

# Bio-Rad ChemiDoc™ XRS+ System

Catalog #170-8265

Sole-Source Specification

*Bio-Rad Laboratories, Inc. is the original manufacturer and sole supplier of the ChemiDoc XRS+ system.*

**The following feature set is unique to ChemiDoc XRS+ system and is not available in competing systems.**

Feature	Benefit
<ul style="list-style-type: none"><li>Image resolution &gt;4 megapixels</li><li>16-bit data acquisition</li><li>4.65 x 4.65 µm pixel size</li><li>Peltier cooling to -30°C</li></ul>	<ul style="list-style-type: none"><li>Ideal combination of high-resolution imaging and sensitivity with supercooled CCD for reduced background (increased signal-to-noise)</li><li>Ideal for resolving closely spaced bands on a gel/blot as well as for longer integration time for weak chemiluminescent signals</li><li>Quantitative (4 orders of linear dynamic range for all samples)</li><li>Increased image resolution when images are cropped or zoomed. Allows users to have smooth, clean images at any zoom level</li></ul>
<ul style="list-style-type: none"><li>Powered by Image Lab™ software</li></ul>	<ul style="list-style-type: none"><li>Enables the highest level of automation in hardware calibration, image optimization, image capture, and analysis</li></ul>
<ul style="list-style-type: none"><li>One-time installation process includes lens flat fielding and flat-fielding calibrations</li></ul>	<ul style="list-style-type: none"><li>System is easily installed and accounts for uniformity issues with the lens and illumination that are inherent in any imager</li><li>Delivers optimized and reproducible image data without any imaging artifacts for superior image uniformity and quantification</li></ul>
<ul style="list-style-type: none"><li>Automated workflow from image capture to results recorded in a protocol file</li></ul>	<ul style="list-style-type: none"><li>Allows recreation, exchange, and editing of existing workflows among multiple users. Eliminates need for training</li><li>Allows 100% repeatability of the workflow by any user and ensures optimized image data and analysis from a gel in a single uninterrupted, fast, and completely reproducible workflow</li><li>Provides instructions on illumination source and filter to use based on the application selected. Ensures that image optimization is specific to a selected gel or blot application</li></ul>
<ul style="list-style-type: none"><li>Automated image capture driven by a selected gel or blot application</li></ul>	<ul style="list-style-type: none"><li>Ensures that image optimization is specific to a selected gel or blot application or can be used for a large portfolio of detection methods such as: chemiluminescent, colorimetric and fluorescent western blots, nucleic acid and protein detection via colorimetric and fluorescent stains such as ethidium bromide, SYBR® Green, SYBR® Safe, SYBR® Gold, GelGreen, GelRed, Fast Blast, SYPRO Ruby, Flamingo™, Oriole™, CY3, rhodamine, green fluorescent protein, Hoechst, Krypton, silver stain, copper stain, zinc stain, Coomassie Brilliant Blue, Coomassie Fluor Orange, Fluorescein, CY2, Alexa 488, Qdots 525, 565, 625, and other spectrally similar stains, labels and dyes</li></ul>
<ul style="list-style-type: none"><li>Image acquisition with automatic focus and iris adjustments for all compatible applications</li></ul>	<ul style="list-style-type: none"><li>Users do not have to focus nor adjust aperture setting. The feature eliminates user error and the need for manual instrument adjustments to obtain an image, resulting in higher image quality</li><li>User only has to adjust the zoom to position the sample</li><li>Allows users, especially in multi-user labs, to quickly switch across all applications</li></ul>
<ul style="list-style-type: none"><li>Flexible and automated image exposure setting for all compatible applications</li></ul>	<ul style="list-style-type: none"><li>Ensures the optimal exposure time for the best dynamic range for all applications</li><li>Intense Bands exposure will be optimized for all bands</li><li>Faint Bands exposure will be optimized for more faint bands</li><li>Manual exposure is available to override automated imaging</li><li>Signal Accumulation Mode (SAM) for easy optimization of exposure time for chemiluminescent detection</li></ul>
<ul style="list-style-type: none"><li>Mac and PC compatible software</li><li>No requirement for license registration</li></ul>	<ul style="list-style-type: none"><li>Allows free functionality for sharing, analysis, and presentation of gel data. Unlimited copies of Image Lab software are available with each system</li><li>Multiple computers can be used, allowing flexibility in choosing location, media, and time for data analysis</li></ul>
<ul style="list-style-type: none"><li>16-bit and 8-bit tiff images with a one-click export option</li></ul>	<ul style="list-style-type: none"><li>Allow to retain all image data as a 16-bit or 8-bit .tiff file. This option creates a larger file and enables the user to analyze the image in other software programs</li></ul>
<ul style="list-style-type: none"><li>Publication-ready images with a one-click export option</li></ul>	<ul style="list-style-type: none"><li>Publishing resolution (dpi) and publishing dimension can be specified with a one-click image export for publication. Provides functionality to produce image at user-defined dpi and dimension</li><li>Produces beautiful, publication-ready images. Selections range from .tiff, .bmp, .png, and .jpg formats</li><li>Eliminates the need to first import image into software such as Photoshop image editing software to change image dpi and size</li></ul>



