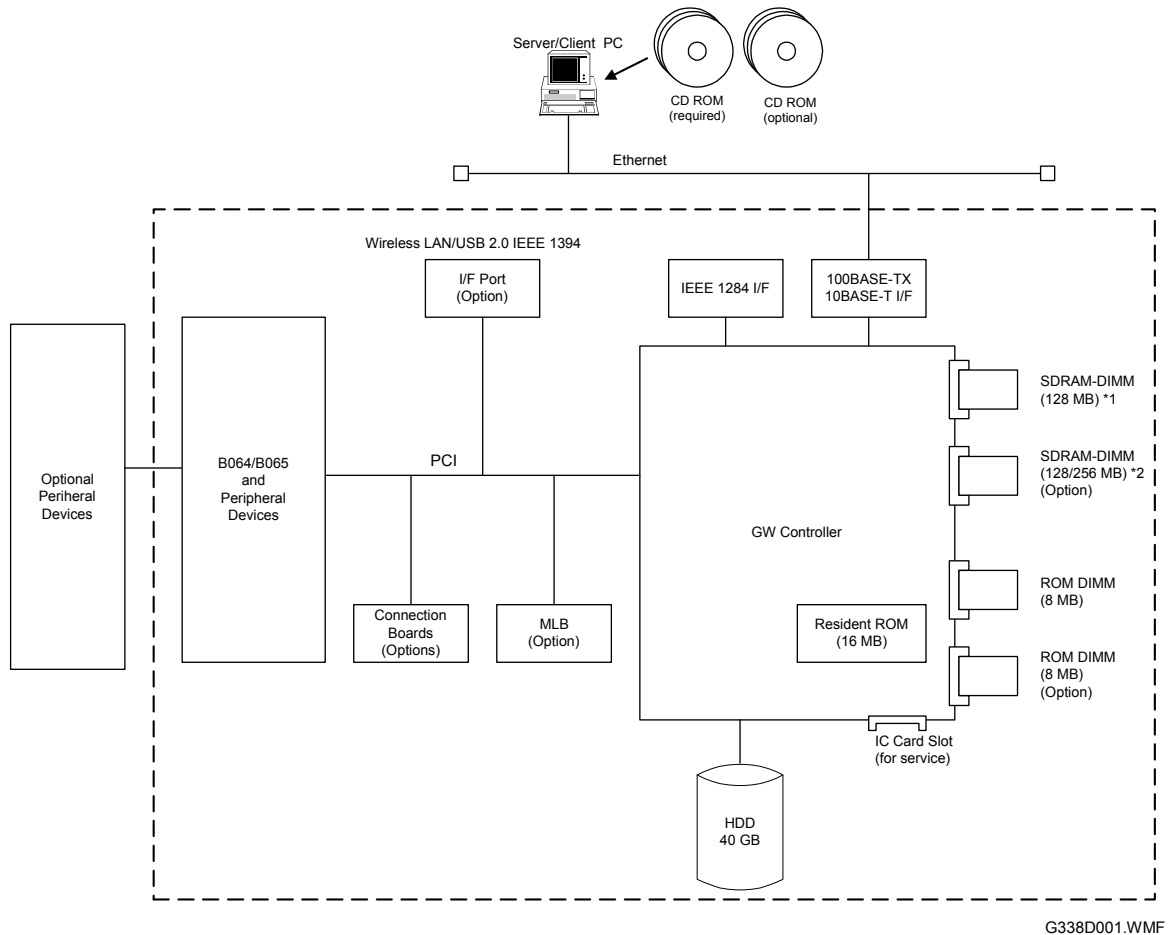


Scanner Unit/Printer Unit

(Machine Code: G338/G339)

