



OPEN SOURCE SOFTWARE NOTICE

Please note we provide an open source software notice along with this product and/or this product firmware (in the following just “this product”). The open source software licenses are granted by the respective right holders. And the open source licenses prevail all other license information with regard to the respective open source software contained in the product, including but not limited to End User Software Licensing Agreement. This notice is provided on behalf of Huawei Technologies Co. Ltd. and any of its local subsidiaries which may have provided this product to you in your local country.

Warranty Disclaimer

THE OPEN SOURCE SOFTWARE IN THIS PRODUCT IS DISTRIBUTED IN THE HOPE THAT IT WILL BE USEFUL, BUT WITHOUT ANY WARRANTY, WITHOUT EVEN THE IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SEE THE APPLICABLE LICENSES FOR MORE DETAILS.

Copyright Notice and License Texts

Software: Android NDK r20b

Copyright notice:

Copyright 2004-2005 Elemental Security, Inc. All Rights Reserved.

Copyright 2006 Google, Inc. All Rights Reserved.

Copyright (c) 2001, 2002, 2003, 2004, 2005, 2006 Python Software Foundation.

(c) Copyright CNRI, All Rights Reserved. NO WARRANTY.

(c) Copyright 2000 Guido van Rossum.

Copyright (c) 2006-2008, R Oudkerk

Copyright (c) 1983, 1989, 1993

Copyright (C) 2008 The Android Open Source Project

Copyright (C) 2004, 2005, 2008, 2009 Internet Systems Consortium, Inc. (“ISC”
)

Copyright (C) 1996-2003 Internet Software Consortium.



Copyright (c) 1983, 1989

Copyright (c) 1983, 1993

Copyright (C) 2018 The Android Open Source Project

Copyright (C) 2017 The Android Open Source Project

Copyright (c) 2007-2014 University of Illinois at Urbana-Champaign.

Copyright (c) 2009-2014 by the contributors listed in CREDITS.TXT

Copyright (c) 2003-2014 University of Illinois at Urbana-Champaign.

Copyright (c) 2005-2011, The Android Open Source Project

Copyright (c) 2007-2011 University of Illinois at Urbana-Champaign.

Copyright (c) 2003-2011 University of Illinois at Urbana-Champaign.

Copyright (c) 1996 Mark Brinicombe.

Copyright (c) 1996 Brini.

Copyright (c) 2008 Eli Friedman

Copyright (c) 2009 Chris Lattner

Copyright (c) 2011 Ed Schouten <ed@FreeBSD.org>

Copyright (c) 2009 Howard Hinnant

Copyright (c) 2014 Chandler Carruth

Copyright 2005, Google Inc.

Copyright 2007, Google Inc.

Copyright 2008, Google Inc.

Copyright 2008 Google Inc.

Copyright 2006, Google Inc.

Copyright (c) 2015-2016 The Khronos Group Inc.

Copyright (c) 2016 Google Inc.

Copyright (c) 2017 Pierre Moreau

Copyright (C) 2016 The Android Open Source Project

Copyright (c) 2014-2016 The Khronos Group Inc.

Copyright (c) 2015-2017 The Khronos Group Inc.



Copyright (c) 2014-2018 The Khronos Group Inc.
Copyright (c) 2014-2017 The Khronos Group Inc.
Copyright (c) 2015-2019 The Khronos Group Inc.
Copyright 2013 The Android Open Source Project
Copyright (c) 2008-2009 The Khronos Group Inc.
Copyright 2016 The Android Open Source Project
Copyright 2015 Google Inc. All rights reserved.
Copyright (C) 1995, 1996, 1997, and 1998 WIDE Project.
Copyright (c) 1982, 1986, 1993
Copyright (C) 2015 The Android Open Source Project
Copyright (C) 2013 The Android Open Source Project
Copyright (c) 2007-2009 The Khronos Group Inc.
Copyright (C) 2010 The Android Open Source Project
Copyright (C) 2011 The Android Open Source Project
Copyright (c) 1994
Copyright (c) 1996,1997
Copyright (c) 2003-2018 University of Illinois at Urbana-Champaign.
Copyright (c) 2009-2018 by the contributors listed in CREDITS.TXT
Copyright (c) 2009-2015 by the contributors listed in CREDITS.TXT
Copyright (c) 2009-2017 by the contributors listed in CREDITS.TXT
Copyright (c) 1997-2018 Intel Corporation
Copyright (c) 2007-2018 University of Illinois at Urbana-Champaign.
Copyright (c) 2011-2018 by the contributors listed in CREDITS.TXT
Copyright (c) 2015-2018 The Khronos Group Inc.
Copyright (c) 2015-2018 Valve Corporation
Copyright (c) 2015-2018 LunarG, Inc.
Copyright (C) 2015-2018 Google Inc.
Copyright (c) 2015-2017 Valve Corporation



