

ELSA WINman (ELSA ȳ'è), ĩfwf<fv

ELSA WINman (ELSA ȳ'è), ĩ AELSA fOf%oftfBfbfN f{[fh, ÆELSA Windows fhf
%ofCfo, đf, fĵf^, É“K ȳ, ȳ, 1, é, 1/2, ß, ĩfvf[Of%of€ , Å, · B

Ú, μ, ç, ±, Æ, ĩ AŽŸ, ĩL[f[fh, đfNfŠfbfN, ·, é, © Afwf<fv, ĩ ð^ø, đfNfŠfbfN, μ, Å, , ȳ/4, ȳ, ç B

WINman <N“ ® f_CfAf fO

f, fĵf^, ĩfvf[fpfefB

fOf%oftfBfbfN f, [fh, ĩ C ȳ Afĵf%o[ffvfX/%ođ'œ“x/f^fCf~f“fO, ĩ'2 ȳ ®

fOf%oftfBfbfN f, [fh/f^fCf~f“fO

ELSA WINman (ELSA 𐀀𐀁)

ELSA WINman (ELSA 𐀀𐀁), 𐀀AELSA fOf%oftfBfbfN f{[fh,Æ ELSA Windows fhf

%ofCfo,đf,fjf^,É“K𐀀𐀁,𐀁,é,½,β,lfvf[Of%of€,Ä,·𐀀B

[%œ-Ê,lfvf[fpfefB],lf_fCfAf[fo,đŠj,č,Ä,č,È,_,ê,îA,±,±,đfNfŠfbfN,μ,Ä,,¾,¾,č 𐀀B
,Ü,½“~f_fCfAf[fo,l'†,Ä[WINman]f_fCfAf[fo,đŠj,č,Ä,č,È,č,Æ,«,îA^É%œ,lf^fu,đfNfŠfbfN,μ,Ä,-
¾,¾,č 𐀀B ELSA 設定

[fXfL[f€](ff[f^ fzfbfg)

^É'O,lfOf%oftfBfbfN f,[fh,đ•Ú'¶,μ,Ä,č,é,éê±[A,»,lf,[fh,É∅,è'Ö,!,é,±,Æ,ª,Ä,«,Ü,·𐀀B

[f,fjf^]

Žg—p,·,é,f,fjf^,đ“ü—í,μ,Ü,·𐀀B[·ïX...],đfNfŠfbfN,μA“ü—í,μ,½'l,đŠm“F,μ,Ä,,¾,¾,č 𐀀B

𐀀Ä,à□d—v,È,ì,îA,f,fjf^,îÄ'â□...·½'-□,žü“g□” (kHz),Ä,·(f,fjf^ ff[f^,ìCÉ^èŽQ□Æ)𐀀B

[fjf%□[ffvfX]

256□F,©32768□F,©·K—v,Éffjf%□[ffvfX,đ'l'đ,μ,Ü,·𐀀B□Ü,μ,č,±,Æ,îAfff

%□[ffvfX,đfNfŠfbfN,μ,Ä,,¾,¾,č 𐀀B

[%œŽ<%œđ'œ“x]/[fo[f` fff<%œđ'œ“x]

1024 x 768,È,Ç□A·K—v,È%œ-Ê%œđ'œ“x,đfNfŠfbfN,μ,Ü,·𐀀B□Ü,μ,č,±,Æ,îA

%œđ'œ“x,đfNfŠfbfN,μ,Ä,,¾,¾,č 𐀀B

[fŠftfÆfbfVf... fC□[fg]

75 Hz,È,Ç□A·K—v,ÉfŠftfÆfbfVf... fC□[fg,đ'l'đ,μ,Ü,·𐀀B□Ü,μ,č,±,Æ,îA fŠftfÆfbfVf...

fC□[fg,đŽQ□Æ,μ,Ä,,¾,¾,č 𐀀B

[□Ü□x...],đfNfŠfbfN,·,é,Æ□A,æ,è³Šm,È²□®,đ□s,±,Æ,ª,Ä,«,Ü,·𐀀B

[OK]/[“K—p]

fefXfg fpf^□[f“,ª^À'è,μ,½,ç□A,Ü,· 𐀀𐀁“è—

e,đ•Ú'¶,μ□AWindows,đ□Ä·N“®,μ,Ä,©,ç□AfffBfXfvfCfC,lfTfCfY,Æ^É'u,ì²□®,đŽn,β,Ü,·𐀀B

fffBfXfvfCfC,lfTfCfY,Æ^É'u,đf,fjf^,Ä²□®,μ,Ä,Ý,Ä,,¾,¾,č 𐀀B,±,Ü,,č,©,È,č□é□±,îA WINman (ELSA