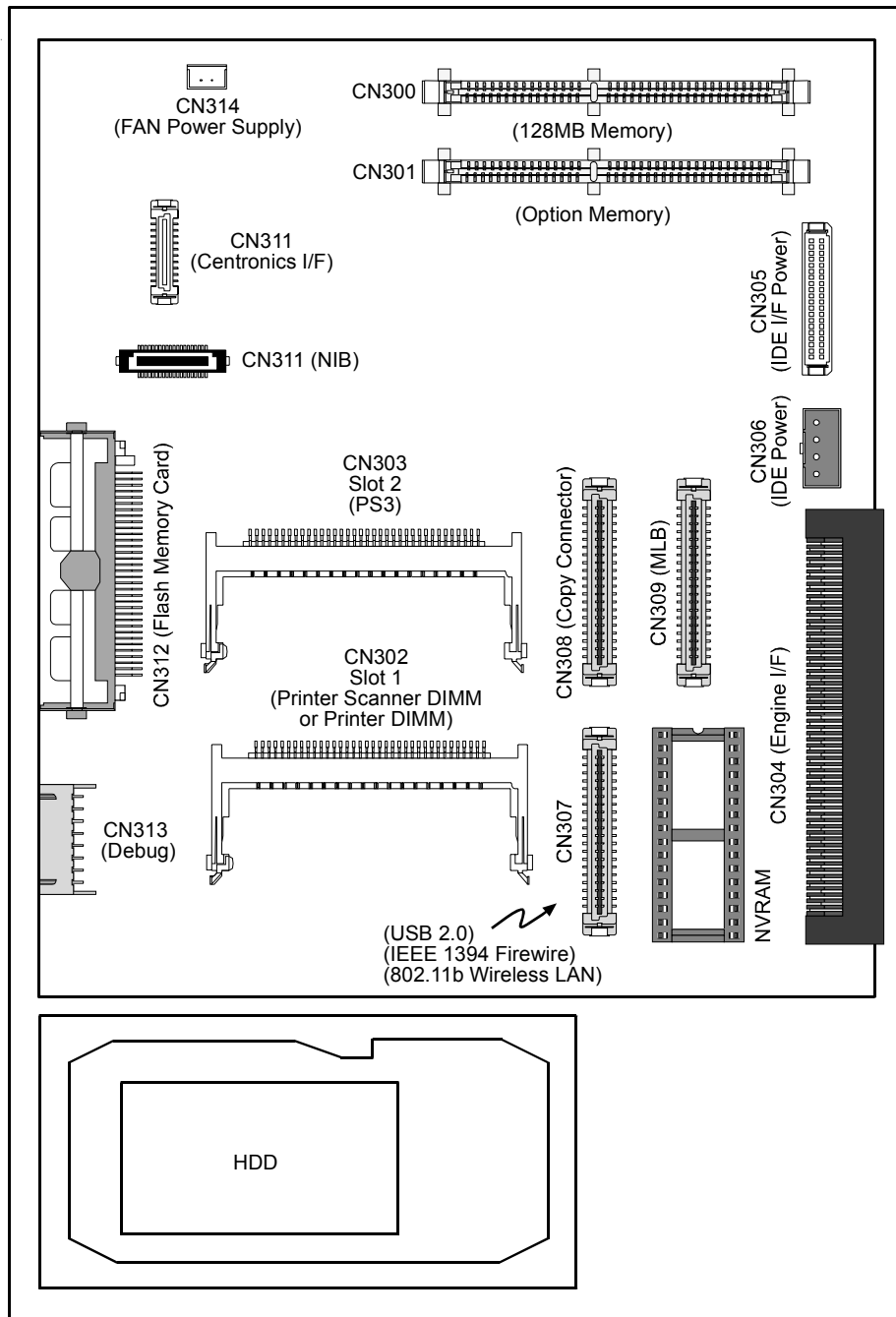
1. DETAILS

1.1 MACHINE LAYOUT



1.2 CONTROLLER BOARD

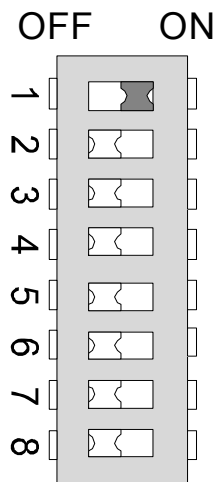
1.2.1 CONTROLLER BOARD LAYOUT



G338D999.WMF

Name	CN	CN Shape	Function
SDRAM DIMM I/F	CN300	144-pin (Straight: SMT)	Standard RAM DIMM
	CN301		Optional RAM DIMM
ROM DIMM I/F	CN302	72-pin (right-angle)	Optional printer/scanner program
	CN303		Optional PS3 emulation program
Engine I/F	CN304	120-pin (right-angle DIP)	Engine I/F (RAPI, CSS, MK1)
IDE I/F	CN305	40-pin (straight DIP)	HDD connection
IDE Power I/F	CN306	4-pin (straight DIP)	HDD power
PCI Option I/F	CN307	80-pin (straight SMT)	PCI I/F options (1394, wireless LAN, USB); only one of these can be installed
IEEE 1284 I/F	CN310	40-pin (straight SMT)	Centronics port
PHY I/F	CN311	40-pin (straight SMT)	Ethernet NIB