Copyright (c) 2015-2017 LunarG, Inc.
Copyright (C) 2015-2017 Google Inc.
Copyright (c) 2015-2016 Valve Corporation
Copyright (c) 2015-2016 LunarG, Inc.
Copyright (C) 2015-2016 Google Inc.
Copyright (c) 2018 The Khronos Group Inc.
Copyright (c) 2018 Valve Corporation
Copyright (c) 2018 LunarG, Inc.
Copyright (c) 2016 The Khronos Group Inc.
Copyright (c) 2016 Valve Corporation
Copyright (c) 2016 LunarG, Inc.
Copyright (c) 2015-2018 Google, Inc.
Copyright 2014 Valve Software
Copyright 2015 Google Inc.
Copyright (c) 2016-2018 The Khronos Group Inc.
Copyright (c) 2016-2018 Valve Corporation
Copyright (c) 2016-2018 LunarG, Inc.
Copyright (c) 2016-2018 Google Inc.
Copyright (C) 2012-2016, Yann Collet
Copyright (C) 2012-2016, Yann Collet.
Copyright (c) 2015-2018 Google Inc.
Copyright (c) 2015-2017 Google Inc.
Copyright (c) 2014-2016 Valve Corporation
Copyright (c) 2014-2016 LunarG, Inc.
Copyright (c) 2009 Dave Gamble
Copyright Kevlin Henney, 1997, 2003, 2012. All rights reserved.
Copyright (c) 2014-2015 The Khronos Group Inc.
Copyright (c) 2005 - 2014 G-Truc Creation (www.g-truc.net)



Copyright (c) 2018 Google Inc.

Copyright (c) 2017 Google Inc.

Copyright (c) 2015-2016 Google Inc.

Copyright (c) 2018 Google LLC

Copyright (c) 2007-2010 The Khronos Group Inc.

Copyright (c) 2016-2017 Valve Corporation

Copyright (c) 2016-2017 LunarG, Inc.

Copyright (C) 2001,2002 Python Software Foundation, and were

(c) 2005 Ian Bicking and contributors

Copyright 2015 The Shaderc Authors. All rights reserved.

Copyright 2016 The Shaderc Authors. All rights reserved.

Copyright (c) 2008-2017 The Khronos Group Inc.

Copyright (c) 2017 The Khronos Group Inc.

Copyright (C) 2014 The Android Open Source Project

Copyright (C) 2001-2006 Python Software Foundation

Copyright (C) 2002-2006 Python Software Foundation

Copyright (c) 1997 by Fredrik Lundh

Copyright (C) 2006 - 2010 Gregor Lingl

Copyright (C) 2002-2005 3Dlabs Inc. Ltd.

Copyright (C) 2012-2013 LunarG, Inc.

Copyright (C) 2017 ARM Limited.

Copyright (C) 2013 LunarG, Inc.

Copyright (C) 2012-2016 LunarG, Inc.

Copyright (C) 2015-2016 Google, Inc.

Copyright (C) 2009 The Android Open Source Project

Copyright (c) 1991, 1993

Copyright (c) 1997 Niklas Hallqvist. All rights reserved.



Copyright (C) 2012 The Android Open Source Project

(c) UNIX System Laboratories, Inc.

Copyright (c) 1999-2001, Digital Creations, Fredericksburg, VA, USA

(C) Copyright 2001 Autonomous Zone Industries

Copyright (c) 1997-2001 by Total Control Software

Copyright (C) 2000, 2001 by Autonomous Zone Industries

Copyright (C) 2002 Gregory P. Smith

Copyright (C) 2000 Autonomous Zone Industries

Copyright (c) 2017 Valve Corporation

Copyright (c) 2017 LunarG Inc.

