

ftfHfO fe[]fuf< fGf~f...fCE[]fVf#f",đ-LCEø,É,μ,Û,·[]B

Direct3D ,Å,í[]ADirect3D fn[]fhhfEjFfA fAfNfZf%ofCE[]fVf#f",º%oÂ"\,È NVIDIA GPU ,º[]Afo[]fefbjNfX  
ftfHfO,Û,½,Ífe[]fuf< ftfHfO,ì,ç,,ê,©,đŽÀ[]s,Å,«,é,±,Æ,đ[]ðCE[],Æ,μ,Å,ç,Û,·[]B

f[]f, : ^ê•",ìfQ[]f€,í[]ADirect3D fn[]fhhfEjFfA,ì[]«"\,đºŠm,ÉŠm"F,·,é,±,Æ,È,[]Afe[]fuf< ftfHfO fTf|[]fg,đ-v<[],μ,Û,·[]B  
,±,ìfVfVf#f",đ-LCEø,É,·,é,Æ[]AŠmŽÀ,É,±,ê,ç,ìfQ[]f€,đ NVIDIA GPU ,Å[]ºí,É"@[]i,º,¹,é,±,Æ,º,Å,«,Û,·[]B

fn[fhfEjFfA,É,æ,Á,ÄAfAvjŠfP[fVfj"],©,ç—v<□,³,ê,½'l,É Z fofbftf@,ì[□,³,²<□\$“l,ÉŽ©“@’²□@,³,ê,é,æ,α,É,μ,Û,·□B  
f□f, : CEÅ—L,ì Z fofbftf@,ì[□,³,ð□Ý’è,·,é•K—v,², ,é□ê□#^ÈŠO,í□A,±,ìfjfvjVfj”,ð—LCEø,É,μ,Ä,“, ,±,Æ,ð,“Š©,ß,μ,Û,·□B  
,±,ìfjfvjVfj”,ð-³CEø,É,·,é,Æ□ACE»□Ý,ìfn[fhfEjFfA□Ý’è,É’í%ž,·,é Z  
fofbftf@,ì[□,³,Å“@□,·,éAfAvjŠfP[fVfj”,μ,©ŽÀ□s,Å,«,Û,¹,ñ□B

["wfofbftf@,ì'ä'Ö•úŽ®,—LŒø,É,μ,Û,·□B

,±,ìfìfvfVf#f",ð—LŒø,É,·,é,Æ□Afn□[fhfEjFfA,í 16 fjrjbfjg fAfvfŠjP□[fVf#f",ì["wfofbftf@,É^Ù,È,éf□ffjffYf€,ðŽg—  
p,μ,Û,·□B,±,ê,É,æ,è 3D fCf□□[fW,ìfŒf"f\_fŠf"fO•iŽ¿,ð□,,ß,é,±,Æ,ª,Å,«,Û,·□B

Direct3D Žg—pŽž,É NVIDIA ,lf□fS,đ—LŒø,É,μ,Ü,·□B

,±,lfvfVf#f“,đ—LŒø,É,·,é,Æ□ADirect3D fAfvfSfP□[fVf#f“,ìŽÀ□sŽž,É□A%æ-Ê%o°<÷,É NVIDIA ,lf□fS,ª•\Ž!,ª,é,Ü,·□B

NVIDIA GPU ,É,íAMip f}fbfv,đŽ©“@□□□□,μ□AfofXŠŌ,ljefNfXf`ff`—□MCEø—  
; ,đ□ā,°□AfAfvfšfP□[fVf#f” ,lfpfH□[f}f“fX,đ□,,β,é<@“\,ª, ,è,Ü,·□B

f□f, : ,½,¾,μ□AMip f}fbfv,ìŽ©“@□□□□,đ—LCEø,É,μ,Ä,“,„Æ□A^è•”,lfAfvfšfP□[fVf#f”,ª□³,μ,•\Ž! ,³,è,È,ç□ê□# ,ª, ,è,Ü,·□B  
,±,ì,æ,α,È-â'è,đ%øđCE^,.,é,É,í□AfCf□□[fW,ª□³,μ,•\Ž! ,³,è,é,Ü,ÅŽ©“@□□□□ Mip f}fbfv fCEfxf<□”,đCE,.,ç,μ,Ä,,¾,³,ç□B Mip  
f}fbfv fCEfxf<,ì□”,đCE,.,ç,.,Æ□A'½,,ì□ê□#□AfefNfXf`ff,ì,,è,â□uCEp, -Ú□v,ª%øđ□Á,³,è,Ü,.,ª□AfpH□[f}f“fX,í'½□'á  
%øª,μ,Ü,·□B

Mip f}fbfv,ì **LOD** (Ú×“x) fojCfAfX,ð²@®,μ,Û,·B

fojCfAfX,ð'á,Û'è,·,é,Æ%œŽž,³Æüüã,μAfojCfAfX,ð,,,-

Û'è,·,é,ÆfAfvfŠfP[fVfj“],jpfH[f]f“fX,³Æüüã,μ,Û,·B uÅ,.,jCf[fW•iŽžv,©,ç uÅ,.,jpfH[f]f“fXv,Û,ÅA,  
,ç,©,¶,BÛ'è,³,è,½ 5 ,Å,jfojCfAfX'l,©,ç'l'ð,Å,«,Û,·B•Û'¶,μ,½jffXf^f€Û'è (,Û,½,Í çTweak£),jŠfXfg,ð•\Žž,μ,Û,·B

Û'è,ð—LÆø,É,·,é,É,ÍAfŠfXfg,©,ç€-Û,ð'l'ð,μ,Ä **["K—p]**,ðNfŠfbfN,μ,Û,·B

fNfŠfbfN, ., é, Æ ACE » ðÝ, ðÝ'è ([Direct3D, ðÚ×ðÝ'è] f\_fCfA f\_fO, ðÝ'è, àšÜ, Þ)  
, ðffXf^f€ ðuTweak ðv, Æ, µ, Ä • ð'¶, ³, è, Ü, . ðB

□ • ð'¶, ³, è, ½ ðÝ'è, ð— x, ðfŠfXfg, É'Ç%oÁ, ³, è, Ü, . ðB

□ “Á'è, ð Direct3D fQ ð[f€, Á ðÁ “K, È ðÝ'è, ðCE ©, Á, ©, Á, ½ ðê ðA, »), ðÝ'è, ðffXf^f€ ðÝ'è, ðuTweak ðv, Æ, µ, Ä • ð'¶, µ, Ä, “, -  
, Æ ðAfQ ð[f€, ðšJŽn, ., é' O, É, ., í, à, Direct3D, ðÝ'è, Á, «, é, ð, Á ðAŠefjfvfVf#f“, ðCE Á • È, È ðÝ'è, ., éŽèŠÔ, ðÉ, “, Ü, . ðB

fNfŠfbfN, ., é, Æ AfŠfXfg, ÅE » Y' I' ð, ð, è, Ä, ç, é f f X f ^ f € Y' è, ð i œ, ð, è, Ü, . B



fNfŠfbfN,·,é,Æ□A,·,×,Ä,ì□Ý'è,ª□%Šú□Ý'è'l,É-ß,è,Ü,·□B

fNfŠfbfN,·,é,Æ□ADirect3D ,)□Ú□×□Ý'è,ðfjXf^f}fCfY,·,é,½,β,lf\_fCfAf□fO f{fbfNfX,³·\Ž!,³,è,Ü,·□B

fXf%ofCf\_đfhf%ofbfO,μ,ÄAfefNfZf< (fefNfXf` ff fGfCef`fg) —p,lfn[fhfEfffA fefNfXf` ff,l"z'uY`è,đ•iX,μ,Ü,·B  
,±,é,ç,l'1,đ•iX,·,é,±,Æ,ÅACE³,lfefNfZf<,ə'è<`³,ê,½êŠ,ª•i,í,è,Ü,·B%ŠúY'è,íADirect3D ,iŽd—I,É],Á,Ä,ç  
,Ü,·BftfgfEfffA,l't,É,íACE³,lfefNfZf<,đ,ç,·,é,©,ìêŠ,É'è<`·,é,±,Æ,đ—v<·,·,é,à,ì,à, ,è,Ü,·B,±  
,é,ç,lfAfvfŠfP[fVf`",Å,íACE³,lfefNfZf<,đÄ'è<`·,é,±,Æ,Å%æŽ,ªCEüã,μ,Ü,·BfXf%ofCf\_ fRf`fgf[f<,đŽg—  
p,μ,ÄACE³,lfefNfZf<,ìêŠ,đfefNfZf<,ì¶ã÷,©,ç'tS,ìŠÔ,Å'²®,μ,Ü,·B

NVIDIA GPU ,<sup>3</sup>efNfXf`ff,δ<L%~ ,. ,é,½,B□A(fOf%oftfBfbfNfX f□□[fh,É“<□Ú,<sup>3</sup>,ê,Ä,ç,éf□f,fŠ,É%oÁ,!,Ä) Žw'è,<sup>3</sup>,ê,½—e—  
Ê,Ü,ÄfvfXfef€ f□f,fŠ,đ—~—p,.,é,æ,α,É□Y'è,Ä,«,Ü,·□B

f□f, : fefNfXf`ff<L%~—p,ÉŽg—p,Ä,«,éfVfXfef€ f□f,fŠ,ì□Á'â—e—Ê,í□AfRf“fsf...□[f^,É“<□Ú,<sup>3</sup>,ê,½•~—□ RAM ,ì—e—  
Ê,đ,à,Æ,É,μ,ÄŽZ□o,<sup>3</sup>,ê,Ü,·□B fvfXfef€ RAM ,ì—e—Ê,<sup>3</sup>□%oÁ,.,é,Æ□A□Y'è,Ä,«,é'l,à'â,«,.,È,è,Ü,·□B

,±,ì□Y'è,ì□APCI fOf%oftfBfbfNfX f□□[fh (, ,é,ç,í PCI ĀÉYŠ:f,□□[fh,ÄŽÀ□s't,ì AGP fOf%oftfBfbfNfX f□□[fh) ,¾, ~,É“K—  
p,<sup>3</sup>,ê,Ü,·□B

□, '¼" ~ Šú, ¢-³CEø, È□é□#, É□AfOf%oftfBfbfNfX fvf□ZfbfT, É, æ, éftfCE□[f€□^—□, )'O, É CPU  
, ¢€"ø, Å, «, éftfCE□[f€□", ð□\$CEÀ, μ, Ü, ·□B

**f□f, :** , , ç, ©, ¶, ßfCEf"f\_fŠf"fo, Å, «, éftfCE□[f€□", ì□äCEÀ, ¢'à, «, ç  
, Ù, Ç□AfWf#fCfXfefBfbfN□AfQ□[f€fjpfbfh□Afl□[f{□[fh, È, Ç, ìffofCfX, É%ž"š, ·, é□Ù, ì□u"ü—í'x%o,, □v, ¢'à, «, ·, È, é□é□#, ¢, , è, Ü,  
·□B fQ□[f€, ìŽÀ□s't, É□AfRf"fsf...□[f^, É□ú'±, ¢, è, Å, ç, é"ü—íffofCfX, É'í, ·, é%ž"š'x%o,, ¢'~ , μ, ç□é□#, í□A, ±, ì'1, ð□¬, ¢, μ, Å, -  
, ¾, ¢, ç□B

"Á'è,ì CPU ,ĂŽg—p,³,è,é'«»-½—ß,ìfhf%ofCfo fTf|[]fg,ð-³CEø,É,μ,Û,·□B

^è•",ì CPU ,Ă,í□ANVIDIA GPU ,ð•â□•,μ,Ă 3D fQ□[f€,âfAfvfšfP□[fvf#f",ìfpftfH□[f}f"fX,ðCEü□ă,³,¹,é'Ç%oÁ 3D -½—  
ß,ðfTf|[]fg,μ,Ă,ç,Û,·□B,±,ìfìfvfVf#f",É,æ,è□Afhf%ofCfo,Ă,ì,±,è,ç,ì'Ç%oÁ 3D -½—ß,ìfTf|[]fg,ð-  
³CEø,É,μ,Û,·□BfpftfH□[f}f"fX,ð"äšr,-,é□ê□#,âfgf%ofuf{fvf...□[fefBf"fO,ð□s,κ□ê□#,É•Ö—~ ,ÈfìfvfVf#f",Ă,·□B

fhf%oCfo,ÅXfefCEfl fsfNfZf< ftfH[f]fbfg,ðfGfNfXf[]fg,Å,«,é,æ,π,É,μ,Û,·□B,±,è,É,æ,è□AOpenGL  
fAfvfŠfP[]fVf#“,ÅXfefCEfl,žg—p%oÅ“\,É,È,è□AfXfefCEfl fVffbf^[] fOf%oX,ð—LÆø,É,Å,«,Û,·□B

fHf%oCfo,Åfi□[fo□[fCEfC fsfNfZf. ftH□[f}fbfg,δfGfNfXf□[fg,Å,«,é,æ,π,É,μ,Ü,·□B,±,è,É,æ,è□AOpenGL  
fAfvfŠfP□[fVf#“,Åfi□[fo□[fCEfC,ªŽg—p%oÅ“\,É,È,è,Ü,·□B



OpenGL fhf%ofCfo,É,æ,Á,ÄA1 ,Ä,lfobfN fofbftf@,Æ 1 ,Ä,ì[‘wfofbftf@,ªAfffBfXfvfCfC,ì“ ,¶%øð‘œ“x,ÉŠ,,è“-  
,Ä,ç,è,é,æ,æ,É,μ,Û,·B

□ ,±,lf!fvfVf†f“,ð—LCEø,É,·,é (f`fFfbfN,·,é) ,ÆA•;□“,lfEfBf“fhfE,ðì□—,·,é OpenGL fAfvfŠfP□[fvf†f“,ìAfrfffl  
f□,fŠ,ìŽg—pCEø—!,ÆfpftfH□[f}f“fX,ªCEü□ã,μ,Û,·B

□ ,±,lf!fvfVf†f“,ð-³CEø,É,·,é (f`fFfbfN,ðŠO,·) ,Æ OpenGL fhf%ofCfo,É,æ,èAOpenGL  
fAfvfŠfP□[fvf†f“,Éì□—,³,è,½SefEfBf“fhfE,²,Æ,ÉfobfN fofbftf@,Æ[‘wfofbftf@,ªS,,è“- ,Ä,ç,è,Û,·B

'l'đ,μ,½ OpenGL fAfvfŠfP[fVf#f",ÉÅ"K,ÈY'è,đs,ç,Ü,·B %o°CEü,«-î^ó,đNfŠfbfN,·,é,ÆAfvfŠfP[fVf#f",a^ê—•\  
Ž,³,è,Ü,·B^ê—,©,çAfvfŠfP[fVf#f",đ'l'đ,μ,Ä,,¾,³,çB

