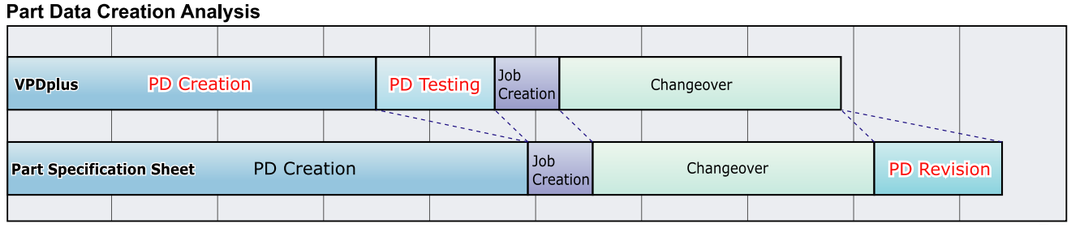
VPDplus Efficiency

■ Test Results

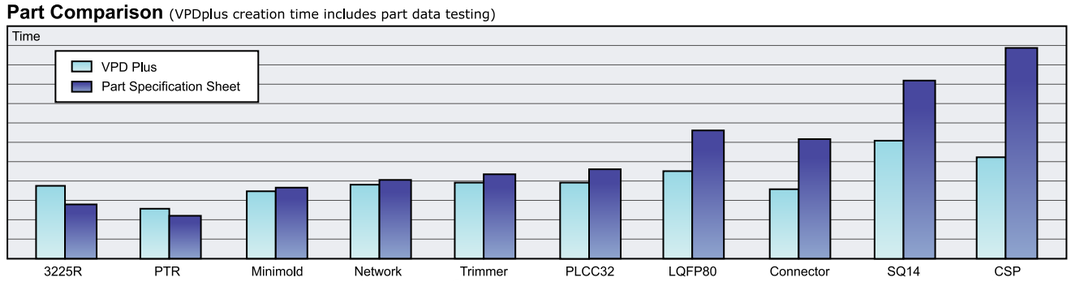
35% reduction in data creation time for leaded components and zero machine-side part data revisions.

- 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

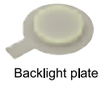


Part Comparison (VPDplus creation time includes part data testing)



Computer Specifications	
CPU / Memory	1 GHz or more (2 GHz recommended) / 512 MB or more (64 MB free memory)
Operating System	Microsoft Windows XP Professional Service Pack 2 or higher (Japanese, English or Chinese (Simplified and Traditional)) Microsoft Windows 2000 Service Pack 4 or higher (Japanese or English)
Video Memory	4 MB or more
Hard Disk capacity	50 MB or more available space
Interface	1 PCI slot, 1 USB port, printer port
Other	CD-ROM Drive, Fuji Flexa, License key

Notes: 1. The VPDplus operating environment must be an environment on which Fuji Flexa can run, however, it is necessary to have a Pentium® III processor or higher and be running Microsoft Windows XP Professional (Service Pack 2 or higher) or Microsoft Windows 2000 (Service Pack 4 or higher).
When running the system under Windows XP Professional (Service Pack 2 or higher), Fuji Flexa version must be V1.5.4.9 or V2.0.0 or higher.
Pentium® is a registered trademark of the Intel Corporation. Microsoft is a registered trademark of the Microsoft Corporation. Windows is a trademark of the Microsoft Corporation.
2. The content of these specifications may be subject to change without prior notice.

Camera Stand Specifications	MPA3000 (Standard parts camera)	MPA4000 (Sidelight parts camera)
Compatible components	45 x 45 mm	35 x 150 mm (35 x 35 mm)
	General parts such as leaded-parts, connectors, BGAs and CSPs	General parts such as leaded-parts, connectors, BGAs and CSPs, and insertion parts such as receptacles and headers
Light Source	Frontlight, Axis incident-light	Frontlight, Axis incident-light, Laser (Class 1)
Functions	Height adjustment tool, Angle adjustment tool, VPDplus light controller, VPDplus image controller	Height adjustment tool, Multi-frame image acquisition (35 x 150 mm), VPDplus light controller, VPDplus image controller
Communication	PC connection board, communication driver software	←
Other	Multi-frame image acquisition plate (32 x 156 mm), 240V support  Backlight unit  Backlight plate	240V support

- Contact Fuji regarding the compatibility of VPDplus with various machine types. The XP series is not compatible with the VPDplus.

