**Introduction**

UBC-DS31 is a RISC-based signage box powered by a NXP ARM® Cortex®-A9 i.MX6 dual-core processor with built-in Gigabit Ethernet for networking and full HD video capabilities. The compact design and support for flexible mounting options, including wall mount brackets and VESA 75/100 standard mounts, ensures easy installation in any application environment. UBC-DS31 can be preloaded with SUSIAccess Signage or U-Poster software for remote management and signage player control capabilities. SUSIAccess Signage is a Linux-based software program that integrates multiple functions, including content production and device management, to support remote device monitoring and management over Ethernet networks.

**Specifications**

<table>
<thead>
<tr>
<th>Processor System</th>
<th>CPU</th>
<th>NXP ARM® Cortex®-A9 i.MX6 dual-core 1 GHz processor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>Technology</td>
<td>DDR3 1066 MHz</td>
</tr>
<tr>
<td></td>
<td>Capacity</td>
<td>On-board DDR3 1GB</td>
</tr>
<tr>
<td></td>
<td>Flash</td>
<td>4 GB of eMMC NAND Flash for OS and 4 MB of SPI NOR Flash for Advantech's boot loader</td>
</tr>
<tr>
<td>Graphics</td>
<td>HDMI</td>
<td>1 HDMI, 1920 x 1080 at 60Hz</td>
</tr>
<tr>
<td></td>
<td>VGA</td>
<td>1 VGA, 1920 x 1080 at 60Hz</td>
</tr>
<tr>
<td></td>
<td>Graphics Engine</td>
<td>2 x CPUs, OpenGL ES 2.0 for 3D, BitBlt for 2D and OpenVG 1.1</td>
</tr>
<tr>
<td></td>
<td>H/W Video Codec</td>
<td>Decoder: MPEG-4 ASP, H.264 HP, H.263, MPEG-2 MP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Encoder: MPEG-4 SP, H.264 BP, H.263</td>
</tr>
<tr>
<td>Ethernet</td>
<td>Chipset</td>
<td>NXP i.MX6 integrated RGMII</td>
</tr>
<tr>
<td></td>
<td>Speed</td>
<td>1 x 10/100/1000 Mbps</td>
</tr>
<tr>
<td>RTC</td>
<td>RTC</td>
<td>Yes</td>
</tr>
<tr>
<td>Watchdog Timer</td>
<td>Watchdog Timer</td>
<td>256-level timer intervals, from 0 – 128 sec</td>
</tr>
<tr>
<td>I/O</td>
<td>USB</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Audio</td>
<td>1 x Line-out</td>
</tr>
<tr>
<td></td>
<td>SPDIF</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>SDIO</td>
<td>1 x SD slot</td>
</tr>
<tr>
<td></td>
<td>Serial Port</td>
<td>1 x RS-232 (CTS, RTS, Tx, Rx)</td>
</tr>
<tr>
<td></td>
<td>Button</td>
<td>1 x Reset button</td>
</tr>
<tr>
<td>Indicator</td>
<td>LED</td>
<td>2 x Green LEDs for system power and RF status</td>
</tr>
<tr>
<td>Expansion</td>
<td>Mini PCIe</td>
<td>1 x Mini PCIe port</td>
</tr>
<tr>
<td></td>
<td>SIM</td>
<td>1 x SIM port</td>
</tr>
<tr>
<td>Power</td>
<td>Power Supply Voltage</td>
<td>12 Vdc</td>
</tr>
<tr>
<td></td>
<td>Power Type</td>
<td>DC-in</td>
</tr>
<tr>
<td></td>
<td>Power Consumption</td>
<td>2.3W (Max)</td>
</tr>
<tr>
<td>Environment</td>
<td>Operating Temperature</td>
<td>0 – 40 ºC</td>
</tr>
<tr>
<td></td>
<td>Operating Humidity</td>
<td>5 – 95% relative humidity, non-condensing</td>
</tr>
<tr>
<td>Mechanical</td>
<td>Dimensions (W x D)</td>
<td>191 x 129 x 30 mm with metal plate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>166 x 117 x 30 mm without metal plate</td>
</tr>
<tr>
<td></td>
<td>Mounting</td>
<td>Wall mount, VESA 75/100 standard mount, and flexible mount brackets with two screw holes on the metal plate</td>
</tr>
<tr>
<td></td>
<td>Weight</td>
<td>265 g</td>
</tr>
<tr>
<td>Operating System</td>
<td>Linux</td>
<td>SUSIAccess Signage</td>
</tr>
<tr>
<td>Certifications</td>
<td>CE/FCC Class B</td>
<td></td>
</tr>
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</table>
## Packing List

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990022408T000</td>
<td>UBC-D31-SD card cover</td>
<td>1</td>
</tr>
<tr>
<td>1931041020</td>
<td>VESA mount bracket screws</td>
<td>4</td>
</tr>
<tr>
<td>1930003218</td>
<td>VESA mount brackets with system screws</td>
<td>2</td>
</tr>
<tr>
<td>2022DS3100</td>
<td>UBC-D31 China RoHS</td>
<td>1</td>
</tr>
<tr>
<td>2022DS3110</td>
<td>Quick start guide</td>
<td>1</td>
</tr>
</tbody>
</table>

## Optional Accessories

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>96PSA-A36W12R1</td>
<td>Power Adapter 100-240V 36W 12V</td>
<td></td>
</tr>
<tr>
<td>1700001524</td>
<td>Power cord 3P UL 180cm</td>
<td></td>
</tr>
<tr>
<td>170203183C</td>
<td>Power cord 3P EU 183cm</td>
<td></td>
</tr>
<tr>
<td>170203180A</td>
<td>Power cord 3P UK 183cm</td>
<td></td>
</tr>
<tr>
<td>1700008921</td>
<td>Power Cord 3P PSE 183cm</td>
<td></td>
</tr>
<tr>
<td>EWM-W142F01E</td>
<td>802.11 b/g/n, AR9287, 2T2R, full-size mini PCIe</td>
<td></td>
</tr>
<tr>
<td>EWM-C106FT02E</td>
<td>HSPA/WCDMA/GPRS cellular module</td>
<td></td>
</tr>
<tr>
<td>1750006943</td>
<td>Cable R/P SMA (M) to MHF 1.32 150 mm (Wi-Fi cable)</td>
<td></td>
</tr>
<tr>
<td>175000318</td>
<td>EMI antenna 20dBi 2.4 GHz SMA CONN for ARK-3384 (Wi-Fi antenna)</td>
<td></td>
</tr>
<tr>
<td>1750006264</td>
<td>Antenna SMA(F)/MHF 15 cm SMALFN8-3150A-00X00R (3G cable)</td>
<td></td>
</tr>
<tr>
<td>1750005865</td>
<td>Antenna, 10.9 cm, 50 ohm, AN8921F-5701SM (3G antenna)</td>
<td></td>
</tr>
<tr>
<td>1700021565-01</td>
<td>Debug cable</td>
<td></td>
</tr>
<tr>
<td>SDF-ISDS1-2G-86E</td>
<td>SDFlash SD card SLC 2G (-40 – 85 °C)</td>
<td></td>
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</tbody>
</table>