□%Šú□Y'è,Å OpenGL fAfvfŠfP□[fvf#f“,a“Á'è,ì•\Ž!□F□”,lfefNfXf`ff,ðŽg—p,·,é,©,Ç,⊘,©,ðƐ^'è,μ,Û,·□B

□ **[Žg—p,·,éffXfNfgfbfv,ì•\Ž!□F□”]** ,Å,í□AWindows fffXfNfgfbfv,ðŽg—p,μ,Ä,ç,é•\Ž!□F□”,lfefNfXf`ff,ð□í,ÉŽg—p,μ,Û,·□B

□ **[□í,É 16 bpp ,ðŽg—p]** ,“,æ,Ñ [□í,É 32 bpp ,ðŽg—p] ,lfifvfvf#f“,Å,í□AffXfNfgfbfv,ì□Y'è,ÉŠÖ,í,ç,□AŽw'è,³,é,½•\Ž!□F□”,lfefNfXf`ff,ð×□S“l,ÉŽg—p,μ,Û,·□B

ftf·fXfNfŠ[f“ OpenGL fAfvfŠfP[fVf#f“—p.lfofbftf@ ftfŠfbfv f, [fh,ðĈ^`è,μ,Û,·B[fuf[fbfN“]’--@] ,Û,½,Í  
[Ž@“@‘1’ð] ,©,ç‘1’ð,À,«,Û,·B

[Ž@“@‘1’ð] ,Å,ÍAfñ[fhfEjfA,ì\—,©,çhf%°fCfo,ªÅ“K,ÈŽè-@,ðĈ^`è,μ,Û,·B

OpenGL ,Å,ì,¼"~Šú,ì^—•û-@,đŽw'è,μ,Û,·B

▯ **[í,Éfift]** ,Å,íAOpenGL fAfvfŠfP[fVf#f",ì,¼"~Šú,đí,É-³CEø,É,μ,Û,·B

▯ **[%ŠúÝ'è,Å,ífift]** ,Å,íA—LCEø,É,·,é,æ,π,ÉfAfvfŠfP[fVf#f",©,ç-¾Šm,É—v<³,è,Ä,č,é,Æ,«^ÈŠO,íA,¼"~Šú,đ-³CEø,É,μ,Ä,","«,Û,·B

▯ **[%ŠúÝ'è,Å,ífif"]** ,Å,íA-³CEø,É,·,é,æ,π,ÉfAfvfŠfP[fVf#f",©,ç-¾Šm,É—v<³,è,Ä,č,é,Æ,«^ÈŠO,íA,¼"~Šú,đ—LCEø,É,μ,Ä,","«,Û,·B

fNfŠfbfN,·,é,Æ□ACE»□Ý,ì□Ý'è,³ffXf^f€□uTweak□v,Æ,μ,Ä•Ù'¶,³,è,Ü,·□B•Ù'¶,³,è,½□Ý'è,²—x,ìfŠfXfg,É'Ç%oÁ,³,è,Ü,·□B  
“Á'è,ì OpenGL  
fAfvfŠfP□[fVf#f“,Å□Å“K,È□Ý'è,²CE©,Â,©,Á,½□ê□#□A,»»,ì□Ý'è,ðffXf^f€□Ý'è,ì□uTweak□v,Æ,μ,Ä•Ù'¶,μ,Ä,“,·,Æ□Afvf□fOf  
%of€,ðŠžn,·,é'O,É,·,î,â, OpenGL ,²□Ý'è,Å,«,é,ì,Å□AŠefJfVfVf#f“,ðCEÄ•Ê,É□Ý'è,·,éžèŠÔ,²□È,·,Ü,·□B

fXf%ofCf\_đfhf%ofbfO,μ,ÄA'1'đ,μ,½fjf%oo[ f`fff"flf<,l-¾,é,³AfRf"fgf%ofXfgAfKf"f}'l,đ'²@,μ,Ü,·B

fjf%oo[•â³Y'è,đŽg—p,·,é,ÆAfA\ofX fCf\ofW,Æ•\Ž!fffofCfX,Ä,ìo—í,l<P"x,l,î,ç,Ä,«,đ•â³,Ä,«,Ü,·B fCf\ofW^—  
AfVfŠfP\fvf†f",đŽg—p,μ,Ä,ç,éê±AŸ'è,đ'²@,·,é,±,Æ,ÄAffBfXfvfCfC,É•\Ž!,·,éfcf\ofW (ŽÊ^,È,Ç) ,lfj  
%oo[l,đ,³,ç,É³Šm,ÉÄE»,Ä,«,Ü,·B

,Ü,½A'½,,ì 3D fAfNfZf%ofCefbfh fQ[f€,ÄA•\Ž!,a^Ä,·,–,ÄfvfCfC,Ä,«,È,ç,±,Æ,a, ,è,Ü,·B—  
¾,é,³,âfKf"f}'l,đ,·,x,Ä,lf`fff"flf<,Ä"™,μ,ã,°,é,±,Æ,ÄA,±,α,μ,½fQ[f€,l•\Ž!,a-¾,é,È,èAfVfCfC,μ,â,·,È,è,Ü,·B

%°CEü,«-î^ó,đfNfŠfbfN,μ,Ä□AfXf%ofCf\_ ,Â'²□@,·,éjJf%oo□[ f`fff"flf<,đ'ı'đ,μ,Ü,·□B□Ô□A—  
î□A□Â,ıf`fff"flf<,đCEÂ•Ê,É'²□@,μ,½,è□A3 □F,đ"~Žž,É'²□@,Â,«,Ü,·□B



fffWf^f< fofCfuf%of“fX,Å,íAjjf%o[•²%oð,âjff%o[“Z“x,ðÚx,ÉSCEä,μA, ,ç,ä,éfAfvfŠfP[fVf#f“,Å-¾,é,‘N-¾,ÉfCf[fW,ð•\CE»,μ,Ü,·B

fXf%ofCf\_ðŽg—p,μ,ÄfffWf^f< fofCfuf%of“fX,ìfCEfxf<,ðfjftA’áA’tA,AA’á,©,ç‘l’ð,Å,«,Ü,·B

ff%oo[<Èü, a], Å•\Ž!, ³, è, Ü, ·B ff%oo[<Èü, íAfrf“fgf%ofXfgA-¾, é, ³A, Ü, ½, íKf“f}, ð'²@, ·, é, ÆfŠfA f^fCf€, Å•í  
%oo», µ, Ü, ·B

fNfŠfbfN,·,é,ÆAWindows ,āÄ<N“® ,μ,½,Æ,«,É,±,±,ÅY’è,μ,½fff%o[’²® ,āZ©“®“I,É•œCE³,³,è,Ü,·B  
f f, : fRf“fsf...[f^,ðfbfbfgf[fN,ÅŽg—p,μ,Ä,ç,ééé# ,íAWindows ,Éf fOfJf“ ,μ,½CEä,Åfff%o[ ,²²® ,³,è,Ü,·B

•Ú'¶,μ,½ffXf^f€ fff%□□Y'èfŠfXfg,ª•\Ž,³,è,Ü,·□B  
□Y'è,ð—LÆø,É,·é,É,Í□A fŠfXfg,©,ς□€-Ú,ð'í'ð,μ,Ü,·□B

fNfŠfbfN, ., é, Æ □ ACE » □ Ý, ð ff % □ □ □ Ý ' è, ð ff X f ^ f € ff % □ □ □ Ý ' è, Æ, µ, Ä • Ú ' ¶, ð, è, Ü, . □ B • Ú ' ¶, ð, è, ½ □ Ý ' è, ð — x, ð Š f X fg, É ' Ç  
% □ Á, ð, è, Ü, . □ B

fNfŠfbfN, ., é, Æ □ AfŠfXfg, ÅCE » □ Ý ' I ' ð, ³, è, Ä, ç, é f f X f ^ f € f f f % ° □ □ □ Ý ' è, ¢ □ í □ œ, ³, è, Ü, . □ B

fNfŠfbfN,·,é,Æ□A,·,×,Ä,lfj%o□[',āfn□[fhfEfFfA□o%o×Žž,ì□Ý'è,É-β,è,Ü,·□B





NVIDIA Media Center ,lfAfCfRf",đ Windows f^fXfNfo[ ,É•\Ž|,μ,Ü,·□B

□ ,±,lfAfCfRf",đŽg—p,·,é,Æ□A•Ö—~.Éf]fbjvfAfbjv f□ffj...□[.©,çfjXf^f€ Direct3D□AOpenGL□Afff%□[□Y'è,đ,·,Î,â,"K—p,Â,«,Ü,·□B

□ ,Ü,½,±,lf□ffj...□[ ,É,Í□A□%Šú□Y'è,É-ß,·,½,ß,ì□€-Ú,â [%œ-Ê,lfvf□fjpfefB] f\_CfAf□fO f{fbjNfX,ÉfAfNfZfX,·,é,½,ß,ì□€-Ú,àŠÜ,Ü,ê,Ä,ç,Ü,·□B

Windows f^fXfNfo[]l,Å Media Center ft[]lfeBfŠfefB,Æ,μ,Ä•\Ž|,.,éfAfCfRf“,đ'!đ,Å,«,Ü,·[]B

1. •\Ž|,³,¹,½,čfAfCfRf“,đfŠfXfg,©,ç'!đ,μ,Ä,,¾,³,č[]B

2. **["K-p]** ,đ'!đ,μ[]Af^fXfNfo[]l,lfAfCfRf“,đ[]X[]V,μ,Ü,·[]B

fffXfNfgfbfv f[]fj...[][,É [nView fvf[]fpfefB] flfvfVf#f",đ'Ç%Á,μ,Ä[]AnView Desktop Manager ,đ—LÆø,É,μ,Ü,·[]B  
fffXfNfgfbfv,đ%°EfNfŠfbfN,μ,Ä,©,ç [nView fvf[]fpfefB] ,đfNfŠfbfN,·,é,Æ[]AnView Desktop Manager ,lfvf[]fpfefB  
fpflf<,²·\Ž!,³,ê,Ü,·[]B

**[Desktop Manager ,ð—LŒø,É,·,é]** flfvfVf#f“,ð—LŒø,É,μ,½Œã,ÁfNfŠfbfN,·,é,Æ□AnView Desktop Manager  
,lfvf□pfefB fpjlf<,ª•\Ži,³,è,Ü,·□B

nView Desktop Manager ,lfvf□pfefB fpjlf<,Á,í□A1 ,Á,Ü,½,í•i□”,lfffXfNfgfbfv,âfffBfXfvfŒfC (f,jjf^),É Desktop  
Manager ,lŠeŽí@“\,ð□Y’è,Á,«,Ü,·□B

,±,è,ç,lfvfVf#f",Å,íAftf|f|fg,³,è,éÅ'â%øð'œ"x,æ,è'á,ç%øð'œ"x,ðftf%øfbfg fpflf< fffBfXfvfCEfC,ÉY'è,μ,½è#É•\  
Ž,³,è,éfCf|fW,ì^Ê'u,ðŽw'è,Å,«,Ü,.B

-î^óf{f^f",đŽg—p,μ,Ä□AfffBfXfvfCEfC□ä,}ffXfNfgfbfv,ì^É'u,đ'²□®,μ,Ü,·□B

fNfŠfbfN, ., é, Æ □ ACE » □ Ý, ì % ð ' œ " x, Æ f Š f t f CE f b f V f ... f CE □ [ f g, É, " , - , é □ % Š ú □ Ý ' è, ì ^ Ê ' u, É f f X f N f g f b f v, ¢ - ß, è, Û, . □ B

Žg—p,·,é NVIDIA GPU fx□[fX,}fOf%oftfBfbfNfX fj□[fh,ÂfTf|□[fg,<sup>3</sup>,è,éfffofCfX,É%ž,¶,Ä□A•\Ž;ifffofCfX (f,fjf^□AfffWf^f<  
ftf%ofbfg fpjf<□ATV) ,đ'!đ,μ,Û,·□B



fNfŠfbfN, ., é, Æ □ Af AfNfefBfu, È • \Ž; fffofCfX, i □ Y' è, ðjffXf^f}fCfY, ., é, ½, ß, Ì [ %œ-Ê'² □ ® ] fEfBf“fhfE, aŠj, «, Ü, . □ B

fNfŠfbfN, ., é, Æ □ ACE » □ Ý, ì TV □ o — í CE ` Ž ®, ¨, æ, Ñ □', ò □ Ý' è, ¢ • \ Ž †, ¢, ê, Û, . □ B

fNfŠfbfN,·,é,Æ□A'ÁŽè,È TV □o—íĈ`Ž® ,đŽw'è,·,é,½,β,)f\_CfAf□fO f{fbfNfX,ªŠ),«,Û,·□B

,±,lfSfXfg,©,ç,"□Z,Ü,ç,ì□'-¼,ð'I'ð,μ,Ä TV □o—íCE`Ž®,ðCE^`è,μ,Ü,·□B

f□f, : , "□Z,Ü,ç,ì□'-¼,³fSfXfg,É•Ž|,³,ê,Ä,ç,È,ç□é□#,í□A,"□Z,Ü,ç,ì'n^æ,É□Å,à<ß,ç□'-¼,ð'I'ð,μ,Ä,,³/4,³,ç□B

TV ,É'—□M,·,é□o—í□M□t,lf^fCfv,đŽw'è,μ,Ü,·□B

□ 'î%ž,·,éfRfJfNf^ fP□[fuf<,đŽg—p,μ,Ä,ç,é□ê□#□A'Ê□í,í [S-fjfff□o—í] ,ì•û,<sup>3</sup> [fRf“f]fWfbfg ffff□o—í]  
,æ,è,à□,,ç•iŽ¿,<sup>3</sup>¼,ç,ê,Ü,·□B

□ ,Ç,lf^fCfv,đ'í'đ,·,ê,î,ç,ç,©•<sup>3</sup>,©,ç,È,ç□ê□#,í□A[Z©“@'í'đ] □Ý'è,đ'í'đ,μ,Ä,,<sup>3</sup>¼,<sup>3</sup>,ç□B