𐀀𐀁),Äf,fjf^ f^fCf~f“fo,đ²□®,·,é,±,Æ,à,Ä,«,Ü,·𐀀B

Žg—p,·,é,f,fjf^□“<y,Nf,fjf^,ì•Ä,Ñ,ì 𐀀𐀁 (f}f<f fxNfŠ□[f“Žž,ì,Ý):

1,Ä^È□ä,ìELSAfOf%oftfBfbfNfXf{[fh,đfRf“fsf...□[f^,ÉfCf“fXfg□[f<,¾,¾,è,Ä,č

fOf%o0ftfBfbfN f,[]fh,ìC³[]Afjf%o[]ffvfX/%o0đ'œ"x/f^fCf~f"fO,ì'²[]®

•K—v,Èffj%o[]ffvfX[]A%o0đ'œ"x[]AfŠftfCefbfVf... fC[]fg,đ"ü—í,·,é,é,±,Æ,Å,f,jjf^
f^fCf~f"fO,³[]¶[]¬,³,ê,Ü,·[]B,±,ìf^fCf~f"fO,í[]V,μ,çfOf%o0ftfBfbfN f,[]fh,Æ,μ,Ä•Ú'¶,Å,«,Ü,·[]B

,» ,ê,É,í[]Af,jjf^,Åžg—p,Å,«,é[]Å'â[]...•½'-[]„Žü"g[]" (kHz),ª•ª,©,Á,Ä,ç,é,±,Æ,ª•K—v,Å,·(f,jjf^
ff[]f^,ìC^'èŽQ[]Æ)[]B

,Ü, ,í•K—v,Èffj%o[]ffvfX ('Êí[]A8 bpp = 256[]F),đ'l'đ,μ,Ü,·[]Bffj%o[]ffvfX,ª'â,«,-
,È,é,Æ[]A[]Å'âfsjNfZf< fNf[]fbfN,ÍŽ©"®"Í,ÉC , ,è,Ü,·[]B•K—v,È%o0đ'œ"x,đ'²[]®,μ,Ü,·[]B
%o0đ'œ"x,í[]Af,jjf^ fTfCfY,ª 15",ì,Æ,«,í 800 x 600[]A16",©,ç 18",ì,Æ,«,í 1024 x
768[]A19") ^È[]ã,ì,Æ,«,í 1280 x 1024,ª'ê"Ê"Í,Å,·[]B

•K—v,ÈŠftfCefbfVf... fC[]fg,đ Hz,Å"ü—í,μ,Ü,·[]B
"wCei,ì,Ü,Æ,ñ,Ç,ª[]•,ìfAfvfŠfP[]fVf#f",ì[]ê[]#[]A60 Hz,Å[]\•ª,Å,·[]BWindows,È,Ç"wCei,ì-
¾,é,çfAfvfŠfP[]fVf#f",í[]AfffBfXfvfCfC,ì,ç,Å,«,đ-h,®,½,ß,É[]Å'á75 Hz^È[]ã,ÅŽÀ[]s,μ,Ä,-
,¾,³,ç[]B'Êí[]A[]Å"K,ÈŠftfCefbfVf... fC[]fg,í85 Hz,Å,·[]B100 Hz,đ%oz,ì,Ä,à-Ú,ÉC©,ì,½
%o0ü'P,ª,È,ç,ì,ª•[]'Ê,Å,·[]B

fefXfg fpf^[]f",ª^À'è,μ,½,ç[]A,Ü, ,[]Ý'è"à—
e,đ•Ú'¶,μ[]AWindows,đ[]Ä<N"®,μ,Ä,©,ç[]AfffBfXfvfCfC,ìTfCfY,Æ^Ê'u,ì'²[]®,đŽn,ß,Ü,·[]B
fffBfXfvfCfC,ìTfCfY,Æ^Ê'u,đf,jjf^,Å'²[]®,μ,Ä,Ý,Ä,,¾,³,ç[]B,¶,Ü,,ç,©,È,ç[]ê[]#,í[]A[WINman
(ELSA[]Ý'è)],Åf,jjf^ f^fCf~f"fO,đ'²[]®,·,é,±,Æ,à,Å,«,Ü,·[]B

