

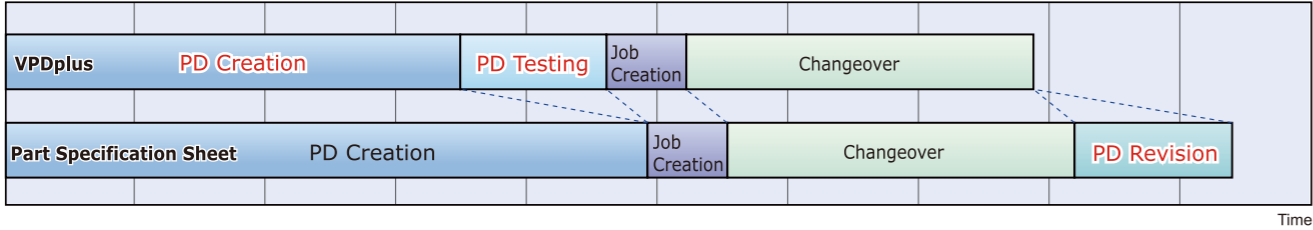
# VPDplus Efficiency

## ■ Test Results

35% reduction in data creation time for leaded components and zero machine-side part data revisions.

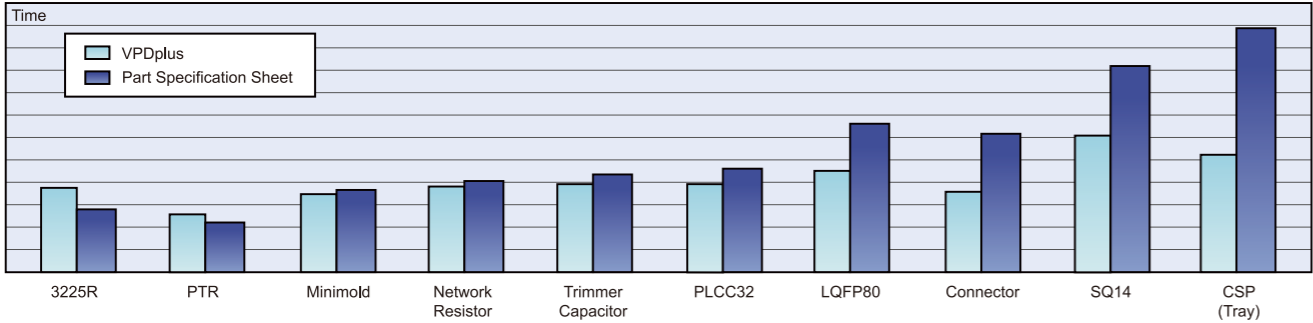
- Analysis
  - ・Comparison of time taken to create part data using VPDplus versus manual entry referring to specification sheet.
  - ・12 new parts
  - ・Changeover: Time taken to transmit job, set parts on feeder, set feeders on machine, set tray on machine (does not include nozzle and backup pin exchange time)
  - ・Average times were used for job creation, changeover, non-vision related part data revision and changeover revisions.

## Part Data Creation Analysis



Time

## Part Comparison (VPDplus creation time includes part data testing)



## Computer Specifications

CPU / Memory	2 GHz or more / 2 GB or more (3 GB recommended) , 4 MB or more of video memory
Operating System	Windows Vista Business SP1 (32bit), Windows Vista Ultimate SP1 (32bit), Windows XP Professional SP3 (32bit)
Supported Languages	English, Japanese, Chinese (Simplified, Traditional)
Hard Disk capacity	200 MB or more of available space and a location to store image files
Interface	1 PCI slot, 1 RS-232C port (required for camera stand)
Other	CD-ROM or DVD-ROM drive, Fuji Flexa, License key

Note: VPDplus is supported by Fuji Flexa V1.5.4 or V2.0.1 and later. (Windows Vista - V4.4.0 and later) For data editing with Vision Type 18, Fuji Flexa V2.4.0 or higher is required.