-i^ó{f^f",đfNfŠfbfN,μ,ÄATV ä.)lffXfNfgfbfv,i^É'u,đ'²@,μ,Ü,.B

**f** : '²@%øßè,ì,½,ß,É TV %øæ'œ,²—,ê,½,èA"rØ,ê,½,è,·,ééè#,íA10 •b'ö"x'Ò,Á,Ä,,¾,¾,çB  
%øæ'œ,²Ž©"@“l,É%ŠúY'è,i^É'u,É-ß,èAÄ'²@,Å,<,é,æ,π,É,È,è,Ü,.B fffXfNfgfbfv,i^É'u,đŽw'è,μ,½,ç **["K—p]**  
,đfNfŠfbfN,μ,ÄA10 •b^É"à,ÉY'è,đ•Û'¶,μ,Ä,,¾,¾,çB

fNfŠfbfN, ., é, Æ □ AfffXfNfgfbfv, ¢CE» □ Ý, ì % º ð ' œ " x, É, ¨ , ¯ , é TV , ì □ % º Š ú □ Ý ' è, ì ^ Ê ' u, É f Š f Z f b f g, ¢, è, Ü, . □ B

fXf%ofCf\_δhf%ofbfO,μ,Ä TV %œ'œ,ì-¾,é,<sup>3</sup>,δ'è,μ,Û,·B



fXf%oCf\_δhf%ofbfO,μ,Ä TV %æ'œ,lRf"fgf%ofXfg,δ'²□®,μ,Û,·□B

fXf%ofCf\_,dfhf%ofbfO,μ,Ä TV %œæ'œ,ìÉ"x,δÝ'è,μ,Û,·B

fXf%ofCf\_,đhf%ofbfO,μ,Ä□ATV □M□t,É“K—p,,.éftfŠfbfj ftfBf<f^,ì—Ê,đ'²□@,μ,Û,.□B

f□f, : DVD %of%œ,đfn□lfhfEjfA fffR□lf\_,©,ç□Ä□¶,·,é□è□‡,í□AftfBf<f^,ìftfŠfbfj,đŠ@'S,Éfft,É,·,é,±,Æ,đ,“Š©,β,μ,Û,.□B

,±,ê,ç,lfRf"fgf[f<,ðŽg—p,μ,ÄAf,jf^,É•\Ž!,<sup>3</sup>,ê,éfrffl,â DVD %œ'œ,ì•iŽì,ð'²,μ,Û,·B

fRf"fsf...[f^,Åfrffl,â DVD %f%œ,ðÄ¶,·,é,Æ,«,ÉA-¾,é,<sup>3</sup>AfRf"fgf%ofXfgAF'ŠAÊ"x,ð•ÊX,É'²,μAÅ"K,È  
%œŽì,Ä•\Ž!,<sup>3</sup>,<sup>1</sup>,é,±,Æ,<sup>3</sup>,Ä,«,Û,·BNVIDIA GPU ,lfRfA," ,æ,Ñf,fŠ fNf¶bfN,ìŽü"g",ð'²,μ,Û,·B

NVIDIA GPU , ìfRfA fNf[]fbfN' - "x, ð[]Ý' è, µ, Û, : []B

fRfA fNf[]bfN' - "x,ª MHz 'P^Ê,Â•\Ź!,³,ê,Ü,·[]B

fOf%oftfBfbfNfX fj□[fh.]lf□f,fŠ fCf“f^□[ftfFfCfX.]fNf□fbfN’-“x,đ□Ý’è,μ,Û,·□B

f f, fš fCf" f^ [f f fCfX.) fNf fbfN' - "x, a MHz 'P^ Ê, Å • \Ž!, ³, é, Ü, · □B



□V,μ,¢fNf□fbfNžú”g□”,ì□Ý’è,đ“K—p,·,é’O,ÉfefXfg,μ,Û,·□B

**f□f, :** f□□(f)□(,ì□o%×Žž□Ý’è,đ•ï□X,μ,½□ê□†,í□AŠ@’S,É“K—p,·,é’O,É□V,μ,¢□Ý’è,đfefXfg,μ,Ä,,¾,³,¢□B

Windows ,đ<N“@,.,é,½,Ñ,ÉfNf□fbfNŽü”g□”,ì•i□X,ž©“@“l,É“K—p,<sup>3</sup>,è,é,æ,π,É,μ,Û,.□B

f□f, : <N“@Žž,ìfNf□fbfN,ìž©“@□Ý’è,đ-<sup>3</sup>Ĉø,É,.,é,É,í□AWindows ,ì<N“@’†,É **Ctrl** fL□[,đ%‰Ÿ,μ’±,¯,Û,.□B fRf”fsf...  
□[f^,đf□fbfgf□□[fN,ĂŽg—p,μ,Ă,č,é□ê□‡,í□AWindows ,Éf□fOf□f“,μ,½’¼Ĉă,É **Ctrl** fL□[,đ%‰Ÿ,μ’±,¯,Û,.□B

,. , x , Ä , ð f S j Z f b f g , µ A f R f " f g f [ f < , ð Ä , Ñ — L C E ø , É , È , é ' O , É f O f % o f t f B f b f N f X f n [ f h f E f F f A , ð < -  
 S " I , É Ä Ç Æ Ÿ o , µ , Ü , · B

f f , : f O f % o f t f B f b f N f X f A f \_ f v f ^ , ð BIOS , ð X V C E ä , ð BIOS f C f [ f W , Å f t f % o f b f v f . . . , · , é , ½ , Ñ , É f S j Z f b f g , · , é , ±  
 , Æ , ð , " Š © , B , µ , Ü , · B

nView • W € f, □ [fh, í fVf" fOf< fffBfXfvfCfC f, □ [fh, Å, · □ B, ±, )f, □ [fh, í □ ANVIDIA GPU fx □ [fX, )fOf%oftfBfbfNfX fj □ [fh, É • \  
Ž!fffofCfX, ð 1 , Å, ¾, " □ Ú' ±, μ, Ä, ç, é □ é □ ‡, É Ž g — p, μ, Ä, , ¾, ³, ç □ B

nView fNf□□lf“ f.□[fh,Å.□Afvf%ofCf}fŠ fffBfXfvfCefC,Æ“~,¶%æ-Ê,³Zff“f\_Š fffBfXfvfCefC,É•\Ži,³,è,Ü,·□B

nView ...•½fXfpf“ f,[]fh,Á,í[]AWindows fffXfNfgfbfv,ð[]...•½•úCEü,ì 2 ,Á,ì•\Ž!fffofCfX,ÉŠg'£,Á,«,Ü,·[]B ,±  
,lf,[]fh,Á,í[]A2 'ä,ìffBfXfvfCEfC,ðCE<[]#,μ,Ä•\Ž!-É,ð%oi,ÉŠg'å,μ,Ü,·[]B1 'ä,ìffBfXfvfCEfC,É•[],ªŽù,Ü,ç,È,ç,à,ì,ð•\  
Ž!;,·,é[]é[]#,É•Ö—“,È<@“\,Á,·[]B

nView □, '¼fXfjpf“ f, □[fh, Å, í□AWindows fffXfNfgjbfv, ð□, '¼•úCEü, ì 2 , Å, ì•\Z!jfffofCfX, ÉŠg'£, Å, «, Ü, ·□B , ±, ìf, □[fh, Å, í□A2  
'ä, ìjffBfXfjvfCEfC, ðCE<□#, μ, Ä•\Z!-Ê, ð□c, ÉŠg'å, μ, Ü, ·□B1 'ä, ìjffBfXfjvfCEfC, É□,, ³, aŽù, Ü, ç, È, ç, à, ì, ð•\Z!,, , é□é□#, É•Ö—  
~, È<@“\, Å, ·□B

nView fffBfXfvfCEfC□Ý'è,â□},Ā•\Ž!,<sup>3</sup>,è,Ü,·□B

§ f,ffj^,lfAfCfRf",ðfNfŠfbfN,·,é,Æ□ACE»□Ý,ì•\Ž!,Æ,μ,Ā'!ð,Ā,«,Ü,·□B

§ f,ffj^,lfAfCfRf",ð%oEfNfŠfbfN,·,é,ÆfjfbfvfAfbfv f□ffj...□[,â•\Ž!,<sup>3</sup>,è□A,»,lfAfCfRf",ÉŠ,,è"-,Ā,ç,è,Ā,ç,é•\Ž!fffofCfX,ì□Ý'è,ð'<sup>2</sup>□®,μ,½,è□A[ffj%□[•â□<sup>3</sup>] f^fu,ð•\Ž!,μ,½,è,Ā,«,Ü,·□B



fZff" fš fNf[f" f,[fh fffBfXfvfCfC,ìCE»Y,ìpf" ^Ê'u,³CEÁ'è,³,è,Ü,·B

%º¼'zffXfNfgfbfv,ð"C^Ó,ì^Ê'u,ÅŽ©—R,ÉCEÁ'è,Á,«,é,ì,ÅAfAfjvšfP[fvf+f",Å×,©,ç•"•³,ìà-¼,ðs,x,Æ,«,É•Ö—  
~,Á,·B

Šg'å□k□-,·,éfrfffl%æ-Ê,ì-ì^æ,ð'ì'ð,·,é,É,í□A'+%>fAfCfRf",Ü,½,í-î`ófAfCfRf",ðfNfŠfbfN,μ,Ü,·□B 'ì'ð,μ,½,ç□A %°²,É,·éY□[f€ fXf%ofCf\_ðfhf%ofbfO,μ,Ä□A%æ-Ê,ì'ì'ð,μ,½·"•ª,ðŠg'å□k□-,Â,«,Ü,·□B

fXf%ofCf\_,dfhf%ofbfO,μ,ÄAfrfffiÄ1%œ-Ê,ì'ì'ð,μ,½•”•ª,ðŠg'â,Û,½,Ík□-,Â,«,Û,·□B%œ°œÛ,«-  
î^ó,ðfNfŠfbfN,μ,ÄAfrfffi,ðftf·fXfNfŠ□[f“ f,□[fh,ÂÄ□1,·,éfffBfXfvfœfC,É%ž,1,Ä [fvf%ofCf}fŠ fffBfXfvfœfC] ,Û,½,Í  
[fZf]f“f\_fŠ fffBfXfvfœfC] ,ð'ì'ð,μ,Û,·□B  
ftf·fXfNfŠ□[f“ f,□[fh,ð-³œø,É,·,é,É,ÍA[-³œø] ,ð'ì'ð,μ,Û,·□B

f[]fo[]fCfC f\ftfgfEjFfA,Å<[]\$“l,ÉfofXf}fXf^,đŽg—p,.,é,æ,ʌ,É[]Ý’è,μ,Û,·[]B

f[]f, : %œ’œ,ª—[],ê,½,è[]A%œ’œ,ª•Ž|,ª,ê,È,ç,È,Ç,ìfjff[]Ä[]ä,ì-â’è,ª”[]μ,È,çCEÀ,è[]A,±,ìfjfvfj+f”,ìf`fFjbfN,đŠO,μ,Ä,“,.,±,Æ,đ,“Š©,ß,μ,Û,·[]B

'l'đ,μ,½fOf%oftfBfbfNfX fj□[fh,ĀŽg—p,³,è,Ä,ç,é•\Ž!ffofCfX,ìŽí—p,³•\Ž!,³,è,Ü,·□B

fNfŠfbfN, ., é, Æ □ AfffBfXfvfCEfC, \fff ofCfX, Æfhf% ofCfo, \fvf □ fpfefB, ¢ • \Ž! , ¢, è, Ü, . □ B

,±,lf,fff^,ÅŽg—p,Å,«,«,éfŠftfĀfbfVf... fĀĀ[fg,â^ê—•\Ž!,³,è,Û,·ĀBfŠftfĀfbfVf...ŽüŠú,đ,.,,·,é,ĀĀA%œ-  
Êā,łftfŠfbfj,âĀ,μ,Û,·ĀB

fffBfXfvfCEfC,ÅfTf|[]fg,³,è,È,çf,[]fh,ð [fŠftfCEfbfVf...ŽůŠú] fŠfXfg,É•\Ž!,·,é,©,Ç,α,©,ðŽw'è,μ,Û,·□B

'□^Ó : fffBfXfvfCEfC,ÅfTf|[]fg,³,è,È,çf,[]fh,ð'1'ð,·,é,Æ□A□[]□,È•\Ž!fGf%□□[,ª"-

□¶,μ,½,è□Afn□[]fhfEfFfA,ª¹□□,·,é□ê□†,ª, ,è,Û,·□B



□ā,Ā'Ī'ð,μ,½fAfCfRf",É'í%ž,·,éfffBfXfvfCfC,ðfvf%ofCf}fš fffBfXfvfCfC,Éžw'è,μ,Ü,·□B

fRf"fsf...□[f^,ð<N"@,·,·,é,Æ□Afvf%ofCf}fš fffBfXfvfCfC,Éf□fOfIf" f\_fCfAf□fO f{fbfNfX,ā•\Ž!,³,è,Ü,·□B

,Ü,Æ,ñ,Ç,ìfAfvfšfP□[fVf#f" fEfBf"fhfE,í□Ašù'è,Ā,í□Ā□%o,Éšj,ç,½,Æ,«,Éfvf%ofCf}fš fffBfXfvfCfC,É•\Ž!,³,è,Ü,·□B fvf  
%ofCf}fš fffBfXfvfCfC,É,ífffXfNfgfbfv,ì□¶□ă<÷,ā•\Ž!,³,è,Ü,·□B

CE»Ÿ, ð nView fffBfXfjvfCEfC,ª,·,x,Ä·\Ž!,³,è,Ü,·B2 ,Â^Èä, ðfffofCfX,ªŸ'±,³,è,Ä,ç  
,é,Æ,«,É·WŸ€^ÈŠO, ðf, ðlfh,ÉŸØ,è'Ö,!,½ŸèŸ#,ÍŸA,±,±,ÂCE»Ÿ, ðffBfXfjvfCEfC,ð'!ð,Â,«,Ü,·B  
,Ü,½ŸAŸã,É·\Ž!,³,è,Ä,ç,é,ff^ fAfcfRf",ðfNfŠfbfN,·,é,ÆŸACE»Ÿ, ðffBfXfjvfCEfC,Æ,µ,Ä'!ð,Â,«,Ü,·B

«»Ÿ,ŸffBfXfvfCfC,ÅŽg—p,·,é□o—ŸffofCfX,ÉŠÖ,·,é□Ÿ'è,â,»,Ÿ,ŸŸX,ª,Å,«,Ü,·□B

fOf%oftfBfbfNfX fj□[fh.É□Ú'±,³,ê,Ä,ç,é,·,×,Ä,)ffBfXfvfCEfC,ªCEŸ□o,³,ê,Ü,·□B  
f□f, : fRf"fgf□□[f< fpfjf<,ðŠ],ç,½CEă,ÅffBfXfvfCEfC,ð□Ú'±,μ,½□ê□‡,ÉŽg—p,μ,Ü,·□B

fZffj"j\_š fffBfXfvfCEfC fRfIfNf^,É□Ú'±,³,è,Ä,ç,éf,ffj^,³CEŸ□o,³,è,È,ç□é□±,Í□A,±,Ìf`fFfbfN f{fbfNfX,ðfIf",É,µ,Ä,,¾,³,ç□B  
,±,è,Í□A<CECE^f,ffj^,Ü,½,Í BNC fRfIfNf^,Ä□Ú'±,³,è,Ä,ç,éf,ffj^,ÉCEø%oÉ,³,è,Ü,·□B

