Scanner Specifications

Basic Specifications

Scanner type: Flatbed, color

Photoelectric device: Color CCD line sensor

Effective pixels: 5100 x 7020 pixels at 600 dpi, 100%

Maximum document size: US letter or A4 size (8.5 x 11.7 inches [216 x 297 mm])

Optical resolution: 600 dpi

Maximum hardware resolution*: 600 dpi (main scan) x 2400 dpi (sub scan)**

* The maximum hardware resolution of 600 x 2400 dpi is achieved using EPSON’s Micro Step Drive™ technology.

** The maximum hardware resolution for sub scans is 2400 dpi when the width of the document to be scanned does not exceed 4 inches. If the width exceeds 4 inches, the scanning software interpolates the resolution after 1200 dpi.

Speed (600 dpi, draft mode)

- Color: 16 msec/line
- Monochrome (bi-level): 5.3 msec/line

Output resolution: 75, 150, 300, 600, 1200, and 2400 dpi

Color separation: RGB color filters on CCD

Command level: ESC/I-D1

Reading sequence:

- Monochrome: One-pass scanning
  - Color byte sequence: One-pass scanning (R, G, B)
  - Color line sequence: One-pass scanning (R, G, B)

- Pixel depth: 8 bits per pixel (12 bits per pixel input, 8 bits per pixel output)

Line art settings: Fixed threshold

Gamma correction: 1 type for user-defined

Interface: USB (Type B receptacle connector)

Light source: White cold cathode fluorescent lamp

Reliability: 10,000 cycles of carriage movements (main unit MCBF)

Dimensions:
- Width: 11.3 inches (287 mm)
- Depth: 16.7 inches (425 mm)
- Height: 3.4 inches (88 mm)

Weight: Approx. 9.9 lb (4.5 kg)

Electrical

<table>
<thead>
<tr>
<th>Specification</th>
<th>100–120 V model</th>
<th>220–240 V model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input voltage range</td>
<td>AC 90 to 132 V</td>
<td>AC 198 to 264 V</td>
</tr>
<tr>
<td>Rated frequency</td>
<td>50 to 60 Hz</td>
<td></td>
</tr>
<tr>
<td>Input frequency</td>
<td>49.5 to 60.5 Hz</td>
<td></td>
</tr>
<tr>
<td>Rated current</td>
<td>0.5 A</td>
<td>0.3 A</td>
</tr>
<tr>
<td>Power consumption</td>
<td>Approx. 20 W</td>
<td></td>
</tr>
</tbody>
</table>

Note: Check the label on the back of the scanner for voltage information.

Environmental

Temperature:
- Operation: 41 to 95 °F (5 to 35 °C)
- Storage: −13 to 140 °F (−25 to 60 °C)

Humidity (without condensation):
- Operation: 10% to 80%
- Storage: 10% to 85%
Operating conditions

Ordinary office or home conditions; avoid extreme dust, direct sunlight, and strong light sources. Make sure the outlet provides enough power.

Safety Approvals

120 V model

Safety standards
UL 1950 with D3
CSA C22.2 No. 950
EMC FCC part 15 subpart B class B
CSA C108.8 class B

230 V model

Safety standards
EN 60950
EMC EN 55022 (CISPR Pub 22) class B
AS/NZS 3548 class B

CE marking

230 V model
Low Voltage Directive 73/23/EEC
EN 60950
EMC Directive 89/336/EEC
EN 55022 Class B
EN 61000-3-2
EN 61000-3-3
EN 50082-1
IEC 801-2
IEC 801-3
IEC 801-4

USB Interface

Interface type
Universal Serial Bus Specification Revision 1.0

Configuration

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configuration</td>
<td>Characteristics: Self-powered</td>
</tr>
<tr>
<td></td>
<td>Remote wake up feature: Not supported</td>
</tr>
<tr>
<td></td>
<td>Maximum power consumption from VBUS: 2mA (5V)</td>
</tr>
<tr>
<td>Interface</td>
<td>No alternate setting</td>
</tr>
<tr>
<td></td>
<td>Number of endpoints used by this interface (excluding endpoint 0): 2</td>
</tr>
<tr>
<td></td>
<td>Class: Vendor specific</td>
</tr>
<tr>
<td>Endpoint 1</td>
<td>Bulk IN transfer</td>
</tr>
<tr>
<td></td>
<td>Maximum data transfer size: 64 byte</td>
</tr>
<tr>
<td>Endpoint 2</td>
<td>Bulk OUT transfer</td>
</tr>
<tr>
<td></td>
<td>Maximum data transfer size: 64 byte</td>
</tr>
<tr>
<td>String Descriptor</td>
<td>Language ID: US English</td>
</tr>
<tr>
<td></td>
<td>1: iManufacturer: &quot;EPSON&quot;</td>
</tr>
<tr>
<td></td>
<td>2: iProduct: &quot;Perfection610&quot;</td>
</tr>
</tbody>
</table>