IC Card I/F	CN312	68-pin JEIDA V4.0	Flash ROM download
Debug I/F	CN313	8-pin (right-angle DIP)	Debugging
Fan I/F	CN314	2-pin (straight DIP)	Fan power supply

1.2.2 CONTROLLER BOARD DIP SWITCHES



G338D998.WMF

No.	Function		Comments
1	Boot selection	OFF	Switch ON only to boot from an IC card.* ¹
2	DFU	OFF	
3	DFU	OFF	
4	DFU	OFF	
5	Localization setting	OFF	ON for export models, OFF for models for the Japanese market
6	Model Setting	OFF	Currently these switches are not used.
7	Model Setting	OFF	
8	Model Setting	OFF	

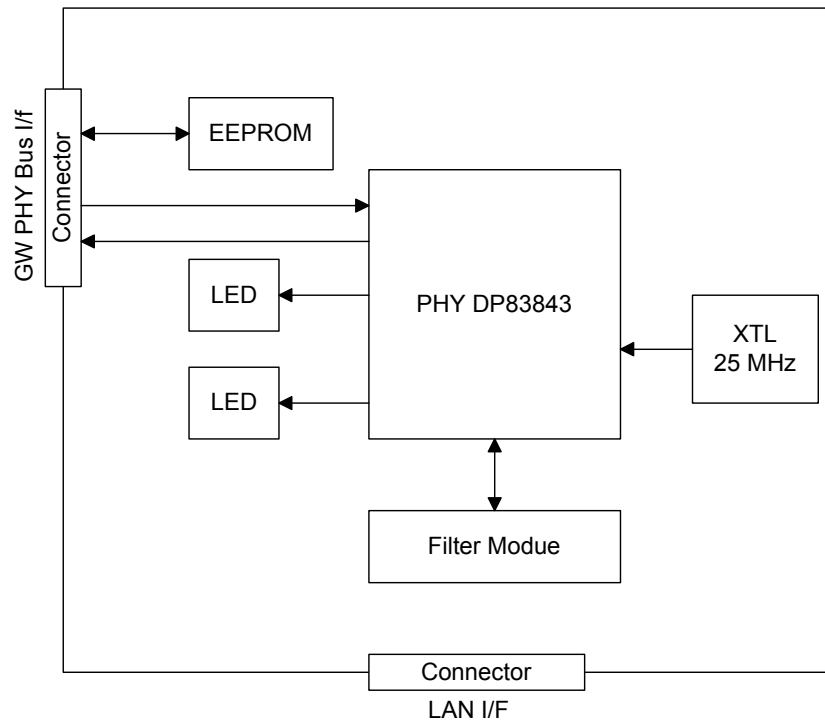
*¹: Set SW1 ON and boot from the IC card only if the normal installation procedure fails. After booting from the card, switch the machine off, set SW1 to OFF, then switch the machine on. SW should always remain set to OFF.

