

Required packages and libraries for Lumerical Suite and Lumerical Photonic Verilog-A

Lumerical

Operating System	Packages
Red Hat Enterprise Linux 8 and Rocky Linux 8	alsa-lib at-spi2-atk at-spi2-core atk avahi-libs bzip2-libs cairo cairo-gobject cups-libs elfutils-libelf expat fontconfig freetype freetype fribidi gdk-pixbuf2 glib2 glibc glibc-devel gmp gnutls graphite2 gtk3 harfbuzz keyutils-libs krb5-libs libICE libSM libX11 libX11-xcb libXau libXcomposite libXcursor libXdamage libXext libXfixes libXi libXinerama libXrandr libXrender libXt libXtst libXxf86vm libblkid libcap libcom_err libdatrie libdrm libepoxy libgcrypt libglvnd libglvnd-glx libgpg-error libidn2 libjpeg-turbo libmount libnsl libnsl2 libselinux libtasn1 libthai libtool-ltdl libunistring libuuid libwayland-client libwayland-cursor libwayland-egl libwayland-server libxcb libxcrypt libxkbcommon libxkbcommon-x11 libxslt libzstd lz4-libs mesa-libGLU mesa-libgbm nettle nspr nss nss-util numactl-libs openssl-libs p11-kit pango pcre pcre2 pixman systemd-libs tbb which xcb-util xcb-util-image xcb-util-keysyms xcb-util-renderutil xcb-util-wm xorg-x11-fonts-100dpi xorg-x11-fonts-75dpi xz-libs
Red Hat Enterprise Linux 9 and Rocky Linux 9	alsa-lib at-spi2-atk at-spi2-core atk avahi-libs bzip2-libs cairo cairo-gobject cups-libs elfutils-libelf expat fontconfig freetype freetype fribidi gdk-pixbuf2 glib2 glibc glibc-devel gnutls graphite2 gtk3 harfbuzz json-glib keyutils-libs krb5-libs libICE libSM libX11 libX11-xcb libXau libXcomposite libXcursor libXdamage libXext libXfixes libXi libXinerama libXrandr libXrender libXt libXtst libXxf86vm libblkid libbrotli libcap libcom_err libdatrie libdrm libepoxy libffi libgcrypt libglvnd libglvnd-glx libgpg-error libicu libidn2 libjpeg-turbo libmount libnsl libnsl2 libselinux libstemmer libtasn1 libthai libtool-ltdl libtracker-sparql libunistring libuuid libwayland-client libwayland-cursor libwayland-egl libwayland-server libxcb libxcrypt-compat libxkbcommon libxkbcommon-x11 libxslt libzstd lz4-libs mesa-libGLU mesa-libgbm nettle nspr nss nss-util numactl-libs p11-kit pango pcre pcre2 pixman systemd-libs tbb which xcb-util xcb-util-image xcb-util-keysyms xcb-util-renderutil xcb-util-wm xorg-x11-fonts-100dpi xorg-x11-fonts-75dpi xz-libs
SUSE Linux Enterprise Server and Desktop 15	fontconfig glibc glibc-devel krb5 libGLU1 libICE6 libSM6 libX11-6 libX11-xcb1 libXau6 libXcomposite1 libXcursor1 libXdamage1 libXext6 libXfixes3 libXi6 libXinerama1 libXrandr2 libXrender1 libXt6 libXtst6 libXxf86vm1 libasound2 libatk-1_0-0 libatk-bridge-2_0-0 libatspi0 libavahi-client3 libavahi-common3 libblkid1 libbz2-1

