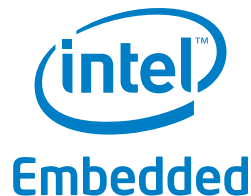


# Intel® Embedded Graphics Drivers Version 10.3.1

## Features by Embedded Intel® Architecture Chipsets/Controllers/Processors

Intel® Atom™ processor 400/500 series, Intel® System Controller Hub US15W, US15WP and US15WPT; Intel® Q45, G41 and G45 Express chipsets; Mobile Intel® GM45, GL40 and GS45 Express chipsets; Intel® Q35 Express chipset; Mobile Intel® GME965 and GLE960 Express chipsets; Intel® Q965 Express chipset; Mobile Intel® 945GSE and 945GME Express chipsets; Intel® 945G Express chipset; Mobile Intel® 910GML and 915GME Express chipsets; Intel® 915GV Express chipset.

To see which Embedded Intel® architecture processors are validated with each Intel® chipset, visit [intel.com/embedded](http://intel.com/embedded). For detailed product information, please visit [edc.intel.com/Software/Downloads/IEGD](http://edc.intel.com/Software/Downloads/IEGD).



Intel® Embedded Graphics Drivers Features	CPU+GPU	Embedded Intel® Architecture-based Chipsets/Controllers										
	Intel® Atom™ Processor 400/500	US15W/US15WP/US15WPT	Q45/G41/G45	GM45/GL40/GS45	Q35	GME965/GLE960	Q965	945GSE/945GME	945G	910GML/915GME	915GV	
Cross-platform, cross-OS configuration editor (CED) utility for creation of driver packages	x	x	x	x	x	x	x	x	x	x	x	x
Installer/de-installer (Windows* only)	x	x	x	x	x	x	x	x	x	x	x	x
Runtime GUI: (Windows and Linux* only)	x	x	x	x	x	x	x	x	x	x	x	x
Runtime control API on internal LVDS and external encoders	x	x	x	x	x	x	x	x	x	x	x	x
Second overlay	x	x	x	x	x	x	x	x	x	x	x	x
Rendered scaling and centering	x	x	x	x	x	x	x	x	x	x	x	x
Hybrid Graphics (PCI- and PCI Express*-based, as primary or secondary, concurrent with integrated graphics)			x	x								
Triple display (two on-board and a third via a PCI add-in video card)	x		x	x	x	x	x	x	x	x	x	x
Dual digital transmitter support on Serial DVO			x	x	x	x	x	x	x	x		
Enhanced clone mode support for use with different-sized displays	x	x	x	x	x	x	x	x	x	x	x	x
Hardware-accelerated video decode		x										
MPEG2, MPEG4, H.264, and VC-1 via VA-API (Linux); Linux with Helix and FFmpeg		x										
MPEG2, H.264, VC-1 supported via DXVA (Windows)		x										
MPEG2, MPEG4, H.264 formats supported in Microsoft CE* 6.0		x										
Anti-Aliasing		x										
Certified Output Protection Protocol (COPP) support on Microsoft XP*	x	x	x	x	x	x	x	x	x	x	x	x
Ability to configure port names used in the runtime GUI	x	x	x	x	x	x	x	x	x	x	x	x
Ability to change resolution/refresh rates for clone displays in the runtime GUI	x	x	x	x	x	x	x	x	x	x	x	x
Advanced extended display identification data (EDID) configuration	x	x	x	x	x	x	x	x	x	x	x	x
Auto-enable bus mastering	x	x	x	x	x	x	x	x	x	x	x	x
Full ACPI support on Windows (not available on Windows CE)	x	x	x	x	x	x	x	x	x	x	x	x
Full ACPI support on Linux*	x	x	x	x	x	x	x	x	x	x	x	x
Display discovery and initialization (driver only)	x	x	x	x	x	x	x	x	x	x	x	x
Dual DVO/SDVO through single device (e.g., Chrontel CH7017*)		x	x	x	x	x	x	x	x	x	x	x
Dynamic port driver	x	x	x	x	x	x	x	x	x	x	x	x
Ability to set port as inactive	x	x	x	x	x	x	x	x	x	x	x	x
Dual digital display output support		x	x	x	x	x	x	x	x	x	x	x
Universal .inf for multiple platform configuration (Windows only)	x	x	x	x	x	x	x	x	x	x	x	x
Dynamic mode support using EDID information (dynamically adds new timing sets fully described in EDID)	x	x	x	x	x	x	x	x	x	x	x	x
Multi-refresh, multi-resolution support (driver does not assume fixed resolution or timings on digital display)	x	x	x	x	x	x	x	x	x	x	x	x
Rotation and inverted display	x	x	x	x	x	x	x	x	x	x	x	x
Allows manual specification of display timing sets	x	x	x	x	x	x	x	x	x	x	x	x
EDID-less (non EDID compliant) display support	x	x	x	x	x	x	x	x	x	x	x	x
Dual independent display (Microsoft Extended Desktop,* Linux Xinerama,* and dual independent head)	x	x	x	x	x	x	x	x	x	x	x	x
Clone dual display support and/or twin dual display support	x	x	x	x	x	x	x	x	x	x	x	x