## VPDplus system configuration

Software Specifications		VPDplus software, Licence Key, Auto Shape Generator (option)			
Camera Stand Specifications		MPA4010 (NXT, AIM series)			
Camera		Standard Camera	Sidelight Camera	High Resolution Camera	PO3 Camera
Supported parts		General parts such as leaded parts, connectors, BGAs and CSPs. (insertion parts such as receptacles and headers can be supported with the sidelight camera)			
Part sizes (mm)	Standard	45 x 38	35 x 35	9 x 9	25 x 25
	X multiframe	45 x 38 to 180 x 32	35 x 35 to 150 x 35		
	XY multiframe	45 x 38 to 74 x 74			
Light source		Frontlight	Frontlight, Sidelight	Frontlight	Frontlight
Functions		Height adjustment, lighting controlled by VPDplus, image acquisition controlled by VPDplus			
Communication		Computer connection board, communication driver software			
Power supply		AC 100 to 240 V, 50/60 Hz; 240 V unit (power cable, standard label [option])			
Current		Maximum = 2.1 A			
Operating environment conditions		Temperature: 5 to 35 °C, Humidity: 45 to 80 % relative humidity (without condensation)			
Dimensions and weight		302 mm (W) x 626 mm (H) x 444 mm (D) , approximately 18 kg (camera unit = 5.2 kg)			

Note 1: Fuji Flexa V3.0 or higher is required to use the Auto Shape Generator.

Note 2: It is possible to change the type of camera unit that is set in the camera stand MPA4010 (specify the type of camera before shipping).

## FUJI MACHINE MFG. CO., LTD.

19 Chausuyama Yamamachi Chiryu-shi, Aichi-ken 472-8686 Japan  
Tel: +81 566 81 2110 Fax: +81 566 83 1140

- Always consult Fuji prior to selling any Fuji equipment to a third party.
- The contents of this catalog are subject to change without notice.
- Contact Fuji or a Fuji representative before transporting this product to a foreign location within your company or selling it to a third party within your country or a different country.
- The information in this catalog is current as of January, 2010

Cat.No.VPDplus/2010.Jan/E

<http://www.fuji.co.jp>

# VPDplus

## Part Data Creation and Confirmation System

Free your programmers from complicated and time consuming part data creation.



Image includes optional equipment.

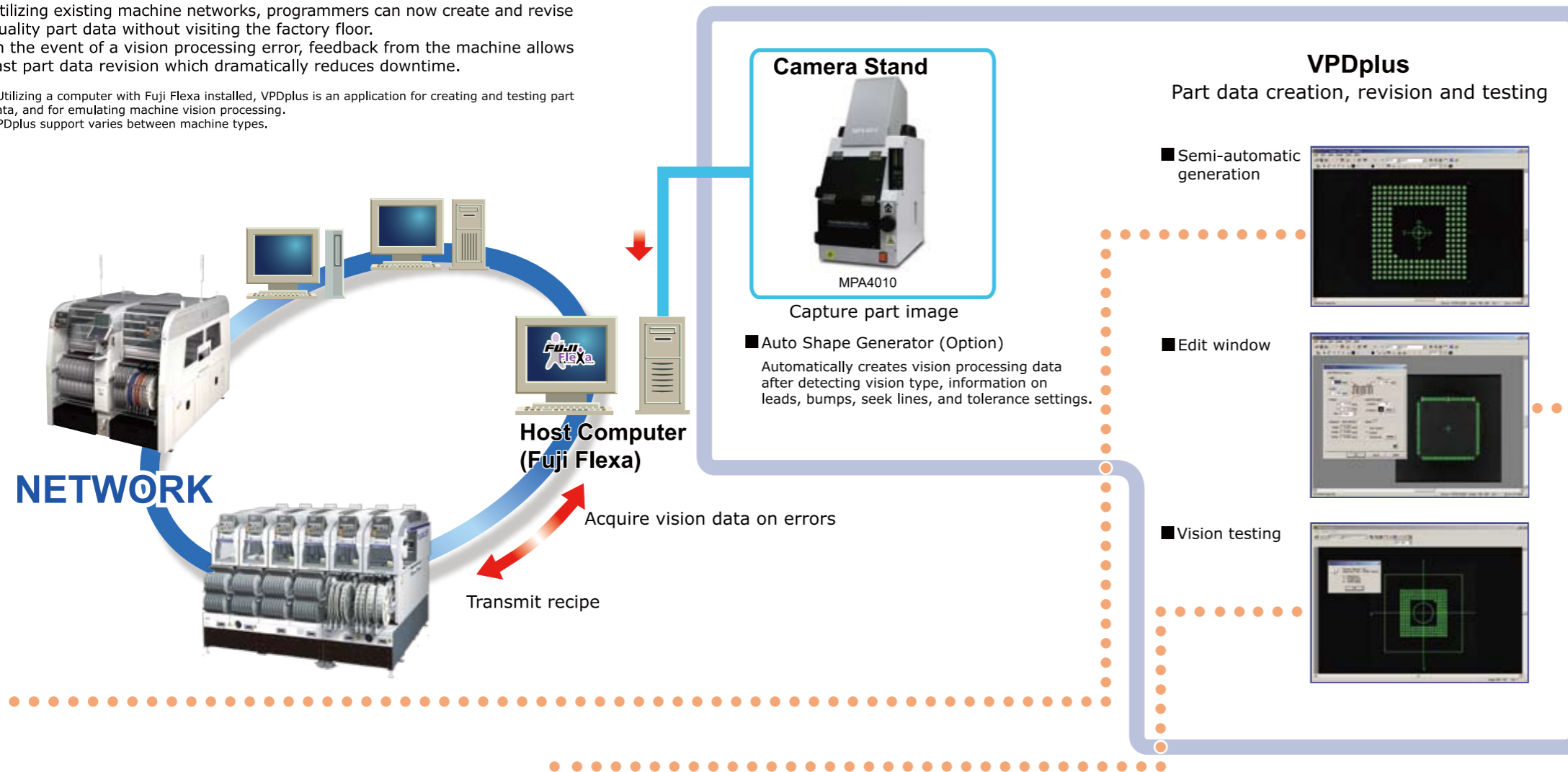
System for the creation and confirmation of part data