Operating System	Packages
	libcairo-gobject2 libcairo2 libcap2 libcom_err2 libcrypt1 libcups2 libdatrie1 libdrm2 libelf1 libepoxy0 libexpat1 libffi7 libfreetype6 libfribidi0 libgbm1 libgcrypt20 libgdk_pixbuf-2_0-0 libgio-2_0-0 libglib-2_0-0 libglut3 libglvnd libgmodule-2_0-0 libgmp10 libgnutls30 libgobject-2_0-0 libgpg-error0 libgraphite2-3 libgthread-2_0-0 libgtk- 3-0 libharfbuzz0 libhogweed4 libidn2-0 libjpeg62 libkeyutils1 libltdl7 liblz4-1 liblzma5 libmount1 libnettle6 libns2 libnuma1 libopenssl1_1 libp11-kit0 libpango-1_0-0 libpcre1 libpixman-1-0 libselinux1 libsystemd0 libtasn1-6 libthai0 libunistring2 libuuid1 libwayland- client0 libwayland-cursor0 libwayland-egl1 libwayland-server0 libxcb-icccm4 libxcb-image0 libxcb-keysyms1 libxcb-randr0 libxcb- render-util0 libxcb-render0 libxcb-shape0 libxcb-shm0 libxcb-sync1 libxcb-util1 libxcb-xfixes0 libxcb-xinerama0 libxcb-xkb1 libxcb1 libxkbcommon-x11-0 libxkbcommon0 libxslt1 libzstd1 mozilla-nspr mozilla-nss which xorg-x11-fonts
Ubuntu 20.04 LTS	debianutils freeglut3 libasound2 libatk-bridge2.0-0 libatk1.0-0 libatspi2.0-0 libavahi-client3 libavahi-common3 libblkid1 libbsd0 libbz2-1.0 libc6 libcairo-gobject2 libcairo2 libcom_err2 libcrypt1 libcups2 libdatrie1 libdrm2 libelf1 libepoxy0 libexpat1 libffi7 libfontconfig1 libfreetype6 libfribidi0 libgbm1 libgcrypt20 libgdk- pixbuf2.0-0 libgl1 libglib2.0-0 libglu1-mesa libglvnd0 libglx0 libgmp10 libgnutls30 libgpg-error0 libgraphite2-3 libgssapi-krb5-2 libgtk-3-0 libharfbuzz0b libhogweed5 libice6 libidn2-0 libjpeg62 libk5crypto3 libkeyutils1 libkrb5-3 libkrb5support0 libltdl7 liblz4-1 liblzma5 libmount1 libnettle7 libnspr4 libnss3 libnuma1 libp11-kit0 libpango- 1.0-0 libpangocairo-1.0-0 libpangoft2-1.0-0 libpcre2-8-0 libpcre3 libpixman-1-0 libselinux1 libsm6 libsystemd0 libtasn1-6 libtbb2 libthai0 libunistring2 libuuid1 libwayland-client0 libwayland-cursor0 libwayland-egl1 libwayland-server0 libx11-6 libx11-xcb1 libxau6 libxcb-icccm4 libxcb-image0 libxcb-keysyms1 libxcb-randr0 libxcb- render-util0 libxcb-render0 libxcb-shape0 libxcb-shm0 libxcb-sync1 libxcb-util1 libxcb-xfixes0 libxcb-xinerama0 libxcb-xkb1 libxcb1 libxcomposite1 libxcursor1 libxdamage1 libxdmcp6 libxext6 libxfixes3 libxi6 libxinerama1 libxkbcommon-x11-0 libxkbcommon0 libxrandr2 libxrender1 libxslt1.1 libxt6 libxtst6 libxxf86vm1 lsb-core xfonts- 100dpi xfonts-75dpi
Ubuntu 22.04 LTS	debianutils freeglut3 libasound2 libatk-bridge2.0-0 libatk1.0-0 libatspi2.0-0 libavahi-client3 libavahi-common3 libblkid1 libbrotli1 libbsd0 libbz2-1.0 libc6 libcairo-gobject2 libcairo2 libcap2 libcom- err2 libcrypt1 libcups2 libdatrie1 libdrm2 libelf1 libepoxy0 libexpat1 libffi8 libfontconfig1 libfreetype6 libfribidi0 libgbm1 libgcrypt20

Operating System	Packages
	libgdk-pixbuf-2.0-0 libgl1 libglib2.0-0 libglu1-mesa libglvnd0 libglx0 libgmp10 libgnutls30 libgpg-error0 libgraphite2-3 libgssapi-krb5-2 libgtk-3-0 libharfbuzz0b libhogweed6 libice6 libidn2-0 libjpeg-turbo8 libjpeg62 libk5crypto3 libkeyutils1 libkrb5-3 libkrb5support0 libltdl7 liblz4-1 liblzma5 libmd0 libmount1 libnettle8 libnsl2 libnspr4 libnss3 libnuma1 libopengl0 libp11-kit0 libpango-1.0-0 libpangocairo-1.0-0 libpangoft2-1.0-0 libpcre2-8-0 libpcre3 libpixman-1-0 libselinux1 libsm6 libsystemd0 libtasn1-6 libtbbmalloc2 libthai0 libunistring2 libuuid1 libwayland-client0 libwayland-cursor0 libwayland-egl1 libwayland-server0 libx11-6 libx11-xcb1 libxau6 libxcb-icccm4 libxcb-image0 libxcb-keysyms1 libxcb-randr0 libxcb-render-util0 libxcb-render0 libxcb-shape0 libxcb-shm0 libxcb-sync1 libxcb-util1 libxcb-xfixes0 libxcb-xinerama0 libxcb-xkb1 libxcb1 libxcomposite1 libxcursor1 libxdamage1 libxdmcp6 libxext6 libxfixes3 libxi6 libxinerama1 libxkbcommon-x11-0 libxkbcommon0 libxrandr2 libxrender1 libxslt1.1 libxt6 libxtst6 libxxf86vm1 libzstd1 lsb-core xfonts-100dpi xfonts-75dpi