Driver

	Intel® Embedded Graphics Drivers Features	Embedded Intel® Architecture-based Chipsets										
		CPU+GPU Intel® Atom™ Processor 400/500	US15W/ US15WP/ US15WPT	Q45/ G41/ G45	GM45/ GL40/ GS45	Q35	GME965/ GLE960	Q965	945GSE/ 945GME	945G	910GMLE/ 915GME	915GV
Display Output	Internal LVDS	X	X		X		X		X		X	
	Internal HDMI with HDCP support			X	X							
	Internal TV-out							X		X		
	Internal VGA	X		X	X	X	X	X	X	X	X	X
	Silicon Image sDVO devices: Sii 1362* and Sii 1364* (DVI) Chrontel sDVO: CH7307* (DVI), CH7308* (LVDS), CH7315* (HDMI), CH7317* CH7022* (VGA), CH7019* CH7320*		X	X	X	X	X	X	X	X	X	X
UEFI Video Driver	Normal boot	X	X	X	X							
	Fast boot		X		X							
	Intel® Boot Loader Development Kit (BLDK) for Linux* and Windows CE*		X									
VBIOS	Embedded VBIOS support	X	X	X	X	X	X	X	X	X	X	
	Display discovery and initialization	X	X	X	X	X	X	X	X	X	X	
	Full VESA mode support/VESA modes 115h and 118h support	X	X	X	X	X	X	X	X	X	X	
	POST to internal LVDS or DVO/sDVO	X	X	X	X	X	X	X	X	X	X	
	Full VGA modes support	X	X	X	X	X	X	X	X	X	X	
EDID-less (non EDID compliant) display support	X	X	X	X	X	X	X	X	X	X		
OSs and APIs	Runtime operation API	X	X	X	X	X	X	X	X	X	X	
	Support for default VGA modes	X	X	X	X	X	X	X	X	X	X	
	Port driver software development kit (Windows and Linux)	X	X	X	X	X	X	X	X	X	X	
	<b>Microsoft</b>											
	<b>Windows XP* (SP3), Windows XP Embedded* (SP3), Windows Embedded for Point of Service*</b>	X	X	X	X	X	X	X	X	X	X	
	DirectDraw* (DirectX* 9.0c, DirectX 8.1, DirectX 3)	X	X	X	X	X	X	X	X	X	X	
	Direct3D* (DirectX 9.0c, DirectX 8.1)	X	X	X	X		X	X	X	X	X	
	DirectX Texture Compression (DXTC)	X	X	X	X	X	X	X	X	X	X	
	Microsoft DirectX Runtime API (DirectX 8.1 SDK samples in windowed and full-screen mode)	X	X	X	X	X	X	X	X	X	X	
	Japanese, Traditional Chinese, Korean	X	X	X	X	X	X	X	X	X	X	
	<b>Windows CE 5.0</b>			X	X	X	X	X	X	X	X	
	DirectDraw/Direct3D Mobile (excluding vertex processing emulation)			X	X	X	X	X	X	X	X	
	Vertical extended display support/rotation			X	X	X	X	X	X	X	X	
	<b>Windows Embedded CE* 6.0 R2</b>	X	X	X	X	X	X	X	X	X	X	
	DirectDraw	X	X	X	X	X	X	X	X	X	X	
	Direct3D Mobile (excluding vertex processing emulation)	X	X				X	X	X	X	X	
	Vertical extended display support/rotation	X	X	X	X	X	X	X	X	X	X	
	Frame-Buffer Overlay Blending		X									
	OpenGL* 2.0, OpenGL ES 1.1, OpenGL ES 2.0		X									
	<b>Linux</b>											
	OpenGL* 2.0		X	X	X	X	X	X				
	OpenGL ES 1.1 and 2.0 support		X									
	OpenGL 1.4, OpenGL* 1.5	X	X	X	X	X	X	X	X	X	X	
Frame-Buffer Overlay Blending		X										
Moblin 2.1 Linux* (kernel 2.6.31, X.server 1.6.1)		X										
Wind River Linux* (kernel 2.6.21)/Red Hat Linux* (kernel 2.6.23, X.org 7.2, X.server 1.3)		X										
Fedora* 7 (kernel 2.6.21, X.org 7.2, X.server 1.3)		X	X	X	X	X	X	X	X	X		
Fedora* 10 (kernel 2.6.27, X.org 1.5) (Fedora 11 support only for Intel Atom processor 400/500 Series)	X	X	X	X	X	X	X	X	X	X		
Ubuntu* 8.04 for MID		X										
DOS* Support (IBM PC 2000* MS 6.22)	X	X	X	X	X	X	X	X	X	X		

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