![red lion logo]

ProducTVity Station

Real-time performance monitoring for the factory floor. And beyond.

> Transforms standard consumer TVs into versatile, real-time KPI production scoreboard and Andon systems, in minutes
> Sends real-time displays or text alerts to mobile devices

industrial
automation

▶▶▶ Increased profitability through insight.

Continuous improvement driven by real-time information.

The principles of Lean manufacturing are now widely acknowledged as the most effective method for continuous improvement of factory productivity, flow, quality, uptime and waste reduction. Whether Kaizen, Six Sigma, Total Quality Management or another initiative, these operational excellence programs rely heavily on the measurement and display of **Key Performance Indicators (KPIs).**

KPIs are top level metrics that illustrate the utilization of facilities, time, material and personnel for manufacturing and process operations. Linked to target values that indicate gaps between actual and ideal performance, KPIs communicate success or failure of processes or operations, as well as measure the positive or negative effect of changes.

To make this data actionable, KPIs are communicated in an understandable and meaningful way to those responsible for it – production floor personnel and their supervisors. In the past, this was done with a chalkboard. Today, large electronic scoreboards can automate communication to the entire plant floor in real time. Studies have shown how measuring and displaying KPI produce immediate gains in operator performance, if for no other reasons than monitoring awareness, pride or employee competitiveness.

The KPIs most important to a specific company will vary among potentially hundreds of values. Examples of commonly used KPIs in manufacturing are:

> **Count:** Total product, good/bad/reject ratio, waste
> **Rate:** Count per minute/hour, per cell/line/shift
> **Target:** Goals displayed against actual time to goal
> **Takt Time:** Time per cycle/task

Beyond individual KPIs are composite metrics that express more complex calculations of overall performance into a simplified metric, such as:

> **OEE:** (Overall Equipment Effectiveness) performance and quality relative to designed capacity during scheduled operational hours
> **TEEP:** (Total Effective Equipment Performance) measures OEE against calendar hours, i.e., 24/7/365

In the most efficient manufacturing or process environment, every operator on the plant floor has visual acuity to current production rates and targets in real time. In many cases, a single percent improvement in productivity can cost justify a production scoreboard in a single day.

Collect and display KPIs on any TV. In just minutes!

Red Lion's ProducTVity Station lets you create your own sophisticated production scoreboard using standard, consumer-grade LCD, LED or plasma TVs.

> Built-in communications drivers and protocol conversion let you interface to most PLCs, drives, motion controllers and other automation equipment

> Requires no dedicated PCs, SCADA or OPC server

> Automatically page between multiple screens of KPI, trends, Andon, messaging and more

> Powerful programming capabilities with included Crimson software lets you customize solutions to your exact requirements or as needs change

> Works with any brand or size of modern TV, monitor or projector

> Easily duplicate information on multiple TVs with common signal splitters

> Complete Internet-ready with built-in Web and FTP servers for remote access and control

> Create the versatile system you want at a fraction of the cost of inflexible industrial scoreboard solutions

Virtually unlimited capabilities.

Display a host of production metrics, trends, alerts, messages, scheduling, guidance and more.
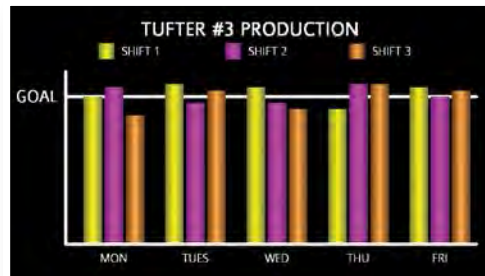

Warn of line down conditions immediately, to reduce overall downtime

Inform personnel of the problem, as well as whose attention is required, to minimize disruptions to production

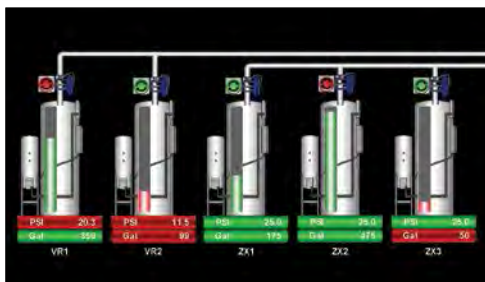**Inform operators** of current run and upcoming requirements to reduce changeover time