NVIDIA GPU ,ì,» ,ì¼,ì<@”\,ÉfAfNfZfX,Â,«,Ü,·□B

NVIDIA Web fTfCfG,ÉfAfNfZfX,μ,Ä NVIDIA GPU ,ìÅV,ìî•ñ,âfhf%ofCfo,ð“üŽè,Å,«,Ü,·B

«»'í'ð,³,ê,Ä,ç,é NVIDIA GPU ,)fn[]fhfEjFfA,ÉŠÖ,.,éÚ×î•ň,đŽ!,μ,Ü,·B



fOf%oftfBfbfNfX fpftfH[f]f"fx'S'ì,É%oe<¿,·é%oÂ"\□«,ª, ,éfVfXfef€,'ì'ð"à—e,ÉŠÖ,·,é□Ú□×□î•ñ,ðŽ!,μ,Û,□B

NVIDIA GPU ,Åžg—p,³,ê,éftf@fCf<^ê— (□à-³/4,Æfo□[fWf#f“ ,ðŠÜ,Þ) ,ðŽ!,μ,Ü,·□B

3D fAfVfŠfP□[fVf†f“, Å, )fAf“f` fGfCfŠfAfX, ð-³CEø, É, μ, Û, ·□B

f□f, : fAfVfŠfP□[fVf†f“, Å□Å□, )f†f†H□[f}f“fX, ²•K—v, È□ê□†, Í□A, ±, )fVfVf†f“, ð—LCEø, É, μ, Ä, , ¾, ³, †□B

fAf" f` fGfCfŠfAfX,ð 2x f,□[fh,Å—LÆø,É,μ,Û,·□B

f□f, : ,±,lf,□[fh,Å,í□A3D fAfvfŠfP□[fVf#f",i)%œŽ¿,ÆfpftfH□[f}f" fX,ªÆü□ã,μ,Û,·□B

GeForce GPU ftf@f~fš[]l,Å“Á<-Žæ“¾4[]İ,Ý,İfAf“f`fGfCfŠfAfX<Z[]p,ªŽg—p,Å,«,é,æ,x,É,È,è,Ü,·[]B

f[]f, : Quincunx fAf“f`fGfCfŠfAfX,Å,í[]A2x fAf“f`fGfCfŠfAfX f,[]fh,Æ“~“™,İpftfH[]f}f“fX,Å[]A’~“x,İ’x,ç 4x f,[]fh,Æ“~“™,İ  
%œžž,đ“¾4,é,±,Æ,ª,Å,«,Ü,·[]B

fAf" f` fGfCfŠfAfX,đ 4x f,□[fh,Å—LÆø,É,μ,Û,·□B

f□f, : ,±,ìf,□[fh,Å,í□A3D fAfvfŠfP□[fvf+f",Å□,%œŽ¿,đ"¾,é,±,Æ,ª,Å,«,Û,·,ª□AfpftfH□[f}f" fX,í'½□'á%œº,μ,Û,·□B

fAf`f`fGfCfŠfAfX,ª 4x□A9 f^fbfv (fKfEfX) f,□[fh,Å—LÆø,É,È,è,Ü,·□B

f□f, : ,±,lf,□[fh,Å,í□A3D fAfvfŠfP□[fVf#f“,Å□,%øæŽ,đ“¾,é,±,Æ,ª,Å,«,·,·,ª□AfpftfH□[f}f“fX,í‘½□‘á%øø,μ,Ü,·□B

fAf" f`fGfCfŠfAfX,đ 4xS f,□[fh,Å—LCEø,É,μ,Ü,·□B,±,lf,□[fh,Å,Í□A3D fAfvfŠfP□[fVf#f",Å 4x  
f,□[fh,æ,è□,%æŽç,³¼,ç,è,Ü,·,³□AfpftfH□[f}f" fX,Í'½□'á%ø²,μ,Ü,·□B

**f□f, :** ,±,ì□Ý'è,Í Direct3D fAfvfŠfP□[fVf#f",Å,ì,ÝCEø%øÉ,đ"Šö,μ,Ü,·□B OpenGL fAfvfŠfP□[fVf#f",đŽÀ□s,·,é,Æ□AŽŸ,É—  
LCEø,ÈfAf" f`fGfCfŠfAfX□Ý'è (4xS □Ý'è,ì'¼' O,ÉCEŸ□o,³,è,½fVfVf#f"□Ý'è) ,Žg—p,³,è,Ü,·□B



fAf" f` fGfCfŠfAfX, ðfTf[] [fg, , é 3D fAfvfŠfP[] [fvf#", ÉÅ"K. ÈfAf" f` fGfCfŠfAfX[] Y'è, ž© "® "I, É—LCEø, É, È, è, Ü, . □B3D  
fAfvfŠfP[] [fvf#", ìžÀ□sžž, Éžè"®, ĀfAf" f` fGfCfŠfAfX f, [] [fh, ð' 'ð, Ā, «, Ü, . □B

fRf"fsf...[f^,)CE»[Y,) AGP [Y'è,ÉŠÖ,.,é[î•ñ,ð•\Ži,μ,Ü,·[B

fOf%oftfBfbfNfX fTfufVfXfef€ ,ÅŽg—p,·,é AGP fCE[]fg,ðŽè“@,Å‘l’ð,μ,Ü,·[]B

f[]f, : “K[]Ø,È AGP fCE[]fg,ª•s-¾,È[]ê[]+,í[]Af`fFfbfN f{fbfNfX,ðfift,ì,Ü,Ü,É,μ,Ä,,¾,¾,ç[]B fVfXfef€ ,É,æ,Á,Ä[]Å“K,È AGP fCE[]fg,ªŽ©“@“l,É[]Ý’è,¾,è,Ü,·[]B.

fXf%ofCf\_đhf%ofbfO,μ,ÄAfOf%oftfBbfNfX fTfufVfXfef€,ĂŽg—p,·,é AGP fCE[]fg,đŽě“®,Ā‘l’đ,μ,Û,·B

fhf%ofCfo,³AfvfXfef€ f[]f,š,©,çš,,è“-,Ä,ç,è,éfrffl f[]f,š,ðšç—[],é•û-@,ð'!ð,μ,Û,·[]B

«»Ÿ,ŀftf«ŀf€ fofbftf@ f,ŀ[fh,Åžw'è,³,è,Ä,ç,é•ù-@,Åžg—p,·,éfvfXfef€ fŀf,fš,ŀ—e—Ê,ðžw'è,µ,Û,·ŀB

“®“|ftfCE[]f€ fofbftf@ f,[]fh,ðŽg—p,,é[]é[]‡,|ftfCE[]f€ fofbftf@,|f[]f,š,ðšÇ—[],.é•ùŽ® ,ðŽw'è,μ,Û,·[]B

NVIDIA ,) **PowerMizer** <@\,É,æ,èAGPU ,)“d—íÁ”i,ð§CEä,Å,«,Ü,·B

[Å~“d—í] ,ðÝ’è,·,é,Æfofbfefš[,ðß-ñ,Å,«,Ü,·B[Å, ,)fpftfH[f}f“fX] ,ð’ð,·,é,ÆAGPU ,)fof%oftfBfbfNfX  
fpftfH[f}f“fX,ðÅ’â,É,Å,«,Ü,·B



Windows ,Å□A•i□",)□o—í,ª, ,éfOf%oftfBfbfNfX fj□[fh,ð□A•i□",)“Æ—\$,μ,½fj□[fh,Æ,μ,ÄŽg—p,Å,<,Ü,·□B  
f□f, : ,±,ìf|fvfVfjf“,ð—LÆø,É,·,é,Æ□Af}f`f`ffBfXfvfCfC fOf%oftfBfbfNfX fj□[fh,É□Ú'±,³,ê,Ä,ç,éŠe•\  
Ž!fffofCfX,É^Ù,È,é%ø'œ“x,â•\Ž;□F□“,ð'l'ð,Å,<,Ü,·□B

OpenGL fXfefCEfl,Æfl[]fo[]fCEfC,ìÚ×Ý'è,ðjXf^f}fCfY,·é,½,B,ìf\_fCfAf[]fo f{fbfNfX,ª·Ž!³,è,Ü,·□B  
f□f, : ,±,ìf{f^f",ð—LCEø,É,·,é,É,í□A,±,ìpfjfk,ì□Å□%o,ìšfXfg f{fbfNfX,Å [4 •ªŠ„fofbftf@ fXfefCEfl API ,ð—LCEø,É,·,é]  
fìfVfVf†f",ª—LCEø,É,È,Á,ç,é•K—v,ª, ,è,Ü,·□B

OpenGL fífofCfC,ð—LCEø,É,μ,Û,·B

Softimage3D ,È,ÇA`è•”,lfAfvfŠfP[fVf#f”,ífofCfC fvfCE[f”,ðŽw`è,μ,Û,·,ªA,±,ífofCfC,íÉí,íff%o[ (RGB) fofbftf@,Æ,Æ,à,ÉfpfCEfbfg-É,Æ,μ,ÁŽg—p,³,è,Û,·B fífofCfC,íAfbfj...[,âf[fj<,É,ÇA3D fCf[fW,© ,ç“Æ— \$,μ,Ád,È,èf,æ`%æ—í^æ,Á,É•Ö—~ ,Á,·B fífofCfC,í 16 frfbfg,“,æ,Ñ 32 frfbfg fff%o[ f,ífh,ðfTfí[f,μ,Û,·B

fif, : OpenGL fXfefCfi,ÆfífofCfC,í“~Žž,ÉŽg—p,Á,«,Û,¹,ñBfífofCfC,ð—LCEø,É,·,é,É,íAflf“f{[fh fOf %oftfBfbfNfX fí,fŠ,ð`Y,·,é•K—v,ª, ,è,Û,·B,Û,½A%ø“x,É,æ,Á,Á,íXfefCfi•Ž!,ðŽg—p,Á,«,É,çééª,ª, ,è,Û,·B fífofCfC@“\,İŽg—p,É-à`è,ª, ,éééª,íA%ø“x,à•Ž;íF”,ðCE,·ç,μ,Á,¾,ª,çB

OpenGL fXfefCEfl,ð—LCEø,É,μ,Û,·□B

fVffbf^[] fOf%ofX,È,Ç,ìfn[]fhfEjFfA,ðŽg—p,μ,ÄfXfefCEfl fAfVfŠfP[]fVf#f",ðŽÄ[]s,·é,É,ì□ANVIDIA fhf%ofCfo,Ä OpenGL fXfefCEfl fsfNfZf< ftfH[]f}fbfg,ðfGfNfXf[]fg,μ□Af[]f,fS,ð□□—,μ,Ä□AfXfefCEfl•\Ž!fAfVfŠfP[]fVf#f",Æ•½-É•\ Ž!fAfVfŠfP[]fVf#f",ð"~Žž,ÉŽg—p,Ä,«,é,æ,π,É,μ,Û,·□B

f[]f, : ,±,ìf!fVfVf#f",í•K—v,È□è□#f,É,ì,Ý—LCEø,É,μ,Ä,,¾,¾,ç□B Ž©"®"ì,ÉfXfefCEflCE`Ž®,ð'ì'ð,·,éfAfVfŠfP[]fVf#f",â□AfXfefCEfl fsfNfZf< ftfH[]f}fbfg,Ä,ì□³□í,É"®□ì,μ,É,çfAfVfŠfP[]fVf#f",à, ,è,Û,·□B

f[]f, : OpenGL fXfefCEfl,Æf[]fo[]fCEfC,í"~Žž,ÉŽg—p,Ä,«,Û,¹,ñ□BfXfefCEfl•\Ž!,ð—LCEø,É,·,é,É,ì□Af[]f"{}f[]fh fOf %oftfBfbfNfX f[]f,fS,ð"□□Y,·,é•K—v,ª, ,è,Û,·□B,Û,½□A%øð'œ"x,É,æ,Ä,Ä,ìfXfefCEfl•\Ž!,ðŽg—p,Ä,«,É,ç□è□#f,ª, ,è,Û,·□B fXfefCEfl•\Ž!,É-â'è,ª, ,é□è□#f,ì□A%øð'œ"x,â•\Ž!□F□",ðCE,ç,μ,Ä,,¾,¾,ç□B

NVIDIA fhf%oCfo,íA,³,Ü,´,Ü,ÈfXfefEfl fn[fhfEjFfA,ðTfj[fhg,µ,Ä,ç,Ü,·B fXfefEfl fn[fhfEjFfA,ð  
%SúY'è,Æ^Ü,È,éY'è,ÄZg—p,·,éê#íAfSfXfg f{fbfNfX,©,ç•\Z!f.[fh,ð'ð,µ,Ü,·B

**[Use shutter glasses]** ,íAELSA 3D REVELATOR? ,Ü,½,ÍEÝŠ·fAf\_fvf^,ðŽg—p,·,éê±,í,Ý—LCEø,É,μ,Ü,·B ,± ,ê,ç,lfAf\_fvf^,íAf,ff^M±,ðA'½,,lŽs"lfXfefCEfl fn[fhfEjFA,ÅŽg—p,³,ê,Ä,ç,é·W±.í 3 fsf“ DIN ,É·ÍS·,μ,Ü,·B fff, : fOf%oftfBfbfNfX fj[fh,É 3 fsf“ DIN fRfifNf^,ª“à’ ,³,ê,Ä,ç,éê±,íAfAf\_fvf^,ðŽg—p,·,é·K—v,í ,è,Ü,¹,ñB

**[Use vertical interlace monitor]** ,íA fOf%oftfBfbfNfX fj[fh,ÉŽ©“@fXfefCEfl ftf%ofbfg fpflf-,ªÚ'±,³,ê,Ä,ç  
,éêë,É'İ,δ,μ,Û,-B

**[Use nView Clone mode]** ,íAfpjbfVfu fXfefCEfi fn[fhfEfffA,đŽg—p,·,éê±,É—LCEø,É,μ,Û,·B ,±,ìfVfVf±“,đŽg—  
p,·,é,É,íANVIDIA GPU ,ÉŠî,ç,Äff...fAf< fffBfXfVfCEfC fOf%oftfBfbfNfX fj[fh,ÉfvfWfFfNf^,đÚ'±,μA[nView  
fffBfXfVfCEfC f,[fh] f^fu,Ä nView fNf[f“ f,[fh,đ—LCEø,É,·,é•K—v,ª, ,è,Û,·B  
^ê•û,ìfffBfXfVfCEfC,ª¶,ìŽ<“\_đA,à,ª^ê•û,ìfffBfXfVfCEfC,ª%øE,ìŽ<“\_đ•\Ž!,μ,Û,·B  
f : ,±,ìfVfVf±“,íAfff...fAf< fffBfXfVfCEfC (,Û,½,ìf}f<f fffBfXfVfCEfC) fOf%oftfBfbfNfX fj[fh,É,ì,ÝŽg—p%øÄ“\,Ä,·B