1.2.3 LED INDICATORS

Operation	LED1 (Upper)	LED2 (Lower)
Controller upgrade	Flashes	Flashes
Version upgrade	Off	Off
Version upgrade end	On	On
Controller normal operation	Alternately flash	
Controller non-operation	Alternately light	
Controller stall (SC819 logged)	Off	Off
RAM error (SC818 logged)	Off	Off

1.3 ETHERNET BOARD

1.3.1 ETHERNET BOARD LAYOUT



G338D002.WMF

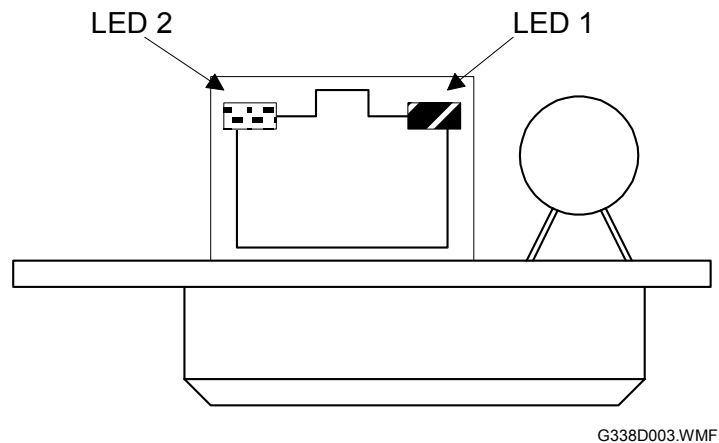
The Ethernet board is provided as a standard feature of this machine.

Function Blocks	Description
PHY (Physical Layer Device)	Completely standardized physical layer device for the functions of each device in the network.
EEPROM	Stores the MAC address.

The physical layer device, the lowest layer of the OSI reference model, refers to the physical components of the network: cables, connectors, and so on. OSI, the *Operating Standard Interface*, is a framework upon which networking standards are arranged. It is commonly diagramed as a layered cake.

1.3.2 ETHERNET BOARD OPERATION

The NIB is a standard IEEE802.3u type which implements 10/100Mbps auto negotiation. System initialization sets the network for 10Mbps/100Mbps.

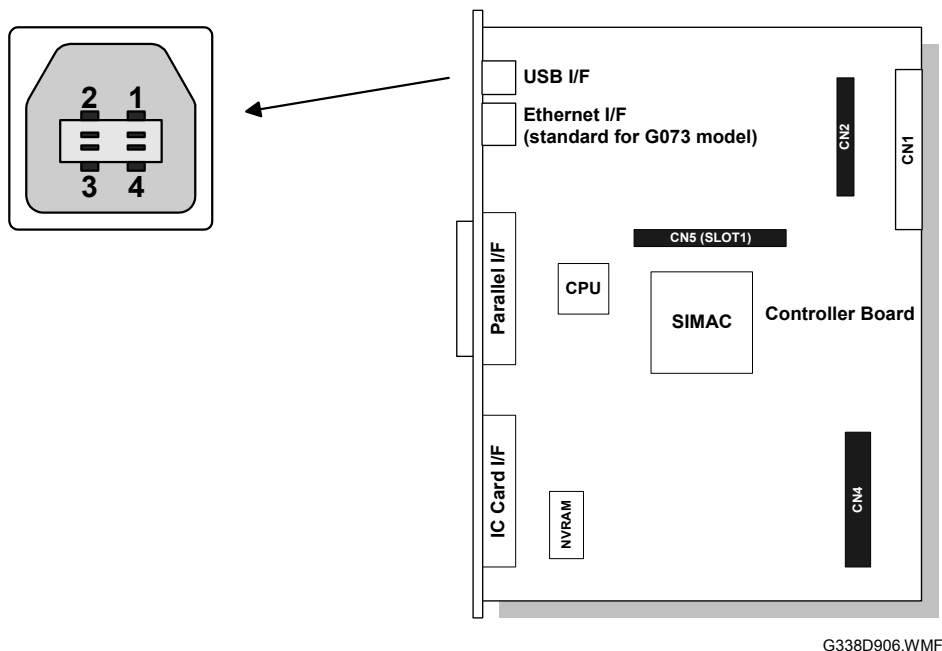


LED 1 (Green)	Indicates the link status: ON Link Safe OFF Link Fail
LED 2 (Orange)	Indicates the operation mode: ON 100 Mbps mode OFF 10 Mbps mode

1.4 USB

1.4.1 PIN ASSIGNMENT

The controller has a type “B” receptacle (CN10).