Copyright (c) 2016 LunarG Inc.

Copyright (c) 2018 LunarG Inc.

Copyright (c) 2018 Google LLC.

Copyright (c) 2014, ARM Limited

Copyright (c) 2014, Linaro Ltd.

Copyright (c) 2014, Linaro Limited

Copyright (c) 1993 John Brezak

Copyright (c) 2009-2013 The Linux Foundation. All rights reserved.

Copyright (C) 1993 by Sun Microsystems, Inc. All rights reserved.

Copyright (c) 2008 Steven G. Kargl, David Schultz, Bruce D. Evans.

Copyright (c) 2009-2011, Bruce D. Evans, Steven G. Kargl, David Schultz.

Copyright (C) 2004 by Sun Microsystems, Inc. All rights reserved.

Copyright 2004 Sun Microsystems, Inc. All Rights Reserved.

Copyright (c) 1989, 1993

Copyright (C) 2004, 2005, 2008 Internet Systems Consortium, Inc. ("ISC")

Copyright (C) 1995-1999, 2001, 2003 Internet Software Consortium.

Copyright (C) 1997-2001 Internet Software Consortium.

Copyright (C) 2006 The Android Open Source Project



Copyright (C) 2007 The Android Open Source Project

Copyright (c) 2013-2014, NVIDIA Corporation. All rights reserved.

Copyright (c) 2008 ARM Ltd

Copyright (C) 2013 Pietro Cerutti <gahr@FreeBSD.org>

Copyright (c) 2013-2014 NVIDIA Corporation. All rights reserved.

Copyright (c) 2009-2011, Code Aurora Forum. All rights reserved.

Copyright (C) 2019 The Android Open Source Project

Copyright (c) 1980, 1983, 1988, 1993

Copyright (c) 1993 by Digital Equipment Corporation.

Copyright (c) 1983, 1987, 1989

Copyright (c) 1985

Copyright (c) 1985 Regents of the University of California.

Copyright (c) 1985, 1988, 1993

Copyright (c) 1985, 1989, 1993

Copyright (c) 1985, 1993

Copyright (c) 1987 Regents of the University of California.

Copyright (c) 1987, 1993

Copyright (c) 1988 Regents of the University of California.

Copyright (c) 1988 The Regents of the University of California.

Copyright (c) 1988, 1993

Copyright (c) 1989 The Regents of the University of California.

Copyright (c) 2011 The FreeBSD Foundation

Copyright (c) 1990 Regents of the University of California.

Copyright (c) 1990 The Regents of the University of California.

Copyright (c) 1990, 1993

Copyright (c) 1990, 1993, 1994

Copyright (c) 1991 The Regents of the University of California.

Copyright (c) 1991, 1993, 1995,



Copyright (c) 1992 Henry Spencer.

Copyright (c) 1992, 1993

Copyright (c) 1992 The Regents of the University of California.

Copyright (c) 1992, 1993, 1994

Copyright (c) 1992, 1993, 1994 Henry Spencer.

Copyright (c) 1993

Copyright (c) 1993 Martin Birgmeier

Copyright (c) 1994 SigmaSoft, Th. Lockert <tholo@sigmasoft.com>

Copyright (c) 1996 by Internet Software Consortium.

Copyright (c) 1996, David Mazieres <dm@uun.org>

Copyright (c) 2008, Damien Miller <djm@openbsd.org>

Copyright (c) 2013, Markus Friedl <markus@openbsd.org>

Copyright (c) 2014, Theo de Raadt <deraadt@openbsd.org>

Copyright (c) 1996-1998, 2008 Theo de Raadt

Copyright (c) 1997, 2008-2009 Todd C. Miller

Copyright (c) 1997 Mark Brinicombe

Copyright (c) 1997 The NetBSD Foundation, Inc.

Copyright (c) 1997 Todd C. Miller <Todd.Miller@courtesan.com>

Copyright (c) 1997, 1998 The NetBSD Foundation, Inc.