Built-in symbol library allows you to depict any process

Create screens that provide **KPI** and **Andon** information at a glance

Compare each **shift's production** against the others to spot potential issues, and to drive a competitive spirit

Calculate advanced KPIs such as OEE to drive continuous improvement initiatives
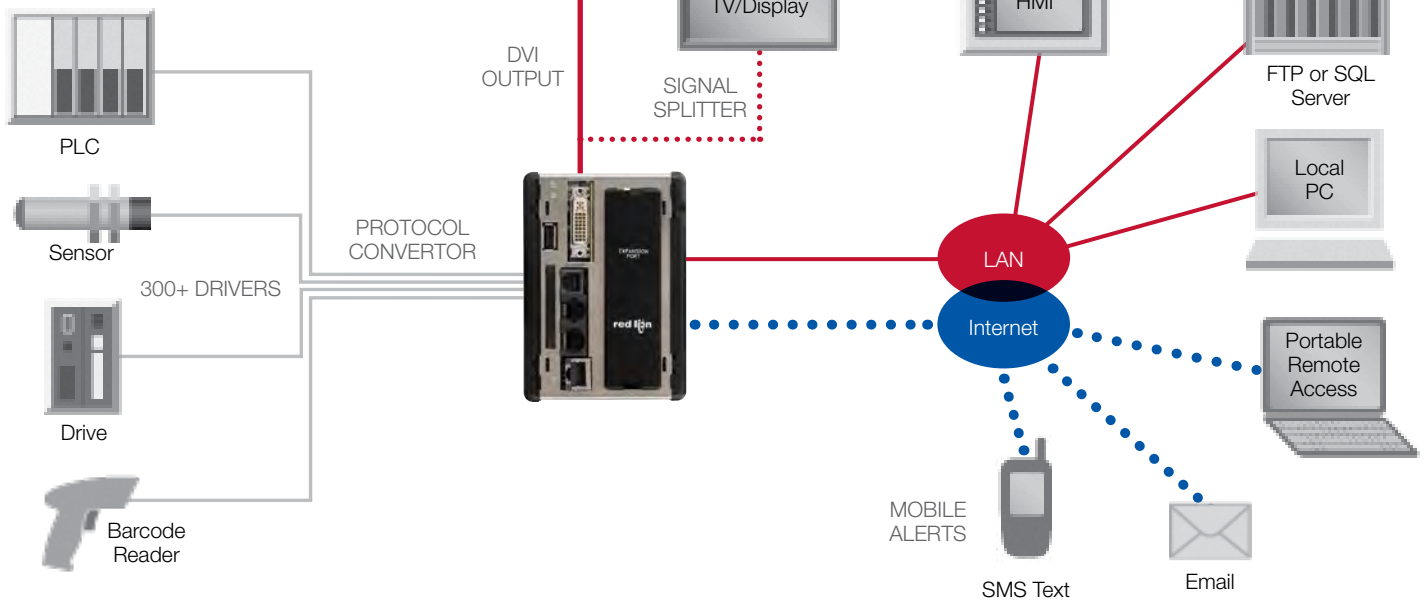

Turn your TV into a sophisticated production scoreboard

Measure. Monitor. Motivate. Manage.

Create your own full-featured, real-time productivity scoreboards.

Red Lion ProducTVity Station

PLC

Sensor

Drive

Barcode
Reader

300+ DRIVERS

PROTOCOL
CONVERTOR

DVI
OUTPUT

SIGNAL
SPLITTER

Duplicate
TV/Display

HMI

FTP or SQL
Server

Local
PC

LAN

Internet

Portable
Remote
Access

MOBILE
ALERTS

SMS Text

Email

The ready-to-deploy scoreboard solution that links performance to any TV.

ProducTVity Station lets you create your own interactive, real-time productivity scoreboard in minutes, using any consumer model LED/LCD or plasma TV. Save thousands over packaged industrial displays and get unprecedented capabilities, fast and easy connectivity to your machines with unlimited possibilities including:

> **Complete performance metrics:** KPIs, Takt, OEE/TEEP

> **Flow monitoring:** line status, calls, maintenance

> **Andon:** events, alerts, downtime timers

> **Production smoothing:** Heijunka, Kanban

> **Safety:** scorecards, messaging, reminders

> **Communications & Web:** messaging, news, break timers

> **Operator guidance:** picking, assembly

> And more

Learn more at www.redlion.net/PTV
Call +1 (717) 767-6511 to speak to a representative.