Pin No.	Signal Description	Wiring Assignment
1	Power	Red
2	Data –	White
3	Data +	Green
4	Power GND	White

1.4.2 REMARKS ABOUT USB

- The machine does not print reports specifically for USB.
- Only one host computer is allowed for the USB connection.
- After starting a job using USB, do not switch the printer off until the job has been completed. When a user cancels a print job, if data transmitted to the printer has not been printed at the time of cancellation, the job will continue to print up to the page where the print job was cancelled
- When the controller board is replaced, the host computer will recognize the machine as a different device.

Related SP Mode

“USB Settings” in the printer engine service mode. Data rates can be adjusted to full speed fixed (12 Mbps). This switch may be used for troubleshooting if there is a data transfer error using the high speed mode (480Mbps).



Data rates can also be adjusted using the UP mode “USB Setting” in the Host Interface in the System menu. This mode can be accessed only when the “Enter”, “Escape”, then “Menu” keys are pressed to enter the UP mode.

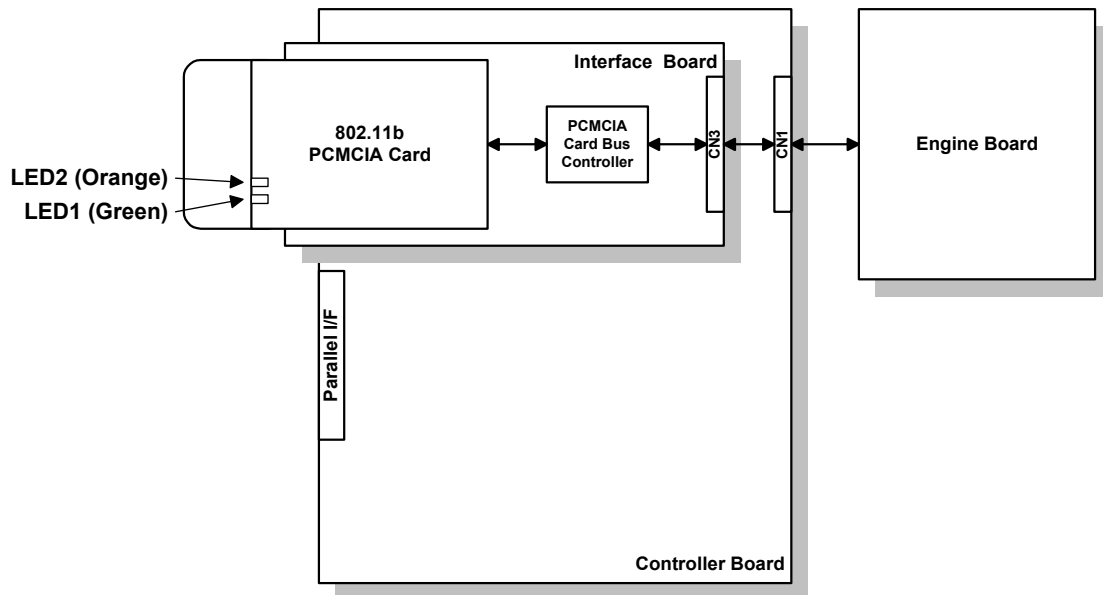
1.5 IEEE802.11B (WIRELESS LAN)

1.5.1 SPECIFICATIONS

Standard applied:	IEEE802.11b	
Data transmission rates:	Speed	Distance
	11 Mbps	140 m (153 yd.)
	5.5 Mbps	200 m (219 yd.)
	2 Mbps	270 m (295 yd.)
	1 Mbps	400 m (437 yd.)
Network protocols:	TCP/IP, Apple Talk, NetBEUI, IPX/SPX	
Bandwidth:	2.4GHz	
	(divided over 14 channels, 2400 to 2497 MHz for each channel)	

NOTE: The wireless LAN cannot be active at the same time as the Ethernet LAN.
The following user tool setting determines which LAN is active: System Settings – Interface Settings – Network - LAN Type.

