**Protocol Conversion**

**Portable**

**Data Acquisition**

**Signal Conditioning**

Unprecedented capabilities, fast and easy connectivity to your machines with unlimited possibilities including:

- **Productivity Station** lets you create your own interactive, real-time productivity scoreboard in minutes, using Red Lion ProducTVity Station™

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

**Measure. Monitor. Motivate. Manage.**

- **Heijunka, Kanban**
- **Andon:**
  - KPIs, Takt,
  - Complete performance metrics:
  - Sensor Drive PLC Reader

- **Wires, and much more:**
  - **Operator guidance:** picking, assembly
  - **Communications & Web:** messaging, news, break times

**Other visual management products by Red Lion**

**Large LED Displays**

- **Digital messaging:**
  - Status
  - Alarms
  - News, buttons

- **Graphics:**
  - 2D and 3D models available

**REAL-TIME CLOCK:**

Typical accuracy is less than one minute per month with Celsius SNTF facility allows synchronization with external

- **Battery:** Lithium Coin Cell. Typical battery life: 5 years in 24/7

**ENVIRONMENTAL CONDITIONS:**

- **Operating Temperature Range:** -10°C to +55°C
- **Storage Temperature Range:** -30°C to +70°C

**PERFORMANCE:**

- **Shock according to IEC 68-2-27:** Operational 25 g, 11 msec in 3 directions.
- **Vibration According to IEC 60068-2-3:** Operational 15 mm/s at 20-2000 Hz, 10 g

**Power Requirements:**

- **Power:** 24 VDC ± 10%
- **Expansion Card** Must use NEC Class 2 or Limited Power Source (LPS) rated power supply

**Ordering Information:**

Model No. Description Part No.

- XCDN CANopen/J1939 option card (adds independent, secondary port) XCDN0001
- XCRS RS232/485 option card XCRS0001
- XCRS0001 80% max relative humidity, -30 to +70˚C
- XCDN0001 Storage Temperature Range: 0 to 45˚C
- XCDN0001 Operating Temperature Range: 3.4 Amps max. (16 modules + 450 mA min. (1 module)

**Features and specifications**

**POWER:**

- **24 VDC ± 10%**
- **400 mA, 1 module**
- **3.4 Amps max. (16 modules + Expansion Card)**

**COMMUNICATIONS:**

- **USB/Serial Option Card** supports USB specification Rev 2.0 Hardwire over sensor cables supports 256 mA (3.3V)
- **DM Port Digital I/O Interface version 1.3, angels, alarms, digital video feedback, with a resolution of 1920x1080 pixels, progressive scan, adhering to CE4-A/HE-706 (706) IBO, support.**

- **Serial Ports:** Serial ports see individually isolated.

- **RS232/485 Port**ped RS232 port via RJ12

**MEMORY:**

- **Onboard Memory:** 128MB of non-volatile flash memory
- **CompactFlash Type I** and Type II cards – 2GB CompactFlash card included.

**CONSTRUCTION:**

- Case body is black high impact plastic and stainless steel. For indoor use only. Installation

**OPERATING:**

- **2GB CompactFlash card included.**
- **II slot for Type I and Type II cards – CompactFlash Type Memory Card:**
  - non-volatile Flash memory.

**COMMS Ports:**

- **Ethernet Port:** 10 BASE-T/100 BASE-TX Ethernet Port: RJ45, and RS232 port via RJ12
- **RS422/485 port via RS232 port via RJ12** individually isolated.