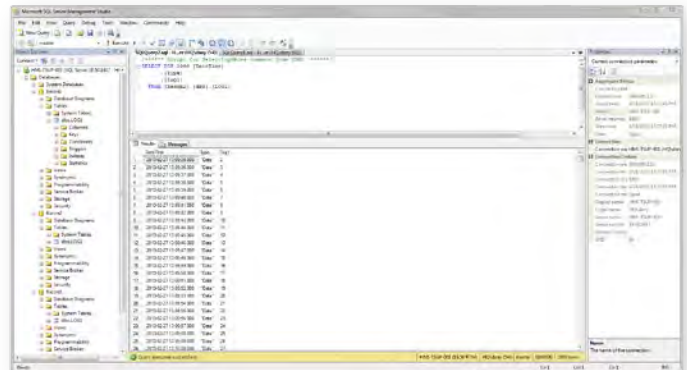# ▶▶▶ Powered by Crimson®

Red Lion Crimson software lets you connect, collect, convert and control with simplicity and power.
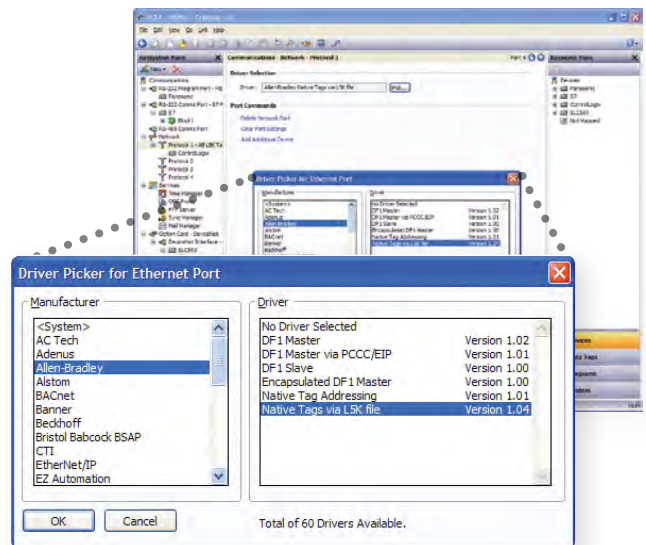
ProducTVity Station is driven by Red Lion's powerful programming platform – Crimson. A full version of the Crimson 3.0 software suite is included at no extra charge, including free lifetime support and upgrades.

With unprecedented ease to collect, analyze and display KPI and Andon information, Crimson is unlike any other productivity visualization tool:

> Collect data directly from devices such as PLCs, drives, bar code scanners and more

> Drag-and-drop data mapping to PLCs, PCs and SCADA systems; lets a Siemens® PLC talk to an Allen Bradley® drive in just seconds

> Built-in graphics library featuring over 5,000 drag-and-drop elements

> Synchronize with FTP servers and MS SQL Server

> Mail manager allows notifications to be sent to one or several defined recipients via text message and email; report or logged data files can be attached to email

sets up in **Minutes**

Remotely view the ProducTVity Station display or data from a PC or any web-enabled device, including smart phones. Receive events and alarms via email or SMS text messages

▶▶▶ Ordering Information:

Model No.	Description	Part No.
PTV	ProducTVity Station Also includes… 　2GB CompactFlash Card 　DVI to HDMI cable – 15' long 　HDMI to DVI adapter 　(for DVI to DVI connections)	PTV00000
CBL	USB Programming Cable	CBLUSB00
	RS232 Programming Cable	CBLPROG0
	Communications Cables	CBLxxxxx[1]
XCCN	CANopen/J1939 option card	XCCN0000
XCGSM	GSM/GPRS cellular modem option card	XCGSM000
XCDN	DeviceNet (slave) option card	XCDN0000
XCENET	Ethernet option card (adds independent, secondary port)	XCENET00
XCPB	PROFIBUS DP option card	XCPBDP00
XCRS	RS232/485 option card	XCRS0000
CS	Digital and analog I/O, and PID control modules.	CSxxxxxx[1]

[1] Visit www.redlion.net for a complete list of PID modules, data acquisition modules, communications drivers and cables.