1.5.2 BLOCK DIAGRAM



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Peripherals

LED Indicators

LED	Description	On	Off
LED1 (Green)	Link status	Link success	Link failure
LED2 (Orange)	Power distribution	Power on	Power off

2. SPECIFICATIONS

2.1 SCANNER

Scanning method	Front side main scan	Scanned by CCD.
	Platen (original on exposure glass)	
	Back side main scan	Scanned by CIS.
	Back side sub scan	
Scanning Area	Main scan	Max. 297 mm
	Sub scan	Max. 432 mm
Resolution	Main scan	600 dpi
	Sub scan	600 dpi
Main Scan Line Range of Precision	100 ~ 1200 dpi (digital black and white)	
Grayscale	8-bit graduation or 2-digit per pixel, 2-digit halftone also possible.	
Scanning Speed	0.8 seconds (1 A4 page at 200 dpi in 2-digit black and white with no compression.	
Interface	Ethernet 100Base-TX/10Base-T	
	IEEE 802.11b Wireless LAN (option)	
	IEEE 1394 with IP Over 1394 only (option)	
Network Protocols	TCP/IP only	
Scan-to-Email	Compatible	
TWAIN driver	Compatible	

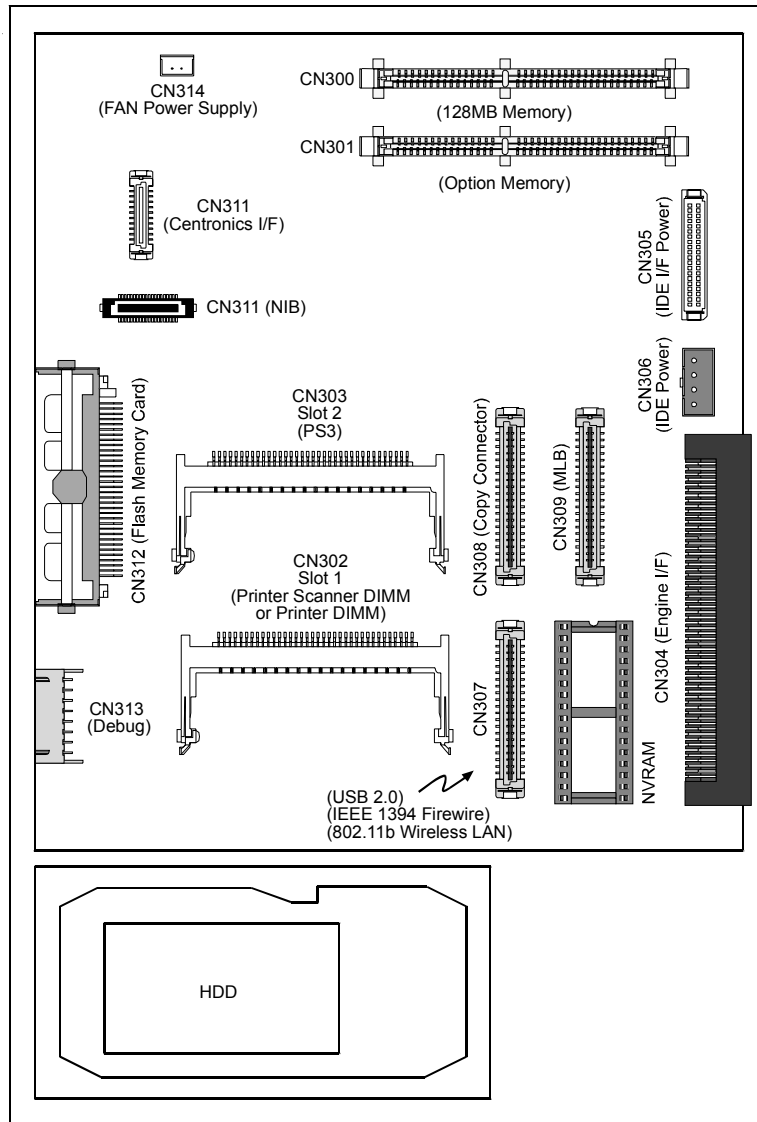
The scanner driver and utility software are provided on one CD-ROM.