**[Use on-board DIN connector]** ,íA fOf%oftfBfbfNfX fj[]fh,É"à' 3 fsf" DIN fRflfNf^,ª" <□Ú,³,ê,Ä,ç,é□ê□‡,É—  
LCEø,É,µ,Ü,·□B ,±,í□ê□‡□AELSA 3D REVELATOR ,â StereoGraphics fOf%ofX,É•t'® ,µ,Ä,ç,éAf\_fvf^,É,Ç,íÇ  
%oÁAf\_fvf^,í•s—v,Ä,·□B fXfefCEfl fn[]fhfEjFfA,ð 3 fsf" DIN fRflfNf^,Ä'¼□ÚfOf%oftfBfbfNfX fj[]fh,É□Ú'±,Ä,«,Ü,·□B

**[Use blue-line code for StereoGraphics StereoEyes]** ,ÍA StereoGraphics StereoEyes  
,Ü,½,íŒYŠ·»•i,É“`«,³,ê,Ä,ç,éAf\_fvf^,ðŽg—p, : ,éêë,É—LŒø,É,μ,Û, :B,±,ê,ç,lfAf\_fvf^,íAf,fff^M†,ðA'½,-  
,iŽs”lfXfefŒfl fn[fhfEjfA,ÄŽg—p,³,ê,Ä,ç,é•W€ ,i 3 fsf“ DIN ,É•İŠ,μ,Û, :B  
f, : fOf%oftfBbfNfX j[lh,É 3 fsf“ DIN fRfIfNf^,³“à’ ,³,ê,Ä,ç,éêë,íAfAf\_fvf^,ðŽg—p, : ,é•K—v,í, ,è,Û,¹,ñB

fXfefCEfICEø%Ê,â“¾,ç,ê,È,çêê±,É±¶%E,ì%æ‘œ,ð“ü,ê‘Ö,ÿ,Ü,·B

f±f, : ‘ÊíA,±,ìfìvfvf±f“,í,‘¾fCf“f^fCE[fX f,fjf^,ðfpfbfVfu f,±f±h,ÅŽg—p,µ,Ä,ç,éêê±,É,ÿ—LCEø,É,µ,Ä,,¾,¾,çB

,Å,«,é,¾,~½,,lf,fš,ðfefNfXf`ff}fbfv—p,ÉŠm•Û,μ,Û,·B ,±,lfvfVf+f“,ð—LÆø,É,·,é,Æ[AfefNfXf`ff,ð½,Žg—  
p,·,éfAfvfŠfP[fVf+f“,lfpfH[f}f“fX,ªEü[ä,μ,Û,·,ª[AfefNfXf`ff,ðŽg—p,μ,È,çfAfvfŠfP[fVf+f“,lfpfH[f}f“fX,í½‘á  
%º,μ,Û,·B

fAf`f`fGfCfŠfAfX,ð—LCEø,É,μ,Ä 3D fAfvfŠfP[fVf+f“,ðŽÀ□s,·,é□é□‡,ÉfefNfXf`ff,ª‘N-¾,É,È,è,Ü,·□B ,±,ê,É,æ,è  
%∞æŽ¿,ªCEü□ã,μ,Ü,·□B

fXf%oCf\_đfhf%ofbfO,μ,ÄAfeNfXf`ff,í^Ù•ú«ftfBf<f^fŠf“fO,lfCEfxf<,đY’è,μ,Û,·B ,,,Y’è,·,é,Û,Ç%œŽ,ªCEüã,μA’á,-  
Y’è,·,é,Û,ÇpftfH[f}f“fX,ªCEüã,μ,Û,·B

CE»ŸŸÚ'±,³,ê,Ä,ç,é TV ,³fRf"fgfŸŸ[fç fpfjfç,É•\Ž!,³,ê,È,çŸêŸŸ,Å,àŸAfOf%oftfBfbfNfX fjŸŸ[fh,ÉŸÚ'±,³,ê,Ä,ç,é TV ,ð-  
ŸS"l,ÉCEŸŸo,µ,Û,ŸB ,±,ì<@"\,ìŸAŸŸÚ'±,³,ê,Ä,ç,é TV f,ffç,ÅfOf%oftfBfbfNfX fjŸŸ[fh,É" FŽ⁻,³,¹,éŸMŸt,³Ÿ³,µ,-  
fŸŸŸ[fh,³,ê,È,çŸêŸŸ,É•Ö—,Å,ŸB

TV ,ìŸŸ'è,ð—LCEø,É,·,é,É,ìŸA^è%ø²,ìŽèŸŸ,ÉŸŸ,ç,Û,ŸB

1. f`fFfbfN f{fbfNfX,ðfj",É,µ,Û,ŸB

2. fŸfbfZŸŸ[fW,ÉŸŸ,Á,ÅfRf"fsf...ŸŸ[f^,ðŸÄçN"® ,µ,Û,ŸB fŸfOfCf" ,µ,½,çŸATV fRf"fgfŸŸŸ[fç,ðŽg—p,Å,«,Û,ŸB.

[%o;] ,íuŠù'èv,iffXfNfgfbfv f,[]fh,Å,.B



[c] ,í 90 “x%ñ”,μ,Ü,·B

["½"],μ,Ä%oj] ,í180 "x%õñ",μ,Ü,·□B

["½"],μ,Äc] ,í 270 "x%ñ"],μ,Ü,·B

%o9,ì%oň"lfjvfVfjf",đŽÀs,.,é,É,íA%oE-î^ó (->) f{f^f",đfNfŠfbfN,.,é,©A %oEã,ì%o~ĈE`,ì-î^ó,đfNfŠfbfN,μA%oň"]  
,<sup>3</sup>,<sup>1</sup>,é•ùĈEü,Éfhf%ofbfO,μ,Û,·B

%o, i%oñ" ]fjvfVf+f", ðŽÀs, ., é, É, ÍA□¶-î^ó (<-) f{f^f", ðfNfŠfbfN, μ, Ü, ·□B

•;□",)ffBfXfvfCfC,Ü,½,Í^Ù,È,éNf%oX,ì NVIDIA GPU ,Ü,½,Í,»,ì-¼•û,ðŽg—  
p,·,é□ê□#,lfCf“f\_fŠf”fo,ì□Ú□×flfvfVf#f“,ðŽw’è,μ,Û,·□B

**f□f**, : Windows NT 4.0 ,Å nView Multiview f,□[fh,ðŽg—p,·,é□ê□#□Af}f<f` fffBfXfvfCfC fn□[fhfEjFfA,lfAfNfzF  
%oJCE□[fvf#f“ flfvfVf#f“,í-³CEø,É,È,è,è,Û,·□B

□ **[fvf“fof< fffBfXfvfCfC f,□[fh]** : fAfNfefBfu,ÈffBfXfvfCfC,ª 1 ‘ä,ì,Ý,ì□ê□#□A,±,lf,□[fh,ª□  
%oSú□Ý’è,É,È,è,è,Û,·□B ,±,lf,□[fh,ì□A□uf}f<f` fffofCfX□vf,□[fh,Å-â’è,ª□¶,μ,½□ê□#,ÉŽw’è,·,é,±,Æ,à,Å,«,Û,·□B

□ **[nView fNf□□[f“/fXfpf“ f,□[fh]** : nView fffBfXfvfCfC,ð nView fNf□□[f“ f,□[fh,Ü,½,Í nView fXfpf“  
f,□[fh,É□Ý’è,μ,Ä,ç,é□ê□#,ì□A,±,lf,□[fh,ª□%oSú□Ý’è,É,È,è,è,Û,·□B fAfNfefBfu fffBfXfvfCfC,Å•;□”,ì NVIDIA-GPU  
fx□[fX,lfOf%oftfBfbfNfX fj□[fh,ðŽg—p,μ,Ä,ç,é□ê□#□A□Ý’è,ì□uf}f<f` fffofCfX□vf,□[fh,ì,ç,·,ê,©,É•ì□X,³,è,Û,·□B

□ **[f}f<f` fffofCfXCEÝŠ•f,□[fh]** : ,±,lf,□[fh,ì□AnView Dualview f,□[fh,Å•;□”,lfAfNfefBfu,È•ŽiffffofCfX,ðŽg—p,μ,Ä,ç  
,é□ê□#□A,Ü,½,Í^Ù,È,éNf%oX,ì NVIDIA GPU fx□[fX,lfj□[fh,ðŽg—p,μ,Ä,ç,é□ê□#,É’í’ð,Å,«,Û,·□B

**f□f**, : ,±,lf,□[fh,ð—LCEø,É,·,é,Æ□AOpenGL ,í,·,ç,ä,éffBfXfvfCfC,lfCf“f\_fŠf”fo,ð□uCEÝŠ-□vf,□[fh,Å□s,ç,Û,·□B ,±  
,lf,□[fh,Å^Ù,È,éNf%oX,ì GPU ,ðŽg—p,μ,Ä,ç,é□ê□#□A,·,×,Ä,lfAfNfefBfu,È GPU ,ì□Å□-<α’É<@”\fZfbfg,ª OpenGL  
fAfVfŠfP□[fvf#f“,É’ñ<Ý,³,è,Û,·□B OpenGL ,lfCf“f\_fŠf”fo fpftfH□[f}f<fX,lfVf“fOf< fffBfXfvfCfC  
f,□[fh,ì□ê□#,æ,èŽáŠ±’á%o,μ,Û,·□B

□ **[f}f<f` fffofCfX fpftfH□[f}f<fX f,□[fh]** : ,±,lf,□[fh,ì□AnView Dualview f,□[fh,Å•;□”,lfAfNfefBfu,È•\  
ŽiffffofCfX,ðŽg—p,μ,Ä,ç,é□ê□#□A,Ü,½,Í^Ù,È,éNf%oX,ì NVIDIA GPU fx□[fX,lfj□[fh,ðŽg—p,μ,Ä,ç  
,é□ê□#,É’í’ð,Å,«,Û,·□B

**f□f**, : ,±,lf,□[fh,ð—LCEø,É,·,é,Æ□AOpenGL ,í,·,×,Ä,lfBfXfvfCfC,lfCf“f\_fŠf”fo,ð□ufpftfH□[f}f<fX□vf,□[fh,Å□s,ç  
,Û,·□B □uCEÝŠ•f,□[fhv,Æ”—ì,É□A^Ù,È,éNf%oX,ì GPU ,ðŽg—p,μ,Ä,ç,é□ê□#□A,·,×,Ä,lfAfNfefBfu,È GPU  
,ì□Å□-<α’É<@”\fZfbfg,ª OpenGL fAfVfŠfP□[fvf#f“,É’ñ<Ý,³,è,Û,·□B ,½,¾,μ□A•\  
ŽiffffofCfX,ì□ø,è’ò,ì,âfXfpf“,É,æ,èŽáŠ±,ì^èŽŽ”ì,ÈfCf“f\_fŠf”fo  
fA□[f`ftf@fNfg,ª□¶,¶,é□ê□#,ª,·,è,Û,·,ª□AfCf“f\_fŠf”fo fpftfH□[f}f<fX,íCEÝŠ•f,□[fh,ì□ê□#,æ,è□u□,‘-□v,Å,·□B

"K□#, :é OpenGL fefNfXf` ff fNf%of"fv,ì" @□i,ð—LÆø,É,μ,Û,·□B  
fefNfXf` ff fNf%of"fv,Æ,í□AfefNfXf` ff,ìŠO•",É, ,éfefNfXf` ff□A•W,ì□^—□•û-@,Å,·□B fefNfXf` ff□A•W,ð  
%œ'œ,ì[,Û,½,ì"à•",ÉÆÅ'è,.,é,±,Æ,ª,Å,«,Û,·□B

fvf%ofCf}fš fffBfXfvfCefC,lfrrffl fl[]fo[]fCefC,ÉŽw'è,<sup>3</sup>,ê,<sup>1/2</sup>%oň“]Šp“x,ðfZfjf“f\_fš fffBfXfvfCefC,Éfšf“fN,<sup>3</sup>,<sup>1</sup>,Ü,·□B ,±  
,ê,É,æ,è□ANVRotate fpflf<,Å'l'ð,μ,<sup>1/2</sup>%oň“]Šp“x,<sup>3</sup>fvf%ofCf}fš fffBfXfvfCefC,ÆfZfjf“f\_fš fffBfXfvfCefC,É“K—p,<sup>3</sup>,ê,Ü,·□B



**fY** [f€ fRf“fgf [f<, đŽg—p,·,é,Æ AfCEf“f\_fŠf“fO,³,ê,½f rffl, đŠg'â k□—,Å,«,Û,·□B

fhf□fbfv f\_fEf“ f□fj...□[ f{f^f“, đfNfŠfbfN,μ,Ä□AŠg'â k□—,·,éffBfXfvfCEfC,đ'1'đ,μ,Û,·□B

□ **[f rffl f~f%□□]**, Å, í□Afrffl f~f%□□[, đfCEf“f\_fŠf“fO,·,éZfj f“f\_fŠ fffBfXfvfCEfC, ìY□[f€ fCEfxf<, đŸ'è,μ,Û,·□B

□ **[f rffl f□[fo□[fCEfC]**, Å, í□Afi□[fo□[fCEfC f rffl, đfCEf“f\_fŠf“fO,·,évf%□fCf}fŠ fffBfXfvfCEfC, ìY□[f€ fCEfxf<, đŸ'è,μ,Û,·□B

□ **[—¼•û]**, Å, í□Afrffl, đfCEf“f\_fŠf“fO,·,évf%□fCf}fŠ fffBfXfvfCEfC, ÆfZfj f“f\_fŠ fffBfXfvfCEfC, ìY□[f€ fCEfxf<, đŸ'è,μ,Û,·□B

%o·“xfCf“fWfP[f^,ìCEx□□f\_fCfAf□fO f{fbfNfX,ð—LCEø,É,μ,Û,·□B

NVIDIA GPU fRfA%o·“x,ì',<sup>3</sup> [fRfACE, '¬,μ,«,φ'l] ,Æ^è`v,·,é,Æ□A[%o·“xfCf“fWfP[f^] f\_fCfAf□fO f{fbfNfX,<sup>3</sup>Ž©“®“l,É•\ Žl,<sup>3</sup>,ê□A□ó<μ□à<sup>-3</sup>/<sub>4</sub>,Æ□A“Á'è,ì GPU ,É<N,±,è,π,é□áSQ,ð-hZ~,·,é,½,ß,É,Æ,ç,ê,½□^'u,<sup>3</sup>Žl,<sup>3</sup>,é,U,·□B