Feature	Benefit
<ul style="list-style-type: none"> <li>Automatic generation of customizable reports</li> </ul>	<ul style="list-style-type: none"> <li>Produces customizable reports with data organized as desired, including, lane and band identification, molecular weight or base pair evaluation. Band sizing and quantification are based on a reference band or quantity standards</li> </ul>
<ul style="list-style-type: none"> <li>User defined data charts with instant access to Excel functionality</li> </ul>	<ul style="list-style-type: none"> <li>Minimizes time from lab work to presentations</li> <li>Data analysis is enriched with Excel calculation within a single user interface</li> <li>Quick export of analysis and images to PowerPoint presentations or Excel files</li> </ul>
<ul style="list-style-type: none"> <li>Snapshot tool to copy images, lane profiles, and graphs</li> </ul>	<ul style="list-style-type: none"> <li>Instant copy/paste into publications and presentations within a single user interface</li> </ul>
<ul style="list-style-type: none"> <li>Clearly defined Image Lab software tools for acquisition and analysis</li> </ul>	<ul style="list-style-type: none"> <li>Provides large descriptive buttons with tool tips and comprehensive tutorial with navigation menu</li> </ul>
<ul style="list-style-type: none"> <li>Easily accessible targeted analysis features</li> </ul>	<ul style="list-style-type: none"> <li>Comprehensive 1-D gel and blot image analysis can be obtained in the shortest possible time</li> <li>Offers live updates of results with any change of analysis parameters</li> <li>Automatic and manual means for molecular weight determination, purity assessment, and relative and absolute quantification</li> </ul>
<ul style="list-style-type: none"> <li>Automatic print</li> </ul>	<ul style="list-style-type: none"> <li>This feature is useful for users only interested in taking an image and printing it</li> </ul>
<ul style="list-style-type: none"> <li>Flexible lane and band detection tools</li> </ul>	<ul style="list-style-type: none"> <li>Image Lab software provides complete flexibility with automatic and manual detection of lanes and bands, using proprietary algorithms</li> <li>Lane finding tools include manual adjustment for all or individual lanes</li> <li>Band finding tools include manual adjustment for all or individual bands</li> <li>Band detection sensitivity is fully adjustable to select the best detection sensitivity for the sample</li> </ul>
<ul style="list-style-type: none"> <li>Multiple image optimization tools</li> </ul>	<ul style="list-style-type: none"> <li>Unlimited undo and redo functions are available to easily correct for any missteps</li> <li>Additional features include easy copy/paste functionality, crop, zoom, 3D, and colors</li> </ul>

#### Technical Support

On-call imaging technical support supplied directly by 10-person team dedicated to U.S.

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