Intel® Embedded Graphics Drivers (IEGD) Version 10.4

Features supporting the following processors, chipsets and system controllers: Intel® Atom™ processor D400/500, N400/500 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® 910GMLE and 915GME Express chipsets; Intel® 915GV Express chipset.

To obtain detailed hardware platform design documentation, tools, software and training, please visit the Intel Embedded Design Center: intel.com/embedded.
To download the correct IEGD (10.4 or 10.3.1) for your chipset and other detailed product information, please visit edc.intel.com/Software/Downloads/IEGD.

Intel® Embedded Graphics Drivers Features	CPU+GPU — Use IEGD 10.4 Gold, which was validated on platforms using these graphics chipsets, system controllers and/or processors			Embedded Intel® Architecture-based Chipsets/System Controllers — Use 10.3.1 Gold (v.1550), which was the last driver validated for these chipsets[1]							
	Intel® Atom™ Processor D400/500 N400/500	US15W/ US15WP/ US15WPT	945GSE	Q45/ G41/ G45	GM45/ GL40/ GS45	Q35	GME965/ GLE960	Q965	910GMLE/ 915GME	915GV	945G
Cross-platform, cross-OS configuration editor (CED) utility for creation of driver packages	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
Runtime GUI: (Windows and Linux* only)	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
Second overlay	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
Multi-GPU multi-monitor mode (PCI-/PCI Express*-based graphic card display outputs, 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
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
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
Ability to configure port names used in the runtime GUI	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
Advanced extended display identification data (EDID) configuration	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
Full ACPI support on Windows (not available on Windows CE)	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
Display discovery and initialization (driver only)	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
Dynamic port driver	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
Dual digital display output support		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
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
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
Rotation and inverted display	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
EDID-less (non EDID compliant) display support	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
Clone dual display support and/or twin dual display support	X	X	X	X	X	X	X	X	X	X	X

(Left row-group label: Driver)

Intel® Embedded Graphics Drivers Features	Intel® Atom™ Processor D400/500 N400/500	US15W/ US15WP/ US15WPT	945GSE	Q45/ G41/ G45	GM45/ GL40/ GS45	Q35	GME965/ GLE960	Q965	910GMLE/ 915GME	915GV	945G
CPU+GPU → Use IEGD 10.4 Gold, which was validated on platforms using these graphics chipsets, system controllers and/or processors				**Embedded Intel® Architecture-based Chipsets/System Controllers** → Use 10.3.1 Gold, (v.1550) which was the last driver validated for these chipsets[1]							
Display Output											
Internal LVDS	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)		X	X	X	X	X	X	X	X	X	X
Chrontel sDVO digital devices: CH7307* (DVI), CH7308* (LVDS), CH7315* (HDMI), CH7319* (DVI HDCP), CH7320* (DVI)		X	X	X	X	X	X	X	X	X	X
Chrontel sDVO analog devices: CH7317* (RGB VGA), CH7021/7022 (SCART/SDTV/HDTV YPrPb/RGB VGA)		X	X	X	X	X	X	X	X	X	X
UEFI Video Driver											
Normal boot	X	X		X							
Fast boot	X	X		X							
Intel® Boot Loader Development Kit (BLDK) for Linux* and Windows CE*	X	X									
VBIOS											
Embedded VBIOS support	X	X	X	X	X	X	X	X	X	X	X
Display discovery and initialization	X	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	X
POST to internal LVDS or DVO/sDVO	X	X	X	X	X	X	X	X	X	X	X
Full VGA modes support	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
OSs and APIs											
Runtime operation API	X	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	X
Port driver software development kit (Windows and Linux)	X	X	X	X	X	X	X	X	X	X	X
Microsoft											
Windows XP* (SP3), Windows XP Embedded* (SP3), Windows Embedded for Point of Service*	X	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	X
Direct3D* (DirectX 9.0c, DirectX 8.1)	X	X	X	X	X	X	X	X	X	X	X
DirectX Texture Compression (DXTC)	X	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	X
Japanese, Traditional Chinese, Korean	X	X	X	X	X	X	X	X	X	X	X
Windows Embedded CE* 6.0 R2	X	X	X	X	X	X	X	X	X	X	X
DirectDraw	X	X	X	X	X	X	X	X	X	X	X
Direct3D Mobile (excluding vertex processing emulation)	X	X	X				X	X	X		
Vertical extended display support/rotation	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									
Linux											
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
Frame-Buffer Overlay Blending		X									
Moblin 2.1 Linux* (kernel 2.6.31, X.server 1.6.1)		X									
Fedora* 10 (kernel 2.6.27, X.org 1.5)	X	X	X	X	X	X	X	X	X	X	X
DOS* Support (IBM PC 2000,* MS 6.22)	X	X	X	X	X	X	X	X	X	X	X

[1] Future IEGD 10.3.x Hot Fix driver(s) will be released as necessary to resolve any critical software graphics defects. (edc.intel.com/Software/Downloads/IEGD)