'l'đ,³,ê,½ NVIDIA GPU ,ìĒ»□Ý,ì%∞.“x,đŽl,μ,Ü,·□B

'l'đ,<sup>3</sup>,ê,½ NVIDIA GPU ,ìĒ»□Ý,ìŽü•Ó%o•“x,đŽ!,μ,Ü,·□B ,±,ì%o•“x,Í GPU •t<ß,ì”MĒ<sup>1</sup>,É,æ,Á,Ä'â,«,^Ù,È,è,Ü,·□B

,±,lfpfif<,É•\Ž|,•,é%o“x,ì'P^Ê ([%oØŽ□] ,Ü,½,í [□ÜŽ□]) ,đfNfŠfbfN,μ,Ä,,¾,³,č□B

äü,ü,½,í%ü,«-îó,đfNfšfbfN,μ,ÄAf[fo[fg,đ-h,®,½,ß,É GPU ,ðCE,‘-³,¹,é'l,đ•ïX,μ,Û,·B  
±,ìpfìf<,ì [,μ,«,ç'l,đ',,½,Æ,«,É%·“xfCf“fWfP[f^,ÄCEx,·,é] flfvfVf#f“,ª—LCEø,É,È,Ä,Ä,ç,éê,ÉA,±,ì'l,ª [GPU fRfA  
%·“x] ,ì'l,Æ^è'v,·,é,ÆCEx\_fCfAf\_fO f{fbfNfX,ªŽ©“@“l,É·Zl,³,è,ÄAó<μà-¾,ÆA'Á'è,ì GPU ,É<N,±,è,x  
,éfl[fo[fg,âáŠQ,đ-hŽ~,·,é,½,ß,É,Æ,ç,è,½^'u,ªŽl,³,è,Û,·B  
f : ,±,ì'l,É,í[fo[fg,ì%ŠúY'è,đŽg—p,·,é,±,Æ,đ,“Š©,ß,μ,Û,·B 'l,đ•ïX,·,éê,í\•ª,È'□^Ó,ª•K—v,Ä,·B

«»Ÿ, Ì NVIDIA GPU fRfA%«x, ðVfXfef€ fgfƐfC, É•Ž, μ, Ü, ·B

fVfXfef€i AGP ŠÖ~A<@"\i□î•ň,đŽi,μ,Ü,·□B



,±,lfZfNfVf#f",Á,íAfrf"fsf...[]f^,lf[]Cf"f{[]fh f`fbfvfZfbfg,lf[]fj[] ID ,Æ AGP <@"\,đŽ!,μ,Ü,[]B

,±,ìZfNfVfjf“,Á,íANVIDIA GPU ,ì AGP <@“\,ðŽì,μ,Û,·B

,±,lfZfNfVfjf",Á,íAfvfXfef€,ÁŽg—p%o"À"\,È AGP <@"\,ìŠT—v,đŽ!,μ,Û,·B ^ê—•\Ž!,³,ê,Ä,č,é€-Ú,íAfvfCf"f{[fh  
f`fbfvfZfbfg,Æ NVIDIA GPU ,É<α'É,ì AGP <@"\,Á,·B

,±,ìÿ'è,É,æ,èAfof%oftfBfbfNfX f[]fh,ìÅ'å AGP fCE[]fg,ðŽè"®,Å'²[]®,Å,«,Ü,·[]B

f[]f, : ,±,ìÿ'è,ðfVfXfef€[]¬,Å^À'S,Æ,³,é,l,æ,è[],'¬,È'l,É'²[]®,·,é,Æ[]AfVfXfef€,ª•s^À'è,É,È,é[]ê[]‡,ª, ,è,Ü,·[]B

,±,}f{fbfNfX,ðfjf“,É,·,é,Æ□AAGP Fast Writes (FW) ,ª—LCEø,É,È,è,Ü,·□B

,±,}f{fbfNfX,ðf}f“,É,·,é,Æ□AAGP Sideband Addressing (SBA) ,<sup>a</sup>—LCEø,É,È,è,Û,·□B

,±,lf{fbfNfX,ðfjf“,É,é,Æ□A2D fRf}f“fh fofbftf@ fLfffbfVf“fO,ª—LÆø,É,È,è,Û,·□B

,±,lfjvfVf#f“,đ'đ,.,é,Æ□Aflf...□[É“ü,ê,é,±,Æ,ª,Å,«,é-ç□^—□,ì AGP fojX—v<□,ì□Å'å□”,đ□\$Eä,Å,«,Ü,·□B



,±,lfjvfVf#f“,đ'ı'đ,,é,Æ□A-ç□^—□,ì AGP fofX—v<□,ì□Å'â□”,³vfXfef€É□Å“K,È'ı,É□Ý'è,³,è,Û,□B

,±,lfjvfVf#f“,đ'đ,.,é,ÆA-č^—,ì AGP fofX—v<,ìĀ'â”,đŽw'è,Ā,«,Ü,·B

,±,lfvfVf#f“,đNfŠfbfN,·é,ÆA,±,lfpfjf,ÅŽw'è,μ,½ AGP □Ý'è,đfefXfg,Å,«,Ü,·□B  
fefXfg,Å,□A'ì'đ,³,è,½□Ý'è,É^À'è□«,âfpftfH□[f}f“fX,ì-â'è,³,È,ç,©,Ç,κ,©,đ'²,x,Ü,·□B

fXf%ofCf\_,đhf%ofbfO,μ,Ä`È%º,lfpfH[f]f“fX,ìÝ’è,đ’l’đ,μDirect3D ,” ,æ,Ñ OpenGL  
fAfvfŠfP[fVf#“,ì•iŽ¿,đCEüã,³,¹,é,±,Æ,ª,Ä,«,Ü,·B

- **[fAfvfŠfP[fVf#“]** : ,±,ìÝ’è,đ’l’đ,·,é,ÆAfhf%ofCfo,í,·,x,Ä,lfAfvfŠfP[fVf#“—v< ,ÉCEμ-s,É],ç,Ü,·B
- **[Ä“K%º»]** : ,±,ìÝ’è,đ’l’đ,·,é,ÆAfAfvfŠfP[fVf#“,ì—v< ,ÆfpfH[f]f“fX,ìÄ“K,Èfof%of“fX,ª,Æ,ê,Ü,·B
- **[fAfOfCEfbfVfu]** : ,±,ìÝ’è,đ’l’đ,·,é,ÆAfAfvfŠfP[fVf#“ fpfH[f]f“fX,ªÄ,·,É,È,è,Ü,·B

,±,lfXf%ofCf\_,ðfhf%ofbfO,μ,ÄADirect3D,“,æ,N OpenGL fAfvfŠfP[fVf#f“,ÄŽg—  
p,³,è,èfAf“f fGfCfŠfAfX,lfCfxf<,ðY’è,Ä,«,Ü,·B **fAf“f fGfCfŠfAfX**,Æ,íA3D flfufWfFfNfg,ì  
%o,ÉŽžÚCE©,ç,è,é,ñ,‘,‘,‘,ìuŠK’iòóv,lfGftfFfNfg,ð’áC,‘,·,é<Zp,Ä,·B  
“A’èfAfvfŠfP[fVf#f“,É’í,μ,ÄAfAf“f fGfCfŠfAfX,ðS@’S,ÉfJt,É,·,é,±,Æ,àAÄ’âCEÀ,lfAf“f fGfCfŠfAfX,ðŽg—p,·,é,±  
,Æ,à,Ä,«,Ü,·B

- **[flft]** ,íA 3D fAfvfŠfP[fVf#f“,Ä,lfAf“f fGfCfŠfAfX,ð-³CEø,É,μ,Ü,·BfAfvfŠfP[fVf#f“,ÄÄ,·,lfpftfH[f]f“fX,ª•K—  
v,Éèè#è,íA,±,lfVfVfVf#f“,ð’í’ð,μ,Ä,³/4,³,çB
  - **[2x]** ,íA fAf“f fGfCfŠfAfX,ð 2x f,[]fh,Ä—LCEø,É,μ,Ü,·B,±,lf,[]fh,Ä,íA3D fAfvfŠfP[fVf#f“,ì  
%oæŽì,ÆfpftfH[f]f“fX,ªCEüà,μ,Ü,·B
  - **[Quincunx]** ,íAGeForce GPUftf@f~fŠ[,Ä“Ä<-Žæ”³/4ì,Ý,lfAf“f fGfCfŠfAfX<Zp,ªŽg—p,Ä,«,é,æ,ª  
,É,È,è,Ü,·BQuincunx fAf“f fGfCfŠfAfX,Ä,íA2x fAf“f fGfCfŠfAfX f,[]fh,Æ”~”™,lfpftfH[f]f“fX,ÄA’~“x,ì’x,ç 4x  
f,[]fh,Æ”~”™,ì%oæŽì,ª³/4,ç,è,Ü,·B
  - **[4x]** ,íA fAf“f fGfCfŠfAfX,ð 4x f,[]fh,Ä—LCEø,É,μ,Ü,·B,±,lf,[]fh,Ä,íA3D  
fAfvfŠfP[fVf#f“,Ä,%,oæŽì,ª³/4,ç,è,Ü,·,ªAfppftfH[f]f“fX,ì’½’á%o,μ,Ü,·B
  - **[4x]A9 f^fbfv fKfEfX]** ,íAfAf“f fGfCfŠfAfX,ðu4x]A9 f^fbfv (fKfEfX)[]vf,[]fh,Ä—LCEø,É,μ,Ü,·B,±  
,lf,[]fh,Ä,íA3D fAfvfŠfP[fVf#f“,ì%oæŽì,ªCEüà,μ,Ü,·,ªAfppftfH[f]f“fX,ª’½’á%o,·,éèè#è,ª, ,è,Ü,·B
- f[]f** , : fn[]fhfEjFfA,ì\$CEÀ,É,æ,Ä,Ä,íA’í’ð,Ä,«,È,çflfVfVf#f“,à, ,è,Ü,·B Ú×,É,Ä,ç,Ä,íANVIDIA ,)ft[]fU[]fY  
fKfCfh,ðŽQ[]Æ,μ,Ä,³/4,³,çB

,±,lfXf%ofCf\_,ðfhf%ofbfO,μ,ÄftfBf<f^,l^Ù•û□«ftfBf<f^fŠf“fO,lfcfx<,ðY’è,μ□A%œŽž,ðCEü□ã,³,¹,é,±,Æ,ª,Â,«.,Ü.,□B,±,lfjfvjVf#f“,ð—LCEø,É,.,é,Æ□A%œŽž,íCEü□ã,μ,Ü,.,ª□AfpftfH□[f]}f“fX,ª¹/²□’á%œ,μ,Ü.,□B

□ **[fjft]** ,í□A ^Ù•û□«ftfBf<f^fŠf“fO,ð-³CEø,É,μ,Ü.,□B

□ **[1x]** ,Ä,í□A □Ä□,lfjfvjVf#f“fX,ª¹/²,ç,ê,Ü.,□B

□ **[2x]** ,Ä,í□A %œŽž,íCEü□ã,μ,Ü,.,ª□AfpftfH□[f]}f“fX,ª¹/²□’á%œ,μ,Ü.,□B

□ **[4x]** ,Ä,í□A %œŽž,íCEü□ã,μ,Ü,.,ª□AfpftfH□[f]}f“fX,ª¹/²□’á%œ,μ,Ü.,□B

□ **[8x]** ,Ä,í□A □,%œŽž,ð³/⁄,ç,ê,Ü.,j

f□f, : fn□[fhfEfffA,ì□\$CEÀ,É,æ,Ä,Ä,í□A’ì’ð,Ä,«.,È,çlfjfvjVf#f“,à, ,è,Ü.,□B □Ú□×,É,Ä,ç,Ä,í□ANVIDIA ,lf□[fU□[fy fKfCfh,ðZQ□Æ,μ,Ä,,³/⁄,³,ç□B

Direct3D fAfvfŠfP[fVf#f",ÅĀ—L,}Šf#fĀfbfVf... fĀ[f#f,đ'!đ,Ā,«,Ü,·B ,±,}f}fVf#f",đ—LĀø,É,·é,ĀĀ%o,}ŠfXfg  
f{fbfNfX,í-³Āø,É,Ē,è,Ü,·B

fhf%ofCfo,É,æ,Á,Ä Direct3D fAfvfŠfP[fVf#f“,)fŠftfCEfbfVf... fCE[fq,ª•i[X,ª,è,é,æ,¼,É,µ,Ü,·B ,±,)fjfvfVf#f“,ð—  
LCEø,É,·,é,ÆA%º,ifŠfXfg f{fbfNfX,ª—LCEø,É,È,è,Ü,·B



,±,lfŠfXfg f{fbfNfX,Å,íAŠe%ø'œ"x,lfŠftfCEfbfVf... fCE[]fg,ðCEÂ•É,É•ï[]X,Å,«,Ü,·[]B

**[Šù'è]** ,Å,í[]AfAfvfŠfP[]fVf#f",lfŠftfCEfbfVf... fCE[]fg,žg—p,³,é,Ü,·[]B ,Ü,©,ì'l,ðŽw'è,·,é,Æ[]AfŠftfCEfbfVf... fCE[]fg,íftf·fXfNfŠ[]f" Direct3D fAfvfŠfP[]fVf#f",ì'l,É[]Ý'è,³,é,Ü,·[]B

fŠftfCEfbfVf... fCE[]fg,ð•ï[]X,·,é,É,í[]A^È%º,ìŽè[]#,É[]],ç,Ü,·[]B

1. [fŠftfCEfbfVf... fCE[]fg] —ñ,lfŠftfCEfbfVf... fCE[]fg,ð•ï[]X,·,é [%ø'œ"x] ,ì[]s,Å **[Šù'è]** ,ðfNfŠfbfN,μ,Ü,·[]B 'l,î^è—,ª•\Ž,³,é,Ü,·[]B
2. fŠftfCEfbfVf... fCE[]fg,ð'l'ð,μ,Ä **["K—p]** ,ðfNfŠfbfN,μ,Ü,·[]B

□,Žü"9□"—l^æ,ð'□•□,μ,Ä%œŽ,ð'N-¾,É,μ,Ü,·□B

f of b f e f Š [ , Æ f p p t f H [ f } f “ f X , Æ , ð ” ä — ! , É , æ , è “ d — ( [ Á “ i , ð ’ [ © , μ , Ü , · [ B

