

Full Resolution vs. Upscale Resolution

Full Resolution Film Scanner	Upscale Resolution Film Scanner
<p>Full Resolution: All pixels are generated directly from the film surface without the loss of resolution due to interpolation or up-scaling. Scanning equipment is significantly more complex and costly for this process. True resolution scanners must be run at much slower speeds to allow time to extract all information entirely from the film surface. Pictures maintain a truer film quality with more available information. Nearly all professional feature films, commercials and other high end projects are scanned for final applications using full resolution scanning methods.</p>	<p>Interpolated Resolution: Scanning from the film surface is done at 1/3 stated resolution using a single Bayer chip to keep equipment cost low and maintain fast scan speeds. A background software algorithm scales up missing resolution to stated specifications (2K, 4K or otherwise) similar to an upres. Files appear as if they were originally scanned at higher resolutions. However, when zooming or viewing on larger screens, artifacts may become apparent including checkerboard pattern, edge zippering, false color demosaicing, error pixels. Further Wiki reading: en.wikipedia.org/wiki/Bayer_filter</p>
<p>Full Resolution Scanners: DFT Scanity 4K, Arriscan XT, Goldeneye 4</p>	<p>Upscale Resolution Scanners: Lasergraphics ScanStation, BlackMagic Cintel, Fabrik Mueller HDS+, Kinetta, Sondor Altra Mk3</p>
<p>Film Cleanliness: Full resolution scanners listed above have fully enclosed film transport cabinets with particle transfer rollers to assure professional, clean results. Filtered air is also blown across the film surface while maintaining a positive pressure within the film enclosure to repel dust.</p>	<p>Film Cleanliness: With the exception of BlackMagic, this class of scanner does not provide a protective enclosure for film transport. And, none provide pressurized filtered air to help maintain clean film. Film is scanned out in the open and is always susceptible to dust particles.</p>
<p>Viewing Quality: Full resolution scanning provides best picture especially when viewed in theaters or on large 4K screens. Zooming and cropping can also be done more easily in post.</p>	<p>Viewing Quality: When viewed on a small screen or mobile phone, Bayer scans produce reasonable results. But, when zooming or viewing on a larger screen missing resolution will take its toll on quality.</p>
<p>Value: If you need a scan to be exactly what you ask for, you will want to be scanning on one of the full resolution scanners listed above. Based on the exorbitant investment, maintenance and operation costs for delivering accurate full resolution, value is far superior.</p>	<p>Value: Interpolated scans are usually priced somewhat lower due to significantly lower equipment and operations cost. But, resolution and quality will never be what is advertised. Moving jobs around for falsely perceived savings will also add transportation cost and delay project delivery.</p>
<p>Know the Difference: <i>When it comes to scanning, professional results are of the utmost importance to us. That is why scanning done at Spectra is at <u>full resolution</u> directly from the film source using the worlds best scanners for spectacular results. When researching scan rates always ask what type of scan you are paying for!</i></p>	