Electrical standard
Full Speed mode (12Mbit/s) of Universal Serial Bus Specification Revision 1.0.

Connector type
One receptacle (series B)

Connector pin arrangement

<table>
<thead>
<tr>
<th>Pin number</th>
<th>Signal</th>
<th>Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>VCC</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>−DATA</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>+DATA</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>GND</td>
<td></td>
</tr>
</tbody>
</table>

Initialization methods
The scanner can be initialized (returned to a fixed set of conditions) in the following ways:

<table>
<thead>
<tr>
<th>Hardware initialization</th>
<th>Software initialization</th>
</tr>
</thead>
<tbody>
<tr>
<td>* The scanner is plugged in.</td>
<td>* Software sends the ESC @ (initialize the scanner) command.</td>
</tr>
<tr>
<td>* The USB cable is unplugged from the USB port on the scanner.</td>
<td>* The scanner receives a Bus Reset from the USB interface.</td>
</tr>
</tbody>
</table>

Lamp and Button

The scanner lamp acts as an indicator and the scanner has one button. Lamp status and button function are described in the tables below.

Start button

scanner lamp
Selecting a Driver and Settings

When you select EPSON TWAIN L as your scanner source, you see the EPSON TWAIN window.

Here are some recommended settings for different types of scans.

<table>
<thead>
<tr>
<th>Image type</th>
<th>Recommended bundled application</th>
<th>Recommended EPSON TWAIN tab</th>
<th>Scanning resolution for printing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photograph</td>
<td>HotShots</td>
<td>Photo</td>
<td>300 dpi</td>
</tr>
<tr>
<td>Small photograph</td>
<td>HotShots</td>
<td>Photo</td>
<td>300 dpi to 2400 dpi</td>
</tr>
<tr>
<td>Magazine</td>
<td>HotShots</td>
<td>Photo</td>
<td>300 dpi</td>
</tr>
<tr>
<td>Newspaper (text only)</td>
<td>PageManager</td>
<td>OCR/Line Art</td>
<td>300 dpi</td>
</tr>
<tr>
<td>Text for OCR</td>
<td>PageManager</td>
<td>OCR/Line Art</td>
<td>300 dpi</td>
</tr>
<tr>
<td>Text with images</td>
<td>PageManager</td>
<td>OCR/Line Art</td>
<td>300 dpi</td>
</tr>
<tr>
<td>Line art</td>
<td>HotShots</td>
<td>OCR/Line Art</td>
<td>300 to 2400 dpi</td>
</tr>
</tbody>
</table>

1 If your final output is for on-screen viewing (for example, on a web page), select 75 dpi for your resolution.
2 If you are enlarging your image, you must manually increase the resolution (dpi) proportionally to maintain the resolution of your original.
3 If you are scanning between 1201 and 2400 dpi, EPSON recommends you keep your scan area to 4 x 11.7 inches to maintain true hardware resolution. Above 2400 dpi, you will be using software interpolation to increase the resolution.

Scanner Bundle Kit

The scanner is available in a bundled kit that includes software for operating the scanner in a Windows® 98 or Macintosh® USB environment. The kit includes the following:

- EPSON Perfection 610 scanner
- USB cable
- CD-ROM that includes:
  - EPSON TWAIN Driver
  - PictureWorks™ HotShots™
  - Broderbund® The Print Shop® PressWriter™
  - NewSoft™ Presto!™ PageManager for EPSON
  - Electronic manuals (pdf)
- Scanner Basics guide

Related Documentation

- CPD-8876 EPSON Perfection 610 Scanner Basics
- 610ET0799 EPSON TWAIN User's Guide (pdf)
- PL-PERF610 EPSON Perfection 610 Parts Price List