AC "dCE<sup>1</sup>,ÆfpftfH[f]f"fx,Æ,ì"ä-;É,æ,è"d-íÁ"i,ð<sup>2</sup>®,μ,Ü,·B

«Ÿg—p, ³,ê,Ä,ç,é“dŸ¹,ðŽ!,µ,Û,·B

«Ÿ, ð — íŒfxf, ÆfpftfH[f]f“fX, Æ, ð”ä — ¡, ðŽ, µ, Ü, ·B

«»Ÿ,ì["df«fxf<,đŽ,μ,Û,·B

,±,ì TV %œ-ÉfTfCfY,ìXf%ofCf\_,ðfhf%ofbfO,μ,ÄATV ,l%œ-ÉfTfCfY,ð'²@,Å,«,Ü,·B ,½,Æ,ì,îATV %œ-É,É•,çŽÈ,ª\ Ž,³,è,éèè#A,±,ìXf%ofCf\_,Ä TV %œ-É,ðŠg'â,μ,ÄŽÈ,ðÁ<Ž,Å,«,Ü,·B

f : %E'l,ÉY'è (fXf%ofCf\_,ð%E'l,Éfhf%ofbfO) ,·,é,ÆADVD ,ÉÅ“K,ÈY'è,É,È,è,Ü,·B



ffWf^f< fojCfuf%of“fX,Ä,íAjjf%o[•º%oð,Æjjf%o[“Z“x,ð\$CEä,µAfrfffiÄ¶,Ä-¾,é,‘N-¾,ÈfCf□□fW,ð•\CE»,Ä,«,Ü,-□B

Ät,É%of'œ (frfffl%œ'œ) ,ã^Ã,,È,éééé,è, ,è,Ü,·B fKf"f}'l,ð,,,:é,ÆA%œ'œ,ã-¾,é,,È,è,Ü,·B

,±,łpfłf<,íAjjfXf^f€%œ'œ%đ'œ"x,đ□□-/Žg—p,,:é<@"\,Å,:□B

,±,îfivfVf#f“,ðfNfŠfbfN,µ,ÄAf,[]fh•ÖWfGfŠfA,Å“ü—í,µ,½fjXf^f€ f,[]fh,ð []mfjXf^f€ f,[]fh[]n fŠfXfg,É'Ç%Á,µ,Ü,·[]B

,±,îfivfvf#f“,đfNfŠfbfN,µ,ÄA□mfJfXf^f€ f,□fh□n fŠfXfg,Å□;‘đ/•ï□X,µ,½fGf“fgfŠ,đ•ï□X,µ,Ü,·□B

,±,İfİvfVf#f“,đfNfŠfbfN,μ,ÄAflfXf^f}fCfY,μ,½f,□lfh,đf,□lfh•İXfGfŠfA,ÅfefXfg,μ,Ü,·□B,±  
,İfefXfg,İ'İ'đ,μ,½fffBfXfvfCfC,Åf,□lfh,İ□Y'è,μ□A□³,μ,□Y'è,³,è,À,ç,é,©,Ç,α,©EY□Ø,μ,Ü,·□B

,±,îfivfVf#f“,đfNfŠfbfN,µ,ÄA□mfJfXf^f€ f,□fh□n fŠfXfg,Å□;‘đ,µ,½fGf“fgfŠ,đ□œ<Ž,µ,Ü,·□B

,±,lf{fbfNfX,ð'!ð,;é,Æ□A'!ð,μ,½ffBfXfvfCEfC,É□A'É□í,ì Windows fffXfNfgfbfv f,□[fh,æ,è□¬,³,cf,□[fh,ð□Ý'è,Å,«,Ü,·□B ,±  
,ìCE<%oÉ□AfffBfXfvfCEfC<@"\,ÉŠi,Å,«□AfffBfXfvfCEfC,l%oÅŽ:fGfŠfA,ðŠg'â•Ž;μ,½,è□AfffXfNfgfbfv,Å%oñ"},·,é,±  
,Æ,ª,Å,«,Ü,·□B



fjXf^f}fCfY,μ,½•\Žif,□[fh,i%oj,i':,³ (.Ü,½,i•□,ifsfNfZf<□") ,đ²□©,μ,Ü,·□B

fjXf^f}fCfY,μ,½•\Žif,□[fh,ì□c,ì'•,³ (,Ü,½,í□,,³,ìsfNfZf<□") ,đ'²□©,μ,Ü,-□B

fjXf^f}fCfY,μ,½•\Žif,□[fh,ì□c,lfŠftfĀfbfVf... fĀ□[fg,đ'²□®,μ,Ü,·□B

fjXf^f}fCfY,μ,½•\Žif.[fh,i•\Ži,³,è,½fj%□□” (,¨,æ,Ñ□Abpp ,Ü,½,íŠefsfNfZf<“- ,½,è,ìfjfbfg□”) ,đ’²□@,μ,Ü,·□B

• Windows • \Z!f, [fh, i 1 , Ä, ð' l' ð, µ Af, [fh • Ö W— i ^ æ, Ä f X f ^ [fg f] f C f " fg, Æ, µ, Ä Ž g— p, µ, Ü, · B

«»ŸŽg—p,Å,«,éjffXf^f}fCfY,μ,½•\Žif,[]fh,đ`ê——•\Ži,μ,Ü,·[]B

CE»ŸŽg—p,Ā,«,é•\Ž!f,□[fh,Ā□A'!δ,μ,½fffBfXfvfCfC,ÉŠÖ~A,μ,½"A'è,ì•\Ž!fffofCfX,Ā□Y'è,Ā,«,é,à,ì,δ^è—•\Ž!,μ,Û,·,±,ì^è—,É,ì□A,±,lfffBfXfvfCfC,ĀŽA□Û,É•\Ž!,Ā,«,éf,□[fh□A,“,æ,Ñ □mWindows fffBfXfvfCfC fvf□fpfefB□Y'è□n fpf!f<,Ā□Y'è,Ā,«,é,±,ê,ç,ìf,□[fh,æ,è□-,³,ç□ê□†,à, ,éf,□[fh,ì,Y,aŠÛ,Û,ê,Ā,ç,Û,·□B

,±,ìf{fbfNfX,ð'ì'ð,,:é,Æ□ATV ,Åfrfffl,ìfRf"fef"fc,ð•\Ž!,:é□é□‡,ì□Å"K□Ý'è,ª%oÅ"\,Å,·□B



Œ»Ÿ,İfAfXfyfNfg"ä,đ^ŮŽ,·,éf,ff^,İf^fCf~f"fo,đ'®@,μ,Ů,·B

ClearView fffBfXfvfCEfCŸ'è,lfOf%oftfBfN,đ•\Ž!,μ,Ü,·B f,fff^ fCf[]fW,đfNfŠfbfN,μ,ÄAfhf%ofbfO,μ•\  
Ž!,i[]#''Ô,đÄ'²[]®,μ,Ü,·B



—D□æffBfXfvfCfC,Æ,μ,ÄŽg—p,·,éffBfXfvfCfC,đ'ı'đ,μ,Ü,·□B —D□æffBfXfvfCfC,Í□A•K—v,É%ž,¶□A□m—  
D□æffBfXfvfCfC,ıřŠftfCfbfVf...□n fXf%ofCf\_,đŽg—p,μ,ÄfŠftfCfbfVf...Ä,«,Ü,·□B

f}fEfX,Å—D□æffBfXfvfCfC,đ'!đ,μ,Ü,·□B fŠfjfCefbfVf...,·,é□é□#□ACE»□Ýfj□[f<,ª, ,éffBfXfvfCfC,ª—  
D□æffBfXfvfCfC,Æ,È,è,Ü,·□B

,±,lfXf%ofCf\_,đŽg—p,μ,Ä□A”ñ—D□æfffBfXfvfCfC,É’í,μ□A—D□æfffBfXfvfCfC,đfŠftfCfjbfVf...,·é%ñ□”,đŽw’è,μ,Ü,·□B

§ 1x ,í□A1 fTfCfNf<,Å 1 “xfffBfXfvfCfC,đfŠftfCfjbfVf...,³,è,Ü,·□B

§ 2x ,í□A1 fTfCfNf<,Å 2 “xfffBfXfvfCfC,đfŠftfCfjbfVf...,³,è,Ü,·□B”ñ—D□æfffBfXfvfCfC,í 1 fTfCfNf<,Å 1 “x,μ,©fŠftfCfjbfVf...,³,è,Ü,¹,ñ□B

§ 3x ,í□A1 fTfCfNf<,Å 1 “xfffBfXfvfCfC,đfŠftfCfjbfVf...,³,è,Ü,·□B



f p f t f H [ f ] f " f X f N f [ f b f N [ Y ' è . í [ A 3 D f A f v f Š f P [ [ f v f # f " , i Ž Ā [ s ' - " x , ð [ Y ' è , µ , Ü , . [ B



•W□€fNf□fbfN□Y'è,í□A2D fAfvfŠfP□[fVf#f“,ižÀ□s'¬“x,δ□Y'è,μ,Ü,·□B

,±,ì□uŠÔ,É^À^S,Æ□l,ç,é,é□Å^âfNf□bfN□Y^è,ðŒ^^è,μ,Û,·□B Œp^±"l,ÉŽÀ□s,·,é□é□#□A,±,±  
,ÅŒ^è,·,é□Å^âfNf□bfN□Y^è,í^Û,È,è□AfvfXfefè,ž©"®Œÿ□ofXfgfŒfX fefXfg,ð,Ç,l,æ,x,É□^—□,·,é,©,É^Ë^¶,μ,Û,·□B

fXfjpf" f,[]fh,Åf[]fo[]fCEfC,ð[]i[]-,Å,«,Ü,·[]B (fvfXfef€É,æ,Á,Ä,Í[]AfXfjpf" f,[]fh,ª—LCEø,É,È,Á,Ä,ç  
,é,Æf[]fo[]fCEfC,ð[]i[]-,Å,«,É,ç[]ê[]#,ª,è,Ü,·[]B,»,ì[]ê[]#[]A,±,ìfjfvjvfj#f",Å·ì[]X,Å,«,Ü,·[]B)

□u,±,łfsf",đ%oŸ,·□v,Æ,ç,ıfOf%oftfBfbfNfX,ı□Afsf",đ%oŸ,·,Æf]fbfvfAfbfv f□fjf...□[,əŠ],,±,Æ,đ^Ó-j,μ,Ä,ç,Ü,·□B  
%oŸ,·,ı,đŽ~,,ß,é,Æ□Af]fbfvfAfbfv f□fjf...□[,ıŽ©"©"ı,É•Â,¶□AfRf"fgf□□[ç· fpflç· fEfBf"fhfE,əftfH□[fjX,đŽ,,ı  
,Æ□A□Ä"xŠ],«,Ü,·□B

"C^Ó.lffBfXfvfCEfC fffofCfX,lfpf" fXfLfff""%øð'œ"x,ðžè"@,Å'1'ð,Å,«,Ü,·B fpf" fXfLfff""%øð'œ"x,ð'1'ð,·,é,ÆA%A"Å"  
,Èêê#Afhf%øfCfo,l"C^Ó,l%øð'œ"x,Åfpf" fXfLfff" f,[]fh,É,È,è,Ü,·B f[]f,: ,±,ìY'è,lfvfXfef€  
,ðÄ<N"®,·,é,Ü,Å•Úž,³,è,Ü,·B

f,jjf^ (fffBfXfvfCfC ffofCfX) ,afJfCfefBfu,l%oñ"],dfTf|[]fg,·,éèè#A,±,lf{fbfNfX,ð'ì'ð,μ,Û,·B f[]f,·: f,jjf^,afJfCfefBfu,l  
%oñ"],dfTf|[]fg,μ,È,çèè#A,±,lf{fbfNfX,ð'ì'ð,·,é,Æ[]A%oñ"]<@"\,ª=³Eø,É,È,è,Û,·B

,±,}f{fbfNfX,đ'ı'đ,·,é,Æ□AfAfvfšfP□[fvf#f",É,æ,è'ı'đ,³,è,é 3D fAfvfšfP□[fvf#f",ı^ù•ù□«□Y'è,đ•ı□X,Â,«,Ü,□B

fXf%ofCf\_,dfhf%ofbfO,μ,ÄADirect3D ,Æ OpenGL fNfAfvfŠfP[fVf#f“,lfNfHfŠfefB,ðŒüüä,·,éfpftfH[f]f“fXŸ’è  
(%oo,ìà-¾ŽQÆ) ,ð’l’ð,μ,Ü,·B

- **fAfvfŠfP[fVf#f“:** ,±,ìŸ’è,ðŽg,çAfhf%ofCfo,²fAfvfŠfP[fVf#f“,l,·,×,Ä,ì—v<ç,É³Šm,Éç],æ,æ,æ,É,μ,Ü,·B
- **fNfHfŠfefB:** ,±,lfHfHf·fgŸ’è,ðŽg,çAfvfŠfP[fVf#f“,ì—v<ç,ÆfpftfH[f]f“fX,ì^á,ç  
,ð²ç®,μAÄ,ìó’Ó,ÄŽÄs,μ,Ü,·B
- **fpftfH[f]f“fX:** ,±,ìŸ’è,ðŽg,çAÄ,lfAfvfŠfP[fVf#f“ fpftfH[f]f“fX,ðŽÄs,μ,Ü,·B



,±,lf{fbfNfX,đ'ı'đ,·,é,ÆAf\_fuf<fXfLfff",<sup>a</sup>—LCEø,É,È,è,Ü,·□B

§ f\_fuf<fXfLfff",í□Aftf< fXfNfŠ□[f",ìfrfffi,ÆfRf"fsf...□[f^ fQ□[f€,Å□Å,à—L—p,ÈfCf□□[fW fNfHfŠfefB,đ'á  
%øđ'œ"x,Å'â•□,ÉCEü□ä,Å,«,Ü,·□B

§ f\_fuf< fXfLfff",Å,í□Af,ffj^,ìfof"fh•□,đ 2 " {,É,·,é•K—v,<sup>a</sup>, ,è,Ü,·□B f\_fuf<fXfLfff"  
f,□[fh,<sup>a</sup>f,ffj^,ìCEÀŠE,đ'·,ı,½□é□#□A□,%øđ'œ"x,ÆfŠftfCEfbjVf... fCE□[fg—p,ìfhf%øfCfo,ÍŽ©“@“ı,É•W□€f,□[fh,É-  
B,è,Ü,·□B

,±,è,É,æ,èAftf|[]fg,³,è,é,·,×,Ä,ìF'²,ðŽ,Âfjfxf^f€ f,[]fh,ðA1 ,Â^Èä'Ç%Á,·,é,±,Æ,ª,Â,«,Û,·B

,±,è,É,æ,èAftf|[]fg,³,è,é,·,×,Ä,lfŠftfCEfbfVf... fCE[]fg,ðŽ[],ÁfjXf^f€ f,[]fh,ð[]A1 ,Â^È[]ä'Ç%oÁ,·,é,±,Æ,ª,Â,«,Ü,·[]B

f,fff^,ÉŽg—p,Á,«,é%œ'œ%đ'œ"x,ìY'è,đ•\Ž!,μ,Û,·B fXf%ofCf\_,đfhf%ofbfO,μ,ÄA^Ù,È,é%œ'œ  
%đ'œ"x,đ'l'đ,μ,Û,·B