Copyright (c) 1997, 1998, 1999, 2004 The NetBSD Foundation, Inc.

Copyright (c) 1997, 2005 Todd C. Miller <Todd.Miller@courtesan.com>

Copyright (c) 1998 Softweyr LLC. All rights reserved.

Copyright (c) 1998 The NetBSD Foundation, Inc.

Copyright (c) 1998 Todd C. Miller <Todd.Miller@courtesan.com>

Copyright (c) 1998, 2015 Todd C. Miller <Todd.Miller@courtesan.com>

Copyright (c) 1999

Copyright (c) 2000 Ben Harris.

Copyright (c) 2000 The NetBSD Foundation, Inc.



Copyright (c) 2001 Wasabi Systems, Inc.

Copyright (c) 2001-2002 Opsycon AB (www.opsycon.se / www.opsycon.com)

Copyright (c) 2001-2011 The FreeBSD Project.

Copyright (c) 2002 Daniel Hartmeier

Copyright (c) 2002 The NetBSD Foundation, Inc.

Copyright (c) 2002 Tim J. Robbins

Copyright (c) 2002 Tim J. Robbins.

Copyright (c) 2002 Todd C. Miller <Todd.Miller@courtesan.com>

Copyright (c) 2002, 2003 Tim J. Robbins.

Copyright (c) 2002-2004 Tim J. Robbins

Copyright (c) 2002-2004 Tim J. Robbins.

Copyright (c) 2003 Constantin S. Svintsoff <kostik@iclub.nsu.ru>

Copyright (c) 2003 Dag-Erling Smørgrav

Copyright (c) 2003 David Schultz <das@FreeBSD.ORG>

Copyright (c) 2003 Mike Barcroft <mike@FreeBSD.org>

Copyright (c) 2002 David Schultz <das@FreeBSD.ORG>

Copyright (c) 2003 Networks Associates Technology, Inc.

Copyright (c) 2003 Todd C. Miller <Todd.Miller@courtesan.com>

Copyright (c) 2003, 2004 Todd C. Miller <Todd.Miller@courtesan.com>

Copyright (c) 2003, Steven G. Kargl

Copyright (c) 2004 David Schultz <das@FreeBSD.ORG>

Copyright (c) 2004 Stefan Farfeleder

Copyright (c) 2004 by Internet Systems Consortium, Inc. ("ISC")

Copyright (c) 1995,1999 by Internet Software Consortium.

Copyright (c) 1995-1999 by Internet Software Consortium

Copyright (c) 1995-1999 by Internet Software Consortium.

Copyright (c) 1996,1999 by Internet Software Consortium.

Copyright (c) 1996-1999 by Internet Software Consortium



Copyright (c) 1996-1999 by Internet Software Consortium.

Copyright (c) 1997,1999 by Internet Software Consortium.

Copyright (c) 1999 by Internet Software Consortium.

Copyright (c) 2004, 2005 David Schultz <das@FreeBSD.ORG>

Copyright (c) 2004-2005 David Schultz <das (at) FreeBSD.ORG>

Copyright (c) 2004-2005 David Schultz <das@FreeBSD.ORG>

Copyright (c) 2005 Bruce D. Evans and Steven G. Kargl

Copyright (c) 2005 David Schultz <das@FreeBSD.ORG>

Copyright (c) 2005 Tim J. Robbins.

Copyright (c) 2005 by Internet Systems Consortium, Inc. ("

Copyright (c) 2005-2008 David Schultz <das@FreeBSD.ORG>

Copyright (c) 2005-2011 David Schultz <das@FreeBSD.ORG>

Copyright (c) 2007 David Schultz

Copyright (c) 2007 David Schultz <das@FreeBSD.ORG>

Copyright (c) 2007 Steven G. Kargl

Copyright (c) 2007 The NetBSD Foundation, Inc.

Copyright (c) 2007 Todd C. Miller <Todd.Miller@courtesan.com>

Copyright (c) 2007, 2010-2013 Steven G. Kargl

Copyright (c) 2007-2008 Michael G Schwern

Copyright (c) 2007-2008 David Schultz <das@FreeBSD.ORG>

Copyright (c) 2007-2013 Bruce D. Evans

Copyright (c) 2008 David Schultz <das@FreeBSD.ORG>

Copyright (c) 2008 Stephen L. Moshier <steve@moshier.net>

Copyright (c) 2008 Todd C. Miller <millert@openbsd.org>

Copyright (c) 2009 David Schultz <das@FreeBSD.org>

Copyright (c) 2009 The NetBSD Foundation, Inc.