fefXfg fXfNfŠ[f“

WINman (ELSAŸ'è),Å,ÍA[V,μ,çf,jjf^

f^fCf~f“fO,ª•Ù'Ÿ,ª,è,é'O,ÉA[V,μ,çf^fCf~f“fO,ªf,jjf^,É“K,μ,Ä,ç,é,©,Ç,κ,©,ªf`fFbfN,ª,è,Ü,·B
,»;,½,β,ÉA,í,,©,ÈŽŽŠÔ,Å,·,ªfefXfg fXfNfŠ[f“ ,ª•Ž!,ª,è,Ü,·B

fefXfg fXfNfŠ[f“ ,ª•Ž!,ª,è,Ä,àAfGfXfP[fv fL[(Esc),ð%oŸ,·,±,Æ,Å,ç,Å,Å,àA,·,±,Æ,ª,Å,«,Ü,·B
ŽŸ,ÉAfefXfg fpf^ [f“ ,É-à'è,ª,È,ç,©,Ç,κ,©[q,Ë,ç,è,Ü,·B

fefXfg fpf^ [f“ ,ª^À'è,μ,½,çA,Ü,·Ÿ'è“à—

e,ð•Ù'Ÿ,μAWindows,ðÄ·N“®,μ,Ä,©,çAfffBfXfvfÇfC,ìTfCfY,Æ^Ê'u,ì'²® ,ðŽn,β,Ü,·B
fffBfXfvfÇfC,ìTfCfY,Æ^Ê'u,ðf,jjf^ ,Å'²® ,μ,Ä,Ý,Ä,,¾,ª,çB,κ,Ü,,ç,©,È,çé[#,ÍA[WINman
(ELSAŸ'è)],Åf,jjf^ f^fCf~f“fO,ð'²®,·,é,±,Æ,à,Å,«,Ü,·B

fOf%oftfBfbfN f,[]fh(frfffif,[]fh)[]Af,fff^ f^fCf~f"fo

fOf%oftfBfbfN f,[]fh(,Ü,½,ífrfffif,[]fh),í[]A, ,éflf%o[]lfffvfX[]A%ođ'œ"x[]Af,fff^
f^fCf~f"fo[]A,»,ì'¼,·,×,Ä,ì" @[]if,[]fh,ÉŠÖ~A,·,éfefNfjffj< ff[]f^,đ<L[]q,·,éff[]f^ fZfbfg,Å,·[]B

f,fff^ f^fCf~f"fo,í[]Af,fff^[]M[]t,ì^èžž" @[]i,đ'è<` ,·,éff[]f^ fZfbfg,Å,·[]B
Šî-{ "I,É,ífsfNfZf< fNf[]fbfN[]A...·½'-[]_Žü"q[]"[]Aftf[]f€,ìfŠftf[]fbfVf... f[]f[]fg,Å,·[]B
[]...·½[],'¼·\Ž;ŽžŠÔ[]A'O·"f[]f`[]A"~Šúfpf<fX(Sync)[]A[]Eã·"f[]f` ,Æ,ç,æ[]¾—
t,Å,æ,è[]³Šm,É<L[]q,³,è,Ü,·[]B

•\Ž;ŽžŠÔ,Æ,í[]A"dŽqfr[]f€,æ%æ-Ê,ÉfsfNfZf<,đ·`%æ,·,éžžŠÔ,ì,±,Æ,Å,·[]B,»,ì[]Eã[]A"dŽqfr[]f€
,đ[]Å[]%o,ì^Ê'u,É-ß,·,É,ì^è'è,ìžžŠÔ,đ—v,µ,Ü,·[]B,±,ìfuf%of"fNžžŠÔ,í[]A'O·"f[]f` (·\
Ž;ŽžŠÔ,æ[]i,í,Á,Ä,©,ç"~Šúfpf<fX,æžn,Ü,é,Ü,Å,ìžžŠÔ)[]A"~Šúfpf<fX("~Šúfpf<fX,ìžžŠÔ)[]A,,"æ,
Ñ[]Eã·"f[]f` ("~Šúfpf<fX,æ[]i,í,Á,Ä,©,çžž,ì·\Ž;ŽžŠÔ,æžn,Ü,é,Ü,Å,ìžžŠÔ),Å[]\[]¬,³,è,Ü,·[]B,±,è,í[]...
·½[],'¼—¼·û,ìf^fCf~f"fo,É,Å,ç,Ä"~—ì,Å,·[]B