Manually creating the correct part data for each production lot takes time and requires programming experience. Now anyone can easily create even complicated part data using VPDplus.

## Seamless data linking with your production system

Utilizing existing machine networks, programmers can now create and revise quality part data without visiting the factory floor. In the event of a vision processing error, feedback from the machine allows fast part data revision which dramatically reduces downtime.

\*Utilizing a computer with Fuji Flexa installed, VPDplus is an application for creating and testing part data, and for emulating machine vision processing. VPDplus support varies between machine types.



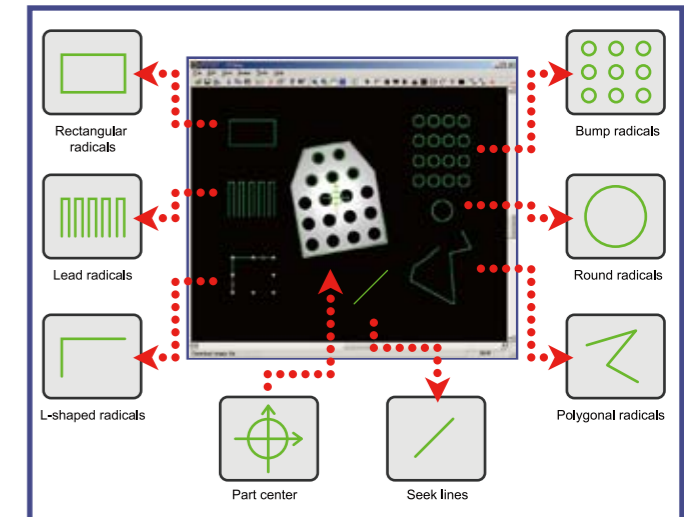
## Visual editor does not require manual data entry

### Editor

Visual entry reduces programming work and eliminates incorrect data entry.

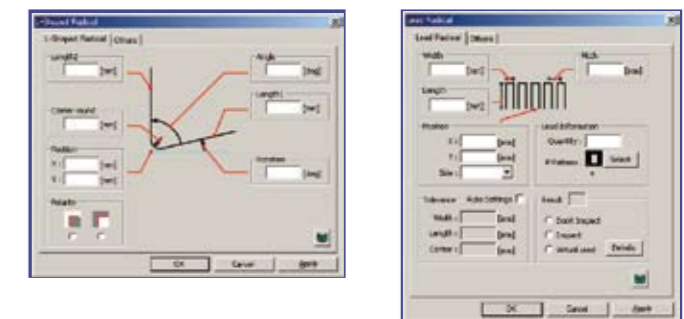
Part data is created based on radicals\* drawn to match the acquired images allowing even complicated shapes to be created easily.

\* Radical: Element for defining each shape.