Copyright (c) 2009-2013 Steven G. Kargl

Copyright (c) 2010 The NetBSD Foundation, Inc.



Copyright (c) 2010 Todd C. Miller <Todd.Miller@courtesan.com>

Copyright (c) 2010, 2011, 2012, 2013 Intel Corporation

Copyright (c) 2010, Intel Corporation

Copyright (c) 2011 David Chisnall

Copyright (c) 2011 David Schultz

Copyright (c) 2011 David Schultz <das@FreeBSD.ORG>

Copyright (c) 2011 Intel Corporation

Copyright (c) 2011 Martin Pieuchot <mpi@openbsd.org>

Copyright (c) 2011 The Android Open Source Project

Copyright (c) 2011, 2012, 2013 Intel Corporation

Copyright (c) 2011, Intel Corporation

Copyright (c) 2011, VMware, Inc.

Copyright (c) 2012 Stephen Montgomery-Smith <stephen@FreeBSD.ORG>

Copyright (c) 2017 Mahdi Mokhtari <mmokhi@FreeBSD.org>

Copyright (c) 2012, Linaro Limited

Copyright (c) 2012-2013, Linaro Limited

Copyright (c) 2013

Copyright (c) 2013 ARM Ltd

Copyright (c) 2013 Antoine Jacoutot <ajacoutot@openbsd.org>

Copyright (c) 2013 Bruce D. Evans

Copyright (c) 2013 The NetBSD Foundation, Inc.

Copyright (c) 2013, Linaro Limited

Copyright (c) 2013-2015, Linaro Limited

Copyright (c) 2014, Intel Corporation

Copyright (c) 2015 ARM Ltd

Copyright (c) 2015 Joerg Sonnenberger <joerg@NetBSD.org>.

Copyright (c) 2015 Nuxi, <https://nuxi.nl/>

Copyright (c) 2017 ARM Ltd



Copyright (c) 2017 Imagination Technologies.

Copyright (c)1999 Citrus Project,

Copyright (c)2001 Citrus Project,

Copyright (c)2003 Citrus Project,

Copyright 1989 The Regents of the University of California.

Copyright 1997 Niels Provos <provos@physnet.uni-hamburg.de>

Copyright 2008 Damien Miller <djm@openbsd.org>

Copyright (c) 1995 by International Business Machines, Inc.

Copyright(C) 1995, Jason Downs. All rights reserved.

Copyright (C) 1998 by Lucent Technologies

Copyright (C) 1998, 1999 by Lucent Technologies

Copyright (C) 1998, 2000 by Lucent Technologies

Copyright (C) 1998-2000 by Lucent Technologies

Copyright (C) 1998-2001 by Lucent Technologies

Copyright (C) 2000 by Lucent Technologies

Copyright (c) 2007-2017 The Khronos Group Inc.

Copyright (c) 2013-2017 The Khronos Group Inc.

Copyright 2005-2008 The Android Open Source Project

Copyright 1999-2006 The Apache Software Foundation

Copyright 2005,2006 The Apache Software Foundation.

Copyright (C) 2010 The Android Open Source Project, but released under

Copyright © 1991-2008 Unicode, Inc. All rights reserved. Distributed

Copyright (c) 2005-2008, The Android Open Source Project

Copyright (c) 2018, The Android Open Source Project

Copyright (c) 2005-2014, The Android Open Source Project

Copyright (c) 2017, The Android Open Source Project

Copyright 2018 The TensorFlow Authors. All rights reserved.

Copyright 2017, The TensorFlow Authors.



Copyright (c) 2016-present, Facebook Inc. All rights reserved.

Copyright (c) 2016 Facebook Inc.

Copyright (c) 2015 Google Inc.