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Red Hat Enterprise Linux 8 and Rocky Linux 8	alsa-lib at-spi2-atk at-spi2-core atk avahi-libs bzip2-libs cairo cairo-gobject cups-libs dbus-libs expat fontconfig freetype fridibi gdk-pixbuf2 glib2 glibc glibc-devel gmp gnutls graphite2 gtk3 harfbuzz jbigkit-libs keyutils-libs krb5-libs libICE libSM libX11 libXau libXcomposite libXcursor libXdamage libXext libXfixes libXi libXinerama libXrandr libXrender libXtst libXxf86vm libblkid libcap libcom_err libdatatr libdrm libepoxy libgcrypt libgpg-error libidn2 libjpeg-turbo libmount libnsl libnsl2 libpng libselinux libtasn1 libthai libtiff libunistring libuuid libwayland-client libwayland-cursor libwayland-egl libwayland-server libxcb libxcrypt libxkbcommon lz4-libs mesa-libgbm nettle nspr nss nss-util openssl-libs p11-kit pango pcre pcre2 pixman systemd-libs which xorg-x11-fonts-100dpi xorg-x11-fonts-75dpi xz-libs
Red Hat Enterprise Linux 9 and Rocky Linux 9	alsa-lib at-spi2-atk at-spi2-core atk avahi-libs bzip2-libs cairo cairo-gobject cups-libs dbus-libs expat fontconfig freetype fridibi gdk-pixbuf2 glib2 glibc glibc-devel gnutls graphite2 gtk3 harfbuzz jbigkit-libs json-glib keyutils-libs krb5-libs libICE libSM libX11 libXau libXcomposite libXcursor libXdamage libXext libXfixes libXi libXinerama libXrandr libXrender libXtst libXxf86vm libblkid libbrotli