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FUJI

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

VPDplus

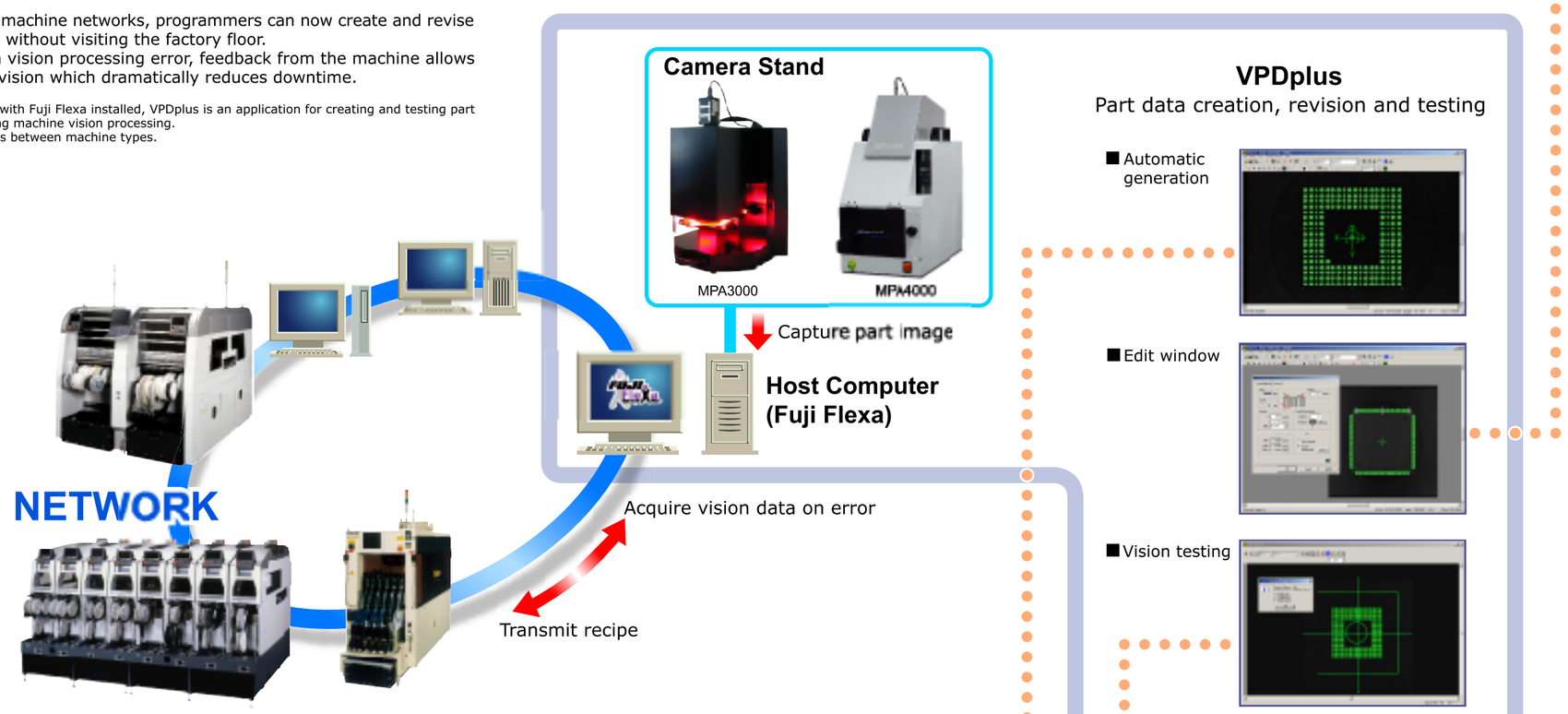
System for the creation and confirmation of part data

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.