Scanner Driver	Network TWAIN Driver for Windows 95/98/Me/NT 3.51/2000/XP
Scanner Utilities	Scan Router V2 Lite (Cherry Lite) for Windows 95/98/Me/NT4.0/2000/XP Desk Top Binder V2 Lite (Plumeria Lite) for Windows 95/98/Me/NT4.0/XP

2.2 PRINTER

Printing Speed	B065 model	Max. 75 ppm (A4/LT LEF)
	B064 model	Max. 60 ppm (A4/LT LEF)
Printer Languages	PCL5e/PCL6	
	PostScript 3 (option)	
	RPCS (Refined Printing Command Stream)	
Resolution	1200 dpi (PCL6/PCL5e/PS3/RPCS)	
	600 dpi (PCL 6/PCL5e/PS3/RPCS)	
	300 dpi (PCL5e)	
Resident Fonts	PCL	35 Intellifonts
		10 TrueType Fonts
	PS3	136 fonts (24 Type 2 fonts, 112 Type 14 fonts)
Host Interfaces	Bi-directional IEEE 1284 parallel x 1 (standard)	
	Ethernet 100Base-TX/10Base-T	
	IEEE 802.11b Wireless LAN (option)	
	IEEE 1394 with SCSI Print and IP Over 1394 (option)	
	IEEE 802.11b Wireless LAN (Option)	
Network Protocols	TCP/IP, IPX/SPX, NetBEUI, AppleTalk	
Memory	Max. 384 MB (128 MB + 256 MB)	
	(Standard 128 MB + 128 MB/256 MB with optional DIMM's)	

2.3 CONTROLLER BOARD CONFIGURATION



G338D999.WMF

Item	Machine Code	Remarks
Printer/Scanner DIMM	G338	The printer/scanner option includes the Centronics I/F and NIB.
Printer DIMM	G339	The printer option includes the Centronics I/F and NIB.
IEEE 1394	G561	Firewire I/F (option)
USB 2.0	525-01	USB I/F (option)
IEEE 802.11b	G628	Wireless LAN (option)
PS3	G525-08	PostScript 3 (option)
Memory 128MB	G331	Also used with the G071 printer (option).
Memory 256MB	G332	

2.4 SOFTWARE ACCESSORIES

The printer drivers and utility software are provided on one CD-ROM. An auto run installer allows you to select which components to install.

2.4.1 PRINTER

Printer Drivers

Printer language	Windows 9x/me	Windows NT 4.0	Windows 2000/XP	Macintosh
PCL6	Yes	Yes	Yes	No
PCL5e	Yes	Yes	Yes	No
PS3	Yes	Yes	Yes	Yes
RPCS	Yes	Yes	Yes	No

NOTE: 1) The printer drivers for Windows NT 4.0 are only for the Intel x86 platform. There is no Windows NT 4.0 printer driver for the PowerPC, Alpha, or MIPS platforms.
 2) The PS3 drivers are all genuine Adobe PS drivers, except Windows 2000/XP, which uses Microsoft PS.

Printer Utility Software

Software	Description
Agfa Monotype Font Manager 2000 (Windows 95/98/Me, NT4, 2000/XP)	A font management utility with screen fonts for the printer.
Smart Net Monitor for Admin (Windows 95/98/Me, NT4, 2000/XP)	A printer management utility for network administrators. NIB setup utilities are also available.
Smart Net Monitor for Client (Windows 95/98/Me, NT4, 2000/XP)	A printer management utility for client users. Peer-to-peer printing utility and parallel/recovery printing functions are included.
1394 Utility (Windows 2000 with SPI or later and Windows XP)	A utility for remote IEEE 1394 printers.
Printer Utility for Mac	This software provides several convenient functions for printing from Macintosh clients.
USB Printing Support	This utility is for the USB 2.0 Interface Board. Using the USB connection on a computer running Windows 98 SE or Windows Me requires the installation of this utility.