Copyright (c) 2015 Yangqing Jia

Copyright(c) 2013, 2014, 2015, the respective contributors

Copyright(c) 2015, 2016 the respective contributors

Copyright (c) 2014, The Regents of the University of California (Regents)

Copyright (c) 2014, the respective contributors

Copyright (c) 2012-2017, The Android Open Source Project

(C) 1995-2012 Jean-loup Gailly and Mark Adler

Copyright 2018 The Android Open Source Project

Copyright 2017 The Android Open Source Project

Copyright 2019 The Android Open Source Project

Copyright (c) 2017 The ANGLE Project Authors. All rights reserved.

Copyright (c) 2007-2016 The Khronos Group Inc.

Copyright (c) 2015 The ANGLE Project Authors. All rights reserved.

Copyright (C) 1995-2012 Jean-loup Gailly.

Copyright (C) 1995-2012 Jean-loup Gailly and Mark Adler

Copyright (c) 2016 Google, Inc.

Copyright (C) 2016 LunarG, Inc.

Copyright (C) 2016 Google, Inc.

Copyright (C) 2017 Google, Inc.

Copyright (C) 2017 LunarG, Inc.

Copyright (C) 1997-1998 Greg Stein. All Rights Reserved.

Copyright (c) 2003-2004 by Fredrik Lundh. All rights reserved.

Copyright (c) 1999-2008 by Fredrik Lundh

Copyright (c) 2003-2009 by Fredrik Lundh. All rights reserved.

Copyright (c) 1999-2009 by Fredrik Lundh



Copyright (c) 1999-2008 by Fredrik Lundh. All rights reserved.

Copyright (C) 2012-2016 Free Software Foundation, Inc.

Copyright (C) 2013-2016 Free Software Foundation, Inc.

Copyright (C) 2010-2016 Free Software Foundation, Inc.

Copyright (C) 2011-2016 Free Software Foundation, Inc.

Copyright 2015-2016 Free Software Foundation, Inc.

Copyright 2013-2016 Free Software Foundation, Inc.

Copyright (c) 2015-2017 Google, Inc.

Copyright (c) 2015-2016 Google, Inc.

Copyright 2010 Google Inc. All Rights Reserved.

Copyright 2010, Google Inc.

Copyright 2005 Google Inc. All Rights Reserved.

Copyright 2018, Google Inc.

Copyright 2009 Google Inc. All rights reserved.

Copyright 2015, Google Inc.

Copyright 2009 Google Inc. All Rights Reserved.

Copyright 2009, Google Inc.

Copyright 2009 Google Inc. All rights reserved.

Copyright 2013, Google Inc.

Copyright 2018 Google LLC. All rights reserved.

Copyright 2018, Google LLC.

Copyright (C) 1989, 1991 Free Software Foundation, Inc.

Copyright (C) 1991, 1999 Free Software Foundation, Inc.

Copyright (C) 2009 Free Software Foundation, Inc. <<http://fsf.org/>>

Copyright (C) 2007 Free Software Foundation, Inc. <<http://fsf.org/>>

Copyright (c) 2013-2018 The Khronos Group Inc.

Copyright (C) 2015-2016 Free Software Foundation, Inc.

Copyright (C) 2009-2016 Free Software Foundation, Inc.



Copyright (C) 2014-2015 LunarG, Inc.

Copyright (C) 2014-2016 LunarG, Inc.

Copyright (C) 2014 LunarG, Inc.

Copyright (C) 2016-2018 Google, Inc.

Copyright (C) 2015 LunarG, Inc.

Copyright (C) 2018 Google, Inc.

Copyright 2015 The Android Open Source Project

Copyright (C) 2015 Valve Corporation

Copyright (c) 2002, NVIDIA Corporation.

Copyright (c) Corporation for National Research Initiatives.

Copyright (c) 1999 by Secret Labs AB.

Copyright (c) 1999 by Fredrik Lundh.

Copyright (c) 1999 by Secret Labs AB

Copyright (c) 1999 by Fredrik Lundh

Copyright (C) 2004-2005 Gerhard Häring <gh@ghaering.de>

Copyright (C) 2005 Gerhard Häring <gh@ghaering.de>

Copyright 2007 Google, Inc. All Rights Reserved.