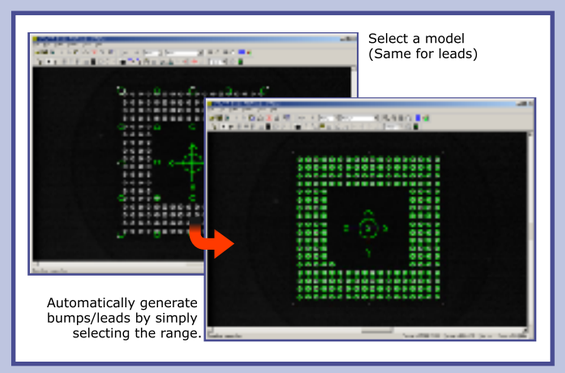
*Utilizing a computer with Fuji Flexa installed, VPDplus is an application for creating and testing part data, and for emulating machine vision processing.
VPDplus support varies between machine types.



Select a model for easy creation

■ Automatic data generation

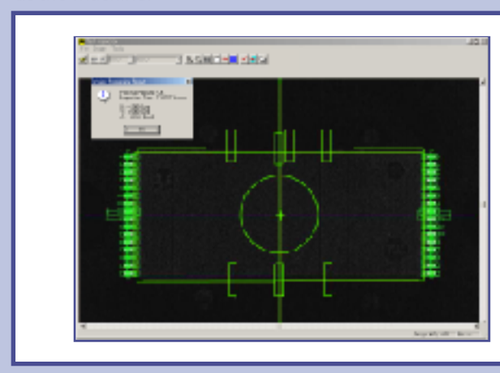
Automatically generate troublesome leads and bumps by simply selecting a model.
Part data creation is now a fast and easy process.



Create reliable data offline

■ Vision testing

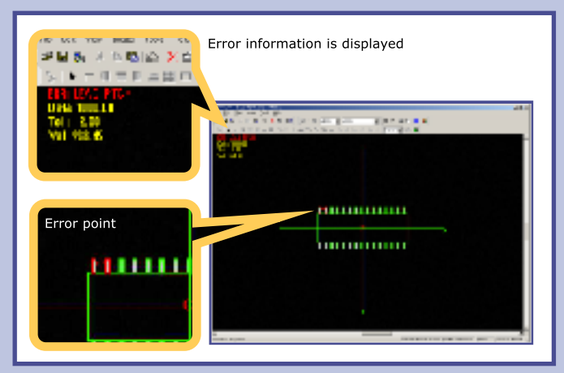
Using the same optical configurations as the machine, part data integrity is compared offline with acquired part images. This dramatically reduces the chance of data integrity errors at the machine.



Reduce lot related reject parts

■ 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.

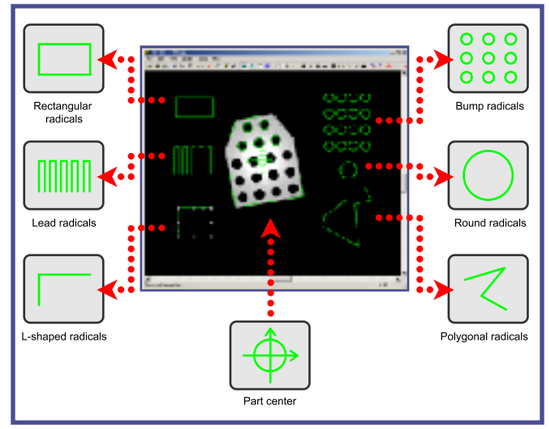


Visual editor does not require manual data entry

■ Editor

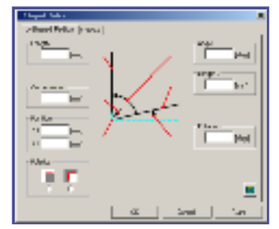
Visual entry reduces programming work and eliminates incorrect data entry.
Part data is created based on radicals* drawn to match the acquired images allowing even complicated shapes to be created easily.

* Radical: Element for defining each shape.



■ Editing Radicals

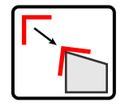
Radicals can be dragged and moved with the mouse, and scaled and distorted freely to match the part shape.
The properties window is used to enter radical properties (position, size and shape) via the keyboard.



Allocation functions

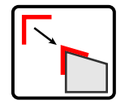
■ Location and Fit Functions

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.