### Editing radicals

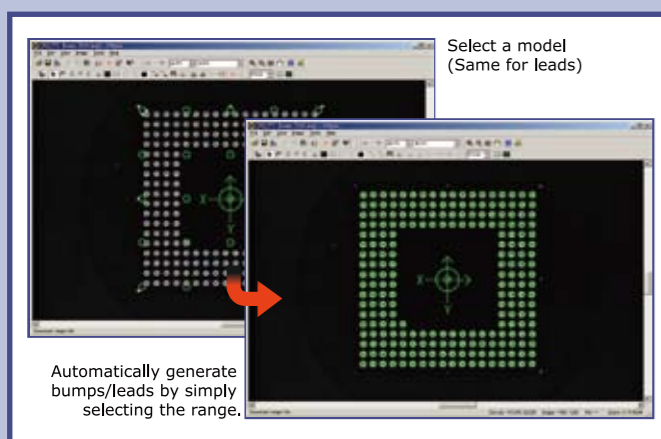
Radicals can be dragged and moved with the mouse, and scaled and distorted freely to match the part shape. The properties window is used to enter radical properties (position, size and shape) via the keyboard.



## Select a model for easy creation

### Semi-automatic generation of lead and bump data

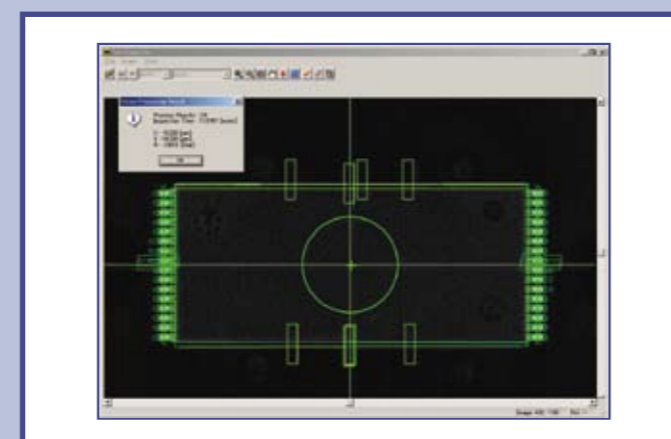
Generate troublesome lead and bump data semi-automatically by selecting a model. Part data creation is now a fast and easy process.



## Create reliable data offline

### Vision testing

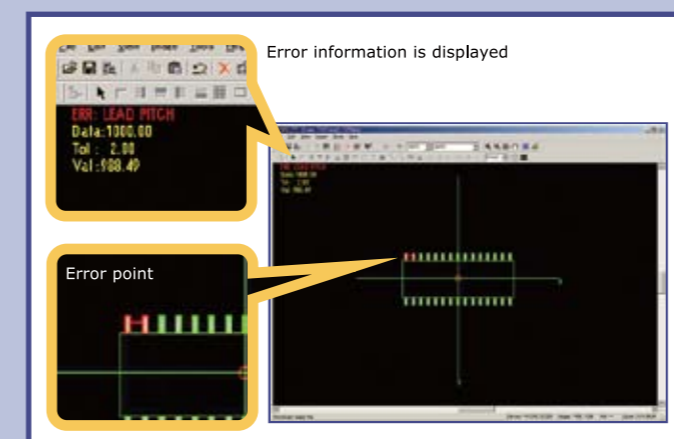
Using the same optical configurations as the machine, part data integrity is compared offline with acquired part images. This dramatically reduces the chance of data integrity errors at the machine.



## Reduce lot related rejection part

### Acquire images from the machine

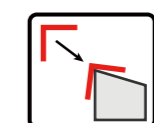
Minor variations between part lots can lead to troublesome vision processing errors. Images can now be downloaded from the machine to assist with quick data corrections.



## Allocation functions

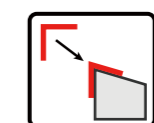
### Location and fit functions

Functions for automatically matching radicals to image shapes and positions. The mouse is used to set a rough size and position that is then automatically matched to the image. Precise data values can then be entered using the keyboard.



#### Location function

Automatically moves the radical to the closest match on the image. Only the position and angle of the radical are adjusted.



#### Fit function

Automatically adjusts the radical shape to match that of the image. The position, angle and segment angle of the radical are adjusted.