

# ProLINE-RoadRunner™ for Universal Placement Machines



1-800-3-DATAIO  
www.dataio.com

**Data IO**

WHETHER YOU CURRENTLY OUTSOURCE DEVICE PROGRAMMING OR PROGRAM IN-LINE AT TEST, PROLINE-ROADRUNNER OFFERS SUBSTANTIAL BENEFITS

**ProLINE-RoadRunner** is an in-line high-speed Flash programming system that mounts directly onto the Universal GSM feeder bank without consuming additional floor space or altering the production line.

**Process Control Software** (TaskLink™ for Windows®), is installed off-line on a secured personal computer. A system administrator uses TaskLink to create and secure programming Jobs. Completed Jobs are saved to a PCMCIA card then transferred to the ProLINE-RoadRunner to run a specific Job.

**Built-in Diagnostics and Job Statistics** are written back to the RoadRunner's PCMCIA card at the end of the production run. Statistics are saved back to TaskLink for analyzing performance results to assist in optimizing production yields and throughput.

**Expand Programming Capacity** as needed by simply installing a second RoadRunner unit onto the same placement machine, or install a second RoadRunner unit onto a different placement machine on the same production line. This is ideal for newer products using higher-density Flash devices, or to further reduce cycle times required with increased capacity demands. Both alternatives require no additional floor space.

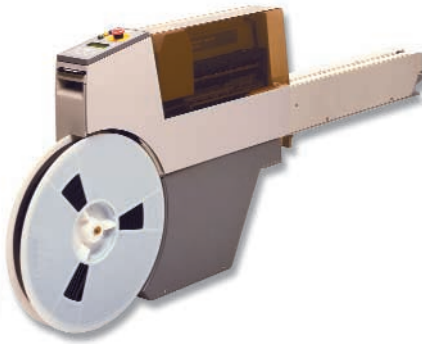
## **Benefits of moving from outsourcing to in-line device programming, using ProLINE-RoadRunner**

- Simplify inventory management
- Less material handling
- Just-in-time programming
- Supply chain efficiencies
- Lean Manufacturing
- Improve time-to-market
- Immediate response to code-changes
- Higher manufacturing profits

## **Benefits of moving from programming-at-test to programming-at-placement, using ProLINE-RoadRunner**

- Reduce programmer/test time
- Optimize test (Expand Coverage)
- Reduce number of testers
- Optimize floor space utilization
- Balance the production line
- Place only verified devices
- Reduce board scrap costs
- High throughput at lower cost
- Fast code changes using TaskLink
- Higher manufacturing profits





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## SPECIFICATIONS

### Physical Size and Weight

- Length: 1105mm (43.5 in.)
- Width: 78.5mm (3.1 in.)
- Height: 483mm (19.02 in.)
- Protrusion distance from machine:  
L 635mm (25 in.)
- Net weight: approx. 17.7 kg (39lbs)

### Device Programming

Standard Flash Programming Speeds  
(Device Dependent)

- 3-4 year old devices:  
4 devices @ approx. 1.2sec./Mbit
- 1-3 year old devices:  
4 devices @ approx. 0.8sec./Mbit

High-Speed Flash Programming Speeds  
(Device Dependent)

- Intel (EFP) 32 Mbit device:  
4 devices @ approx. 0.375sec./Mbit
- AMD 32Mbit device:  
4 devices @ approx. 0.437sec./Mbit
- AMD 64Mbit device:  
4 devices @ approx. 0.375sec./Mbit
- Leaded-device coplanarity alteration 1 mil
- Optional tape-in modules: 16, 24, and 32mm
- Reel size: 13 inches

### Changeover Time\* (New Job Setup)

≤ 15 minutes

- Change reel (13 inch reel diameter)
- Empty cover tape takeup reel
- Change socket adapter
- Insert new job card
- Insert carrier tape and align pocket

### Changeover Time (Consumables)

≤ 1 minute

- Replace PNP nozzle tips
- Replace socket adapters

### Operating Temperature Range

- +15° to +40° C (+ 60° to +104° F)
- Temperature stabilization time: ≥ 8 hours
- Operating humidity, non-condensing:  
20 to 80%

### Regulatory Compliance

CE, OSHA

\* Does not apply to reconfigurations requiring a change in tape width.

## REQUIREMENTS

### SMT Platform

- Universal GSM placement machines (GSM1, GSM2)
- No modifications to the Universal GSM Placement Machine

### Power Requirements

- AC Input: 110/240 Vac, 50/60 Hz (single phase)
- AC Input Power: 100 W

### Air Requirements

- Regulated Air to RoadRunner Unit:  
75PSI +/-5 PSI @ 4 SCFM

### Personal Computer

- PC with PCMCIA card drive running Microsoft® Windows 95, Windows 98 or Windows NT (Windows NT may require purchase of additional software drivers or a card drive)
- Hard disk space: 25 MB minimum for TaskLink files
- CD ROM drive
- Serial or bus mouse
- Memory Card Drive
- VGA monitor with 640 (480 minimum resolution)

## (ROI) CALCULATOR

Let us share the benefits of implementing ProLINE-RoadRunner into your production environment through:

- Cost-Benefit Analysis
- Impacts to Contribution Margin
- Impacts to Operating Costs
- Production Line Capacity Report

Go to:

[www.data-io.com/products/RoadRunner](http://www.data-io.com/products/RoadRunner)

Within 48 hours a Data I/O sales representative will contact you to schedule a convenient time to preview the results. We will provide up to four impact-analysis charts that highlight the impacts of moving from your current device programming process to the ProLINE-RoadRunner.

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