weigh' Operation no Interruptions to Operation
- Weighing Accuracy +/-1% of Rated Capacity or Better
- Comes Complete with Universal Mounting Brackets
- 2 Year Warranty
- 12 Hour Customer Support Line

3



Integrated Visual Data Technology Inc.

For over 30 years IVDT has designed and manufactured industry leading onboard weigh scales, vehicle productivity and safety systems for material handling vehicles. Specializing in delivering return on investment solutions for businesses, global customers benefit from increases in productivity and best in class safety compliance. IVDT's innovative modular design allows system users to experience flexible, comprehensive and customized solutions enhancing the efficiency and safety of material handling fleets of all sizes.

With over 200 software algorithms and hardware configurations IVDT provides customized solutions tailored to the end user The ease and versatility of plug in technology and stock manufacturing allow IVDT to deliver 90% of those solutions through lift truck dealers and OEM manufacturers worldwide.

Our experienced technical staff provide the industries best response to solution enquiries, technical support and product deliveries.

3439 Whilabout Terrace Oakville,
Ontario L6L 0A7, Canada

905-469-0985

905-825-9494

sales@skidweigh.com

www.skidweigh.com

© Integrated Visual Data Technology Inc. VIM22020