Copyright 1996 by Sam Rushing

Copyright 2000 by Timothy O'

Malley <timo@alum.mit.edu>

Copyright (c) 2004 Python Software Foundation.

Copyright (C) 2006 Python Software Foundation.

Copyright (C) 2005 Gregory P. Smith (greg@krypto.org)

Copyright (c) 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010,2011, 2012, 2013 Python Software Foundation

Copyright (c) 1991 - 1995, Stichting Mathematisch Centrum Amsterdam,

Copyright Disney Enterprises, Inc. All Rights Reserved.

Copyright (c) 1998-2001 by Secret Labs AB. All rights reserved.



Copyright (C) 2000 Bastian Kleineidam

Copyright (C) 2000 Luke Kenneth Casson Leighton <lkcl@samba.org>

Copyright (c) 1997-2001 by Secret Labs AB. All rights reserved.

Copyright (c) 2003-2005 by Peter Astrand <astrand@lysator.liu.se>

Copyright (C) 2002 Lars Gustäbel <lars@gustaebel.de>

Copyright (C) 1999-2001 Gregory P. Ward.

Copyright (C) 2002, 2003 Python Software Foundation.

copyright 2001, Autonomous Zones Industries, Inc., all rights...

Copyright 2000, Mojam Media, Inc., all rights reserved.

Copyright 1999, Bioreason, Inc., all rights reserved.

Copyright 1995-1997, Automatrix, Inc., all rights reserved.

Copyright 1991-1995, Stichting Mathematisch Centrum, all rights reserved.

Copyright 1994 by Lance Ellinghouse

Copyright (c) 1999-2002 by Secret Labs AB.

Copyright (c) 1999-2002 by Fredrik Lundh.

Copyright (c) 1999-2002 by Secret Labs AB

Copyright (c) 1999-2002 by Fredrik Lundh

Copyright 2017 The Glslang Authors. All rights reserved.

Copyright (C) 2005, 2006 Martin von Löwis

Copyright 2006 Georg Brandl.

Copyright 2008 Armin Ronacher.

Copyright 2007 Georg Brandl.

Copyright (c) 2000, BeOpen.com.

Copyright (c) 1995-2000, Corporation for National Research Initiatives.

Copyright (c) 1990-1995, Stichting Mathematisch Centrum.

Copyright (C) 2008-2016 Free Software Foundation, Inc.

Copyright 2016 Google Inc. All Rights Reserved.

Copyright (C) 2004-2006 Python Software Foundation



Copyright (C) 2001-2010 Python Software Foundation

Copyright (C) 2002-2007 Python Software Foundation

Copyright 2018 Google Inc. All rights reserved.

Copyright 2016 Ismael Jimenez Martinez. All rights reserved.

Copyright 2017 Roman Lebedev. All rights reserved.

Copyright (C) 2014-2016 Free Software Foundation, Inc.

Copyright (C) 1984, 1989-1990, 2000-2015 Free Software Foundation, Inc.

Copyright (c) 2013 The Khronos Group Inc.

Copyright (C) 2015-2017 Google, Inc.

Copyright (C) 2013-2016 LunarG, Inc.

Copyright (C) 2012-2015 LunarG, Inc.

Copyright (c) 2002-2010 The ANGLE Project Authors.

Copyright (C) 2016-2017 LunarG, Inc.

Copyright (c) 2015, The Android Open Source Project

Copyright jQuery Foundation and other contributors, <https://jquery.org/>

Copyright (c) 2011-2018 Twitter, Inc.

Copyright (c) 2011-2018 The Bootstrap Authors

Copyright (C) 2008-2018, SpryMedia Ltd.

Copyright (C) 19yy <name of author>

Copyright (C) 1991 Free Software Foundation, Inc.

Copyright (C) 2012-2014 LunarG, Inc.

Copyright (C) 2002-2010 The ANGLE Project Authors.

Copyright (C) 1984, 1989-1990, 1999-2012 Free Software Foundation, Inc.

Copyright 1996-2009 the NASM Authors - All rights reserved.

Copyright 2001-2013 by Vinay Sajip. All Rights Reserved.

Copyright (C) 2001-2013 Vinay Sajip. All Rights Reserved.