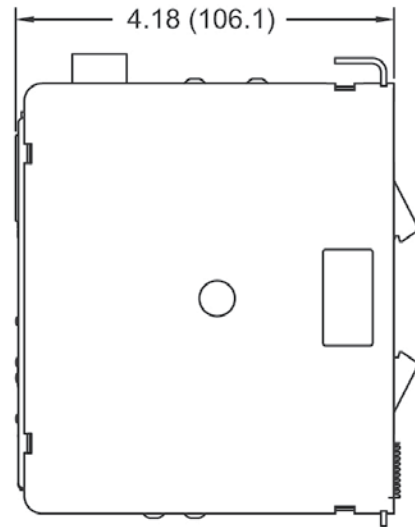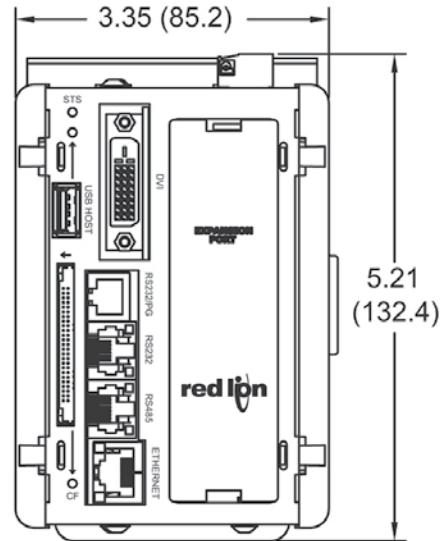## ▶▶▶ Features: communication, connectivity, conversion and collection, all-in-one.

Connect to sensors with CS expansion modules including analog and digital input, strain gage, thermocouple and RTD input

> 720p DVI output to leverage affordable consumer TVs with no compatibility issues

> USB and CompactFlash® ports let you track and log data directly to IT-friendly CSV Files

Dimensions:
In inches (mm)

3.35" W x 5.21" H x 4.18" D
(85.2mm W x 132.4mm H x 106.1mm D)

> Three built-in independent serial ports plus one 10 Base-T/100 Base-TX Ethernet port capable of communicating with 10 protocols simultaneously

> Built-in protocol conversion with over 300 communications drivers

> Integrated Ethernet gateway to network-enable serial or fieldbus machines onto a common communications backbone in minutes

> Expansion port to add additional serial or Ethernet ports, as well as various fieldbuses such as DeviceNet and Profibus

> Processor with 32-bit floating-point math to calculate complex and time-based metrics

> Built-in Web and FTP servers provide worldwide access to data logs and status

►►► **A comprehensive portfolio of industrial automation and networking solutions to connect. monitor. control.**

INDUSTRIAL AUTOMATION

Process Control
- ▶ PID Controllers
- ▶ Data Acquisition
- ▶ RTUs & I/O Modules
- ▶ Signal Conditioners
- ▶ Sensors

HMIs & Panel Meters
- ▶ HMI Operator Panels
- ▶ Panel Meters
- ▶ Large LED Displays
- ▶ Visual Management

INDUSTRIAL NETWORKING

Ethernet Switches
- ▶ Unmanaged
- ▶ Monitored
- ▶ Managed
- ▶ PoE
- ▶ Routers
- ▶ Wi-Fi Radios

Cellular M2M
- ▶ Cellular Routers
- ▶ Cellular RTUs

Communication Converters
- ▶ Protocol Converters
- ▶ Media Converters
- ▶ Serial Converters

red lion®

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As the global experts in communication, monitoring and control for industrial automation and networking, Red Lion has been delivering innovative solutions for over forty years. Our automation, Ethernet and cellular M2M technology enables companies worldwide to gain real-time data visibility that drives productivity. Product brands include Red Lion, N-Tron® and Sixnet®. With headquarters in York, Pennsylvania, the company has offices across the Americas, Asia-Pacific and Europe. Red Lion is part of Spectris plc, the productivity-enhancing instrumentation and controls company. For more information, please visit www.redlion.net.