Œ»Ÿ'İ'đ,³,ê,Ä,ç,é,ĴĴ^,İ%œ'œ%đ'œ"x,ÅŽg—p,Å,«,éĴĴ%Ÿ'è,đ•\Ž!,μ,Ü,·B fRf"fgf[f<,đfNfŠfbfN,μ,ÄA^Ù,È,éĴĴ  
%Ÿ'è,đ'đ,μ,Ü,·B

,±,è,Û,À,É"□¶,μ,ÄfffofCfX fhf%ofCfo,É,æ,èf□fO,³,è,½"ÁŽè,È NVIDIA GPU fCxf"fg,ð^è—•\Ž!,μ,Û,□B ,±  
.è,ç,lfCxf"fg,Í□Afcxf"fg f□fO frf...□[fA,À,à•\Ž!,À,«,Û,□B

OpenGL, Åf[]fo[]fCfC,ÉŽg—p,·,éfsfNfZf< ftfH[]f}fbfg,ðŽw'è,μ,Û,·[]B

▯ **fff%[] fCf“ffbfNfX f[]fo[]fCfC (8bpp)**: 8 frfbfg,lfpfCfbbfgf[]fo[]fCfC,ðŽg—p,·,é[]B

▯ **RGB f[]fo[]fCfC (RGB555 ftfH[]f}fbfg)**: 16 frfbfg (RGB555),lf[]fo[]fCfC,ðŽg—p,·,é[]B

▯ **fff%[] fCf“ffbfNfX (8bpp),Æ RGB555 ftfH[]f}fbfg**: fAfvfŠfP[]fvf#“,Å 8 frfbfg fpfCfbbfg,Û,½,Í 16 frfbfg (RGB555) f[]fo[]fCfC,l,ç,ì,ç,©,ðŽg—p,Å,«,Û,·[]B

**f[]f,[]Ff[]fo[]fCfC,Í[]Afif“f{[]fh fOf%ftfBfbfNfX f[]f,š,ð'[]Y,·,é•K—v,ª, ,è,Û,·[]B,Û,½[]A%ð'œ“x,É,æ,Å,Ä,ífXfefCfl•\ Z;ðŽg—p,Å,«,É,ç[]é[]#ª, ,è,Û,·[]B f[]fo[]fCfC<@“\,ÉfAfNfZfX,Å,«,É,ç[]é[]#[]A %ð'œ“x,Û,½,Í[]F'²,ð[]-,³,ç'l,É,·,é,ÆfAfNfZfX,Å,«,Û,·[]B**

fAf`f`fGfCfŠfAfVfX[]s,)fKf`f}[]C[]³,ð—LCEø,É,μ,Û,·[]B  
fXf€[]fY,È[]s,ðfCf`f\_Šf`fO,·,é[]é[]#[]AfKf`f}[]C[]³,μ,½fAf`f`fGfCfŠfAfVfX[]s,ª[]o—f f f o f C f X, i [] F ' 2 < @ "\, i •ªŽU, ð [] ^ —  
[] , μ, Û, · [] B



,±,lfVfXfef€„đf}fXf^,Æ,μ,Û,·□B ,±,lfVfVf#f“,ª—LCEø,È□è□#□AfOf%oftfBfbfNfX fj□[fh,í□AftfCE□[f€  
f□fbfN“~Šú□M□t,đ□¶□□-,·,éf}fXf^,Æ,μ,ÄŽg—p,³,è,Û,·□B



—\$%º,èfGfbfW ,±,lfjvfVf#f“,ª—LCEø,Èè#A—\$,¿%º,ª,èfGfbfW,ª“~ŠúCEŸo,ÉŽg—p,ª,è,Û,·B

“Šú'x%o,, (us) ,±,lfvfVf#f” ,af}fXf^ f,[]fh,ĀŽg—p,³,è,é[]ê[]#[]AftjCE[]f€ f[]bfN  
fj[]fh,[]A“Šúfpf<fX,ð[]¶[]→, ,é,Û,Ā'Ò,ĀŽžŠÔ (f}fCfNf[]Zfjf“fh) ,ðŽw'è,μ,Û,·[]B

fŠftfCEfbfVf... (Hz) f}fXf^ f,[]fh,)è[]#[]A,±,è,lfOf%oftfBfbfNfX fj[]fh,²[]o—í“~Šúfpf<fX,ð[]¶[]¬,·,éfCE[]fg (Hz) ,Å,·[]B



□Ú'±fefXfg ,±.)lfjvfVf#f",í□A"~ŠúfljvfVf#f",đĀŸ□ō,μ□Ú'±,đĀŸ□ø,μ,Ü,·□B Ā»□Ÿ,)jXfe□[f^fX,đ•\Ži,μ,Ü,·□B

,±,è,ðŽg—p,μ,Ä□AffXfNfgfbfv,ð•\Ž!,:éfffBfXfvfCfC fyfA,ð'l'ð,μ,Ü,:□B'æ 1 ,lfAfCfRf",lfvf%ofCf}fŠ  
fffBfXfvfCfC,ðŽ!,μ□A'æ 2 ,lfAfCfRf",lfZjfj"f\_fŠ fffBfXfvfCfC,ðŽ!,μ,Ü,·□B,±,è,l□A^è□□,ÉŽg—p,Ä,«,éfffBfXfvfCfC  
fyfA,·,x,Ä,lfSfxfg,Ä,·□B



,±,ê,đŽg—p,μ,ÄAffXfNfgfbfv,ì•\Ži•û-@,đ'!đ,μ,Ü,·Bn\Single Display',íAffXfNfgfbfv,đfvfŠfCf}fŠ  
fffBfXfvfCfC,Ä,ì,Y•\Ži,μ,Ü,·Bn\DualView',íA2 ,Ä,ífffBfXfvfCfC,Ä 1 ,Ä,,Ä^Ü,É,éfffXfNfgfbfv,đ•\Ži,μ,Ü,·Bn\  
n\Clone',íA2 ,Ä,ífffBfXfvfCfC,Ä"- ,ífffXfNfgfbfv,đ•;□»μ,Ü,·Bn\Horizontal Span',íA2 ,Ä,ífffBfXfvfCfC,ÄA1  
,Ä,ífffXfNfgfbfv,đ□...•½,É□L,ì,μ,Ä•\Ži,μ,Ü,·Bn\Vertical Span',íA2 ,Ä,ífffBfXfvfCfC,ÄA1  
,Ä,ífffXfNfgfbfv,đ□,¼,É□L,ì,μ,Ä•\Ži,μ,Ü,·B

,±,lf,ff^,afTf|□[fg,Å,«,È,cf,□[fh,δ%oB,·

fjXf^f€ f,□[fh,i,Y•\Z!,.é

fffXfNfgfbfv fl[]fo[]f%ofbvf,ð[]AnView fffBfXfvfCfC'S'i,É[]...•½,Ü,½,í[],'¼fXfpf" f,[]fh,Å—LCEø,É,μ,Ü,·[]B\ \n  
nfffXfNfgfbfv fl[]fo[]f%ofbvf,Å,í[]A•j[]",lfffBfXfvfCfC,ðŽg—p,μ,Å 1  
,Å,lfffXfNfgfbfv,ðfXfpf"f,[]fh,ÅCE`[]¬,·,é[]ê[]#[]AfffBfXfvfCfC fCf[][]fW,i`è•",ð—x,lfffBfXfvfCfC,ifGfbfW%o^,ç  
,ÉCEj,è•Ö,μ•\Z;í,Å,«,Ü,·[]B

□...•½Xfjpf“ f.□[fh,ÅffXfNfgfbfv f□[fo□[f%fbfv,đŽg—p,;é□ê□#□Afl□[fo□[f%fbfv,;é□...•½sfNfZf<□”,đ“Á’è,μ,Ü,;□B

□, '¼fXfpf“ f.□[fh,ÅffXfNfgfbfv fl□[fo□[f%fbfv,đŽg—p, :.é□ê□#□Afl□[fo□[f%fbfv, :.é□, '¼fsfNfZf<□”,đ“Á'è,μ,Ú,·□B

—\’afufCEf”fh,ðfffBfXfvfCEfC’S’i,É—LCEø,É, : ,é□B\ñ\ñ—\’afufCEf”fh,í□Afvf□fWfFfNf^ fx□[fX,lfffBfXfvfCEfC,ÅŽg—  
p, : ,é,½,ß,É□YCEv,³,é,Ä, ”,è□A•i□”,lfvf□fWfFfNf^ fx□[fX,lfffofCfX,© ,ç,í□o—í,²fí□[fo□[f%ofbfv, : ,é□Ú,É”□¶, : ,é<P“x,ì  
%oe<ç,ð•â□³,μ,Ä□A1 ,Ä,ìfV□[f€fCEfX,ÉfffBfXfvfCEfC fCf□□[fW,ðCE` □¬,μ,Ú,·□B

—\’afufCEf”fh,ÉŠÜ,pffBfXfvfCEfC fGfbfW,đ’l’đ, ,é,É,í□A%œ-Ê,lfGfbfW%œ^,č,É, ,é-î^óf{f^f” ,đNfŠfbfN,μ,Û, .□B



□...•½ffBfXfvfCfC fGfbfW, ©,ç□A—\‘afufCef“fh,ÅŽg—p, : ,éfsfNfZf<□”,đŽw’è,μ,Û,·□B

fufCEf"fh,μ,½...•½ffBfXfvfCEfC fGfbfW%oo^,ç,ÉA...•½f<f} 'l,ð"±"ü,·,é,½,β,ÉŽg—p,·,é•İ%oo»"x,lj□□[f<flft,ð"Á'è,μ,Ü,· (0  
□` 255 fsfNfZf<,l"í"à)□B\n\n'ã,«,çf□□[f<flft,ðŽg—p,·,é,Æ□AfffBfXfvfCEfC fGfbfW%oo^,ç,ÉCE©,!,éfV□[fç,ªCE,□-  
,μ□AfffBfXfvfCEfC,l□@□‡,ªŠÉ'f%oo»³,è,Ü,·,ª□A'½□%ooæŽ¿,ª¹,È,í,è,é%oÁ"\□«ª, ,è,Ü,·□B

fufCEf"fh,μ,½...•½ffBfXfvfCEfC,i-Ú•Wf{f}'l,đ"A'è,μ,Û, (0 □` 255 fsfNfZf<,l"í"í"à)□B□"Žš,ª'â,«,¢  
,Û,Ç□AfufCEf"fh,μ,½fGfbfW,Å,İfCf□□[fW,ª-¾,é,,È,è,Û,□B

□, '¼ffBfXfvfCEfC fGfbfW, ©, ç□A—\³fufCEf“fh, ĀŽg—p, , éfsfNfZf<□”, ðŽw'è, μ, Ū, .□B

fufCEf"fh,μ,½,¼ffBfXfvfCEfC fGfbfW%oo^,ç,ÉA,¼f·f}l,ð"±"ü,·,é,½,ß,ÉŽg—p,·,é•i%oo»"x,lf[]f·fjft,ð"A'è,μ,Ü,· (0 □`  
255 fsfNfZf<,l"i`i"à)B\ñ'n'â,«,çf[]f·fjft,ðŽg—p,·,é,ÆAfffBfXfvfCEfC fGfbfW%oo^,ç,ÉCE©,!,efV[]f€,ªCE,□-  
,μAfffBfXfvfCEfC,l[]@[]‡,ªŠÉ'f%oo»³,è,Ü,·,ªA'½[]%ooæŽ¿,ª¹,È,í,è,é%oÁ"\[]«,ª, ,è,Ü,·□B

fufCEf"fh,μ,½,¼ffBfXfvfCEfC,ì-Ú•Wf<f}'l,ð"Á'è,μ,Ü,· (0 255 fsfNfZf<,ì"í"à)B"Žš,ª'ã,«,¢  
,Ü,ÇAfufCEf"fh,μ,½fGfbfW,Á,İCf[fW,ª-¼,é,,È,è,Ü,·B

f\_fCfAf□fO f{fbfNfX, ©, ç□AffXfNfgfbfv f□[fo□[f%o]fbfv, Æ—\`³fufCef“fh□Ý`è, ðftf@fCf<, ÉfGfNfXf]□[fg, μ, Û, □B

ftf@fCf:, ©, ç□AfffXfNfgfbfv fl□[fo□[f%ofbvf,Æ—\’afufCEf”fh□Y’è,ðfCf”f□[fg,μ□Af\_fCfAf□fO f{fbfNfX,É,±  
.ê,ç,l□Y’è,ð”z”u,μ,U,.□B



f~fLjVf"fo fCEf"f\_f%o fTf|[]fg,đŽA[]s,μ,Ü,·B'1'đ,μ,½ftf< fXfNfŠ[]f" fffofCfX,É[]Aftf< fXfNfŠ[]f" f~fLj,ª•\Ži,³,è,Ä,č  
.É,č[]é[]#[]A,±,lfjfvfVf+f",đ'1'đ,μ,Ü,·B

□,%øδ'œ"xfffXfNfgfbfv fXfP□[fŠf"fo,ð—LŒø,Û,½,í—³Œø,É,μ,Û,·□B□,%øδ'œ"xfffXfNfgfbfv  
fXfP□[fŠf"fo,É,æ,è□AffXfNfgfbfv,l%øæŽ¿,³Œù□ä,μ,Û,·□B

fXf%ofCf\_,δ^Ú“®,μ,Ä□ADirect3D ,Æ OpenGL fAfvfŠfP□[fVf†f“,lfNfHfŠfefB,ðCEü□ä,·,éfpftfH□[f}f“fX□Ý’è (%oo²,ì□à-  
¾ŽQ□Æ) ,ð‘l’ð,μ,Ü,·□B

□ **fpftfH□[f}f“fX**,Á,í□AfvfŠfP□[fVf†f“,É,Æ,Á,Ä□Å“K,lfpftfH□[f}f“fX,ª“¾,ç,è,Ü,·□B

□ **fof%of“fX**,íffftfHf<fg□Ý’è,Á□AfvfŠfP□[fVf†f“,É,Æ,Á,Ä□Å“K,ÈfNfHfŠfefB,ÆfpftfH□[f}f“fX,ª“¾,ç,è,Ü,·□B

□ **fNfHfŠfefB**,Á,í□AfvfŠfP□[fVf†f“,É,Æ,Á,Ä□Å“K,lfNfHfŠfefB,ª“¾,ç,è,Ü,·□B

#fNfŠfbfN,·,é,Æ□AfOf%oftfBfbfNfX f□[fh,đ'²□@,μ,Ä□Å“KftfCE□[f€,ì“~Šú□Ý'è,ð□s,π^è~A,ì“à•”fefXfg,āŽÀ□s,³,è,Ü,·□B  
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