Copyright 2001-2012 by Vinay Sajip. All Rights Reserved.

Copyright (C) 2001-2012 Vinay Sajip. All Rights Reserved.



Copyright 2013 Google Inc. All Rights Reserved.

Copyright 2007 Google Inc.

License: Apache License V2.0

Please see above.

Software: JSON for Modern C++ 3.7.3

Copyright notice:

Copyright (c) 2013-2019 Niels Lohmann <<http://nlohmann.me>>.

Copyright Louis Dionne 2015

Copyright (c) 2013-2019 Niels Lohmann

Copyright 2013-2019 [Niels Lohmann](<http://nlohmann.me>)

Copyright (c) 2016 Nicolas Seriot

Copyright (c) 2018 Vitaliy Manushkin <agri@akamo.info>.

Copyright (c) 2015 Max Woolf

Copyright (c) 2018-2019 Bryan Gillespie

Copyright (c) 2015-2017 Niels Lohmann.

Copyright (c) 2015-2017 Niels Lohmann

Copyright (c) 2016-2019 Viktor Kirilov

Copyright (c) 2016-2018 Viktor Kirilov

Copyright 2014 The Authors

Copyright (c) 2009 Google Inc. All rights reserved.

Copyright (C) 2009 Google Inc.

Copyright (c) 2012, Erik Edlund <erik.edlund@32767.se>

Copyright 2015 Google Inc. All rights reserved.

Copyright 2018 Google Inc. All rights reserved.

Copyright 2016 Ismael Jimenez Martinez. All rights reserved.



Copyright 2017 Roman Lebedev. All rights reserved.

License: MIT License

The MIT License

Copyright (c) <year> <copyright holders>

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Software: stb_image 0224a44a10564a214595797b4c88323f79a5f934

Copyright notice:

Copyright (c) 2017 Sean Barrett

software dedicate any and all copyright interest in the software to the public

but those are ignored at this step), and (c) maintains an adjacency list of

(c) Willem van Schaik, 1996, 2011



License: Public Domain

Anyone is free to copy, modify, publish, use, compile, sell, or distribute this software, either in source code form or as a compiled

binary, for any purpose, commercial or non-commercial, and by any means.

Software: SPIRV-Cross 2020-02-26

Copyright notice:

Copyright 2015-2017 ARM Limited

Copyright 2016-2020 Google Inc.

Copyright (c) 2014-2016 The Khronos Group Inc.

Copyright 2015-2020 Arm Limited

Copyright (c) 2014-2019 The Khronos Group Inc.

Copyright 2016-2020 Arm Limited

Copyright 2019-2020 Hans-Kristian Arntzen

Copyright 2018-2020 Arm Limited

Copyright 2016-2020 Robert Konrad

Copyright 2016-2020 The Brenwill Workshop Ltd.

Copyright 2018-2020 Bradley Austin Davis

License: Apache License V2.0

Apache License

Version 2.0, January 2004

<http://www.apache.org/licenses/>

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.



"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition,

"control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes



of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable



(except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

- (a) You must give any other recipients of the Work or Derivative Works a copy of this License; and
- (b) You must cause any modified files to carry prominent notices stating that You changed the files; and
- (c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
- (d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained

within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions.

Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor,



except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf



of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");

you may not use this file except in compliance with the License.

You may obtain a copy of the License at

<http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software

distributed under the License is distributed on an "AS IS" BASIS,

WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.

See the License for the specific language governing permissions and

limitations under the License.

Written Offer

This product contains software whose rights holders license it on the terms of the GNU General Public



License, version 2 (GPLv2) and/or other open source software licenses. We will provide you and any third party with the source code of the software licensed under an open source software license if you send us a written request by mail or email to the following addresses:

foss@huawei.com

detailing the name of the product and the firmware version for which you need the source code and indicating how we can contact you.

Please note you need to make a payment before you obtain the complete Corresponding Source Code from us. For how much you will pay and how we will deliver the complete Corresponding Source Code to you, we will further discuss it by mail or email.

This offer is valid to anyone in receipt of this information.

THIS OFFER IS VALID FOR THREE YEARS FROM THE MOMENT WE DISTRIBUTED THE PRODUCT OR FIRMWARE .