**Serial Ports:**

- **Color depth is 32K.**
- **Support, HDCP is not supported.**

**DVI Port:**

- **Digital Visual Interface version 1.3, single link, provides a digital video feed, with a resolution of 1280 horizontal x 720 vertical pixels, progressive scan, with a lifetime of 10 years at 25˚C.**

**POWER CONNECTION:**

- **200+ DRIVERS**
- **CONVER**
- **TOR**
- **OUTPUT**
- **SPLITTER**
- **SIGNAL**

**TV/Display**

- **Duplicate...**

**...and much more:**

- **Operator guidance:** picking, assembly
- **Communications & Web:** messaging, news, break times
- **Safety:** economic, messaging, reminders

**OD/TEP:**

- **Flow monitoring:** line status, calls, maintenance
- **Andon:** events, alarms, downtime lines
- **Production smoothing:** helpful, Kardian

**See Productivity Station in action**

Free mobile app:

- [Station in action](http://example.com)

- [View ProducTVity Station](http://example.com)

**TRANSFORMS A STANDARD CONSUMER TV INTO A VERSATILE, REAL-TIME KPI PRODUCTION SCOREBOARD AND ANDON SYSTEM, IN MINUTES.**

**SENDs REAL-TIME DISPLAYS OR TEXT ALERTS TO MOBILE DEVICES.**

**ProducTVity Station™**

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

**DIMENSIONS:** In inches (mm)

- **W x H x D:** 5.21” x 3.35” x 3.75” (132.4 x 85.2 x 96.1)

**ProducTVity Station®**

The ready-to-deploy scoreboards that link 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, Taks
- Flow monitoring: line status, calls, maintenance
- Andon: events, alarms, downtime lines
- Production smoothing: helpful, Kardian
- Communications & Web: messaging, news, break times
- Operator guidance: picking, assembly...and much more.

**ProducTVity Station™**

REAL-TIME PERFORMANCE MONITORING FOR THE FACTORY FLOOR. AND BEYOND.
Continuous improvement driven by continuous 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 the level metrics that illustrate the achievement of facilities, time, material and personnel for manufacturing and process operations. LinkedIn’s top values that indicate gaps between actual and ideal performance, KPIs communicate success or failures of processes or operations, and so 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, digital scoreboards can automate communication to the entire plant floor in real time. Studies have shown how measuring and displaying KPIs produce immediate gains in operator performance, if for no other reason than monitoring awareness, pride or employee competitiveness.

KPIs are most important to a specific company with varying potentially hundreds of values. Examples of commonly used KPIs in manufacturing are:

- Count: Total Product, good/bad ratio, waste, 
- Ratio: Count per minute/hour, per shift/hour, 
- Targets: Goal displayed against actual, KPI gap, 
- Test Time: Time per cycle/batch.

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 
TEEP: (Total Effective Equipment Performance) 

This document provided by Barr-Thorp Electric Co., Inc.   800-473-9123    www.barr-thorp.com

Red Lion’s ProductViTVity Station lets you create your own sophisticated production scoreboard using standard, off-the-shelf products—like LCDs, LED or plasma TVs. You can purchase for less than $500.

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

Red Lion’s ProductViTVity Station lets you create your own sophisticated production scoreboard using standard, off-the-shelf products—like LCDs, LED or plasma TVs. You can purchase for less than $500.

Features: Communication, connectivity, conversion and collection, all-in-one.

- 700mA CV output to leverage affordable consumer TVs with no compatibility issues
- USB and CompactFlash ports let you plug and log data directly to TV, monitors or CSV files
- Three-hardware independent serial ports plus one 10 Base-T/100 Base-T Ethernet port capable of communicating 10 protocols simultaneously
- Built-in protocol conversion with over 200 communications drivers
- Integrates Ethernet gateway to network-enable serial or feedback machines onto a common communications backbone in minutes
- Expand port to add additional serial or Ethernet ports, as well as various feedbacks like ASCII and Modbus
- Communicate with SCADA feedbacks to illustrate complex and time-based statistics
- Built-in Web and FTP servers provide worldwide access to data logs and status through your Intranet
- Mail Manager allows notifications to be sent to one or several defined recipients via text messages and/or email communications
- Send data logging and report generators via FTP. Data can be sent to one or several defined recipients.

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