2.5 PAPER SIZES SUPPORTED BY THE PRINTER

Paper	Size (W x L)	Paper Trays Main Unit/Option		By-pass Tray	LCT	Duplex
		US	Eur/Asia			
A3	297 x 420 mm	Y [#] /Y [#]	Y/Y	Y [#]	N	Y
B4	257 x 364 mm	Y [#] /Y [#]	Y [#] /Y [#]	Y [#]	N	Y
A4 SEF	210 x 297 mm	Y/Y	Y/Y	Y [#]	N	Y
A4 LEF	297 x 210 mm	Y/Y	Y/Y	Y [#]	Y	Y
B5 SEF	182 x 257 mm	Y [#] /Y [#]	Y [#] /Y [#]	Y [#]	N	Y
B5 LEF	257 x 182 mm	Y [#] /Y [#]	Y [#] /Y [#]	Y [#]	N	Y
A5 SEF	148 x 210 mm	Y [#] /Y [#]	Y/Y	Y [#]	N	Y
A5 LEF	210 x 148 mm	N	N	Y [#]	N	N
B6 SEF	128 x 182 mm	N	N	Y ^C	N	N
B6 LEF	182 x 128 mm	N	N	N	N	N
A6 SEF	105 x 148 mm	N	N	Y ^C	N	N
Ledger	11 x 17"	Y/Y	Y [#] /Y [#]	Y [#]	N	Y
Legal	8.5 x 14"	Y/Y	Y [#] /Y [#]	Y [#]	N	Y
Letter SEF	8.5 x 11"	Y/Y	Y/Y	Y [#]	N	Y
Letter LEF	11 x 8.5"	Y/Y	Y/Y	Y [#]	Y	Y
Half Letter SEF	5.5 x 8.5"	Y/Y	Y [#] /Y [#]	Y [#]	N	Y
Half Letter LEF	8.5 x 5.5"	N	N	N	N	N
Executive SEF	7.25 x 10.5"	Y [#] /Y [#]	Y [#] /Y [#]	Y [#]	N	Y
Executive LEF	10.5 x 7.25"	N	N	Y [#]	N	Y
F	8 x 13"	Y [#] /Y [#]	Y [#] /Y [#]	Y [#]	N	Y
Foolscap	8.5 x 13"	Y [#] /Y [#]	Y [#] /Y [#]	Y [#]	N	Y
Folio	8.25 x 13"	Y [#] /Y [#]	Y [#] /Y [#]	Y [#]	N	Y
Com10 Env.	4.125 x 9.5"	N	N	N	N	N
Monarch Env.	3.875 x 7.5"	N	N	N	N	N
C6 Env.	114 x 162 mm	N	N	N	N	N
C5 Env.	162 x 229 mm	N	N	N	N	N
DL Env.	110 x 220 mm	N	N	N	N	N
8K	267 x 390 mm	Y [#] /Y [#]	Y [#] /Y [#]	Y [#]	N	Y
16K SEF	195 x 267 mm	Y [#] /Y [#]	Y [#] /Y [#]	Y [#]	N	Y
16K LEF	267 x 195 mm	Y [#] /Y [#]	Y [#] /Y [#]	Y [#]	N	Y
Custom	Minimum: 100 x 297 mm Maximum: 148 x 600 mm	N	N	Y ^C	N	N

Remarks:

Y	Supported. The paper size sensor detects the paper size.
Y [#]	Supported. The user has to select the correct paper size for the tray.
Y ^C	Supported. The user has to enter the width and length of the paper.
N	Not supported.

2.6 USB SPECIFICATIONS

USB connectivity is provided as an option for this machine.

Interface	USB 1.1, USB 2.0
Data rates	480 Mbps (high speed), 12 Mbps (full speed), 1.5 Mbps (low speed)
	High speed mode is only supported by USB 2.0.

2.7 IEEE 802.11B SPECIFICATIONS

Standard applied	IEEE802.11b	
Data transmission rates	Speed	Distance
	11 Mbps	140 m (153 yd.)
	5.5 Mbps	200 m (219 yd.)
	2 Mbps	270 m (295 yd.)
	1 Mbps	400 m (437 yd.)
Network protocols	TCP/IP, Apple Talk, NetBEUI, IPX/SPX	
Bandwidth	2.4GHz (divided over 14 channels, 2400 to 2497 MHz for each channel)	