Operating System	Packages
	libcap libcom_err libdatrie libdrm libepoxy libffi libgcrypt libgpg-error libicu libidn2 libjpeg-turbo libmount libnsl libnsl2 libpng libselenium libstemmer libtasn1 libthai libtiff libtracker-sparql libunistring libuuid libwayland-client libwayland-cursor libwayland-egl libwayland-server libwebp libxcb libxcrypt-compat libxkbcommon libxml2 libzstd lz4-libs mesa-libgbm nettle nspr nss nss-util openssl-libs p11-kit pango pcre pcre2 pixman systemd-libs which xorg-x11-fonts-100dpi xorg-x11-fonts-75dpi xz-libs
SUSE Linux Enterprise Server and Desktop 15	fontconfig glibc glibc-devel krb5 libICE6 libSM6 libX11-6 libXau6 libXcomposite1 libXcursor1 libXdamage1 libXext6 libXfixes3 libXi6 libXinerama1 libXrandr2 libXrender1 libXtst6 libXxf86vm1 libasound2 libatk-1_0-0 libatk-bridge-2_0-0 libatspi0 libavahi-client3 libavahi-common3 libblkid1 libbz2-1 libcairo-gobject2 libcairo2 libcap2 libcom_err2 libcrypt1 libcups2 libdatrie1 libdbus-1-3 libdrm2 libepoxy0 libexpat1 libffi7 libfontconfig1 libfreetype6 libfribidi0 libgbm1 libgcrypt20 libgdk_pixbuf-2_0-0 libgio-2_0-0 libglib-2_0-0 libglvnd libgmodule-2_0-0 libgmp10 libgnutls30 libgobject-2_0-0 libgpg-error0 libgraphite2-3 libgthread-2_0-0 libgtk-3-0 libharfbuzz0 libhogweed4 libidn2-0 libjbig2 libjpeg62 libjpeg8 libkeyutils1 liblz4-1 liblzma5 libmount1 libnettle6 libnsl2 libopenssl1_1 libp11-kit0 libpango-1_0-0 libpcre1 libpixman-1-0 libpng16-16 libselenium1 libsystemd0 libtasn1-6 libthai0 libtiff5 libunistring2 libuuid1 libwayland-client0 libwayland-cursor0 libwayland-egl1 libwayland-server0 libxcb-render0 libxcb-shm0 libxcb1 libxkbcommon0 libzstd1 mozilla-nspr mozilla-nss which xorg-x11-fonts
Ubuntu 20.04 LTS	debianutils libasound2 libatk-bridge2.0-0 libatk1.0-0 libatspi2.0-0 libavahi-client3 libavahi-common3 libblkid1 libbsd0 libc6 libcairo-gobject2 libcairo2 libcom-err2 libcrypt1 libcups2 libdatrie1 libdbus-1-3 libdrm2 libepoxy0 libexpat1 libffi7 libfontconfig1 libfreetype6 libfribidi0 libgbm1 libgcrypt20 libgdk-pixbuf2.0-0 libglib2.0-0 libgmp10 libgnutls30 libgpg-error0 libgraphite2-3 libgssapi-krb5-2 libgtk-3-0 libharfbuzz0b libhogweed5 libice6 libidn2-0 libjbig0 libjpeg-turbo8 libjpeg62 libk5crypto3 libkeyutils1 libkrb5-3 libkrb5support0 liblz4-1 liblzma5 libmount1 libnettle7 libnspr4 libnss3 libp11-kit0 libpango-1.0-0 libpangocairo-1.0-0 libpangoft2-1.0-0 libpcre2-8-0 libpcre3 libpixman-1-0 libpng16-16 libselenium1 libsm6 libsystemd0 libtasn1-6 libthai0 libtiff5 libunistring2 libuuid1 libwayland-client0 libwayland-cursor0 libwayland-egl1 libwayland-server0 libwebp6 libx11-6 libxau6 libxcb-render0 libxcb-shm0 libxcb1 libxcomposite1 libxcursor1 libxdamage1 libxdmcp6 libxext6 libxfixes3

Operating System	Packages
	libxi6 libxinerama1 libxkbcommon0 libxrandr2 libxrender1 libxtst6 libxxf86vm1 libzstd1 lsb-core xfonts-100dpi xfonts-75dpi
Ubuntu 22.04 LTS	debianutils libasound2 libatk-bridge2.0-0 libatk1.0-0 libatspi2.0-0 libavahi-client3 libavahi-common3 libblkid1 libbrotli1 libbsd0 libc6 libcairo-gobject2 libcairo2 libcap2 libcom-err2 libcrypt1 libcups2 libdatrie1 libdbus-1-3 libdeflate0 libdrm2 libepoxy0 libexpat1 libffi8 libfontconfig1 libfreetype6 libfribidi0 libgbm1 libgcrypt20 libgdk- pixbuf-2.0-0 libglib2.0-0 libgmp10 libgnutls30 libgpg-error0 libgraphite2-3 libgssapi-krb5-2 libgtk-3-0 libharfbuzz0b libhogweed6 libice6 libidn2-0 libjbig0 libjpeg-turbo8 libjpeg62 libk5crypto3 libkeyutils1 libkrb5-3 libkrb5support0 liblz4-1 liblzma5 libmd0 libmount1 libnettle8 libnsl2 libnspr4 libnss3 libp11-kit0 libpango-1.0- 0 libpangocairo-1.0-0 libpangoft2-1.0-0 libpcre2-8-0 libpcre3 libpixman-1-0 libpng16-16 libselinux1 libsm6 libsystemd0 libtasn1-6 libthai0 libtiff5 libunistring2 libuuid1 libwayland-client0 libwayland- cursor0 libwayland-egl1 libwayland-server0 libwebp7 libx11-6 libxau6 libxcb-render0 libxcb-shm0 libxcb1 libxcomposite1 libxcursor1 libxdamage1 libxdmcp6 libxext6 libxfixes3 libxi6 libxinerama1 libxkbcommon0 libxrandr2 libxrender1 libxtst6 libxxf86vm1 libzstd1 lsb-core xfonts-100dpi xfonts-75dpi