Product Features

- 22mm x 26mm mini-board is compatible with previous 20/21K14XUSB-C family products
- All-digital design uses camera board’s digital (D1) output for input to USB board
- USB 2.0 bus provides power to camera
- Complete SDK available

Software

- USB 2.0 viewer software and Microsoft Digitally Certified WDM Device Drivers for 32bit and 64bit Windows operating systems
- DirectX/DirectShow compliant
- TWAIN compliant

Technical Specifications

<table>
<thead>
<tr>
<th>Electrical</th>
<th>20B14XUSB NTSC</th>
<th>21B14XUSB PAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image Sensor</td>
<td>1/4” CMOS</td>
<td>1/4” CMOS</td>
</tr>
<tr>
<td>Resolution (HxV)</td>
<td>640 x 480 (max)</td>
<td>640 x 480 (max)</td>
</tr>
<tr>
<td>Frame Rate</td>
<td>30fps</td>
<td>25fps</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>&lt; 0.05 lux, (50 IRE) F1.2, 3200°K, lens transmission 80%, scene reflection 75%</td>
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</tr>
<tr>
<td>Signal to Noise Ratio</td>
<td>&gt; 46 dB digital output</td>
<td>&gt; 46 dB digital output</td>
</tr>
<tr>
<td>Gamma</td>
<td>0.45 default</td>
<td>0.45 default</td>
</tr>
<tr>
<td>Gain Control</td>
<td>Automatic 36 dB (AGC default)</td>
<td>Automatic 36 dB (AGC default)</td>
</tr>
<tr>
<td>Scan Mode</td>
<td>Interlaced</td>
<td>Interlaced</td>
</tr>
<tr>
<td>Mirror Mode</td>
<td>Selectable via software</td>
<td>Selectable via software</td>
</tr>
<tr>
<td>Synchronization</td>
<td>Internal</td>
<td>Internal</td>
</tr>
<tr>
<td>Back Light Compensation</td>
<td>Default off</td>
<td>Default off</td>
</tr>
<tr>
<td>White Balance Mode</td>
<td>AWB</td>
<td>AWB</td>
</tr>
<tr>
<td>Contour Enhancement</td>
<td>Default on</td>
<td>Default on</td>
</tr>
<tr>
<td>Iris Control</td>
<td>Electronic Rolling Shutter</td>
<td>Electronic Rolling Shutter</td>
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<tr>
<td>Shutter Speed</td>
<td>Automatic from 1/60 to 1/100,000</td>
<td>Automatic from 1/50 to 1/100,000</td>
</tr>
<tr>
<td>Video Outputs</td>
<td>USB</td>
<td>USB</td>
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<tr>
<td>Control Communication</td>
<td>USB</td>
<td>USB</td>
</tr>
<tr>
<td>Power Supply</td>
<td>USB 2 bus</td>
<td>USB 2 bus</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>&lt; 0.8W</td>
<td>&lt; 0.8W</td>
</tr>
</tbody>
</table>

Mechanical

Dimensions WxHxD: 26mm x 22mm x 16mm without lens (1” x 0.87” x 0.63”)

Weight: 19g (0.67oz)

Lens Mounts Example:
Replace “X” in model number with desired lens:
2 = Metal M-12 Pinhole
5 = Metal M-12 Board
8 = Metal CS Board

Connectors:
Camera board: 30 pin to USB board (J100) MOLEX-501920-3001
USB board: 6 pin JST, power & data (J1)

Standards:
RoHS

Pinouts and Dimensions

Environmental

Operating Temperature: -15° C ~ 55° C (5° F ~ 131° F)
Storage Temperature: -25° C ~ 70° C (-13° F ~ 158° F)
Operating Humidity: 20 up to 93% RH
Storage Humidity: Up to 98% RH
Lifetime MTBF: > 150,000 hrs
Packaging: ESD safe package

Note: Camera is not USB 1.1 compliant

Software

Viewer (included):
SFT-07019
- WDM device drivers
- DirectX/DirectShow compliant
- TWAIN compliant (requires driver installation)

SDK (optional):
SFT-07019-SDK
Complete software development kit and support for OEMs

Recommended System Requirements

Hardware:
- Pentium IV 2.3GHz +, 1GB hard drive, Intel USB 2.0 Host controller

Software:
- Windows 7, 8, 10 32 bit and 64 bit
- Windows Vista 32 bit and 64 bit
- Windows XP Service pack 2 +, DirectX 9.0c or above

Accessories

Optional USB 2.0 cable:
- 60C1062 8 ft. (2.4384m)
- 60C1062-1 40 in. (1.016m)
- 60C1062-2 12 in. (304.8mm)
- 60C1062-3 6 in. (152.4mm)
- 60C1062-4 15 ft. (4.572m)

Complementary Models

20/21B14XDIG YUV digital and composite video output