fjf%o[fffvfX/ bpp

fjf%o[fffvfX,ì'P^Ê,íbpp,©A[F",Á, ,ç,í,³,ê,Ü,·B
 bpp (Bits Per Pixel),ÍŠefsfnfZf<,ÉŽg—p,Á,«,éfrffl f[f,fŠ,ì—e—Ê,Á,·B,½,Æ,ì,îA8
 bpp,ìê#AŠefsfnfZf<,Í8frfbfg,ðŽg—p,µA256 (= 2,ì8æ)F,ðŠi"[A·Žì,Á,«,Ü,·B,±
 ,ì",ìA(%æ-Êä,ì·Žì,É\•ª,ÈfsfnfZf<,ª, ,éê#)"~Žž,É·Žì,Á,«,éF,ì",ì,±,Æ,Á,·B

Windows ,ìê#A'Êí,í32768F(= 15 bpp)^Èä,ªŽg—p,³,ê,Ü,·B,±,ìF",ªA·\
 Žì,ì'‰ŽÀ"x,Æf[f,fŠÁ"i/·Žì'—"x,Æ,ìŠÖEW,ÁÁ—Ç,ì'Á<ì"_,¼,©,ç,Á,·B[F",ª,È,ç
 ,ÆAfCf[fW,ìfnfìfŠfB,ª'á‰,µA½,,ìê#AfffBfUfŠf"fo,ªK—v,É,È,è,Ü,·B[F",ª½,ç
 ,ÆAf[f,fŠ,ìÁ"i,ª,ìA'Êí,ìWindows fhf%ofCfo,ì—"x,ªx,,È,èA‰ð'œ"x,ð‰,°,é,©A"~,¶
 ‰ð'œ"x,Á,àfŠftfCfbfVf... fC[f,ð‰,°,È,ç,Æ·Žì,Á,«,È,,È,è,Ü,·B
 ^ê"Ê"ì,É,ÍŽÿ,ìÝ'è,ð,,§,µ,Ü,·B
 256F(8 bpp): 'Êí,ìfìftfBfX fAfvfŠfP[fVf#"[i3D,ðŽg—p,µ,È,ç,Æ,«j
 32768,Ü,½,í65536F(15,Ü,½,í16 bpp),ìfnfCjff%o[: frffl,Ü,½,í3DfAfvfŠfP[fVf#"
 1670-œF(24,Ü,½,í32 bpp),ìftf<ff%o[: , "x,È‰æ'œ^—ü, ~

^ê"Ê"ì,Èfjf%o[fffvfX

F,ì"	bpp,Á·\ ,í,µ,½fjf %o[fffvfX	fRf"fg
2	1	"[·Af,fmfNf
16	4	VGA 640x480,È,Ç,ìpfCfbfg
256	8	fpfCfbfgA^ê"Ê"ì,È,‰ð'œ" xfOf%oftfBfbfN f{[fh,ì·W€f,[fh
32768	15	fnfCjff%o[5 + 5 + 5 bpg
65536	16	fnfCjff%o[5 + 6 + 5 bpg
1670-œ	24,Ü,½,í32	ftf<ff%o[8 + 8 + 8 bpg

4,Ü,½,í8 bpp,ìê#A[F,ì",ìfpfCfbfg(RAM DACjff%o[fe[fuf<),ðŽg,Á,Á·\
 Žì,³,è,éŽÀÛ,ìF,É·İŠ,³,ê,Ü,·B,½,Æ,ì,îA,±,ìfpfCfbfg,Á262144F,ìfGf"fgfŠ(6 bpg,ìê#),à1670-
 œF,ìfGf"fgfŠ(8 bpg,ìê#),ì^—,ª‰Á"·,·B

bpg ,Æ bpp,đ□-“¯,μ,È,ç,æ,κ,É,μ,Ä,,¾,¾,ç□Bbpg,Í□ARGB□F•ª”z,²,Æ,ìjff%o□[ffvfX,đŽ!,μ,Û,·(bpg =
Bits Per Gun)□B,½,Æ,!,î□A16 bppfnfCjJf%o□[,ìê□#□A5 + 6 + 5 bpg,Í 3□F•ª”z,ìÔ□A—î□A□Â,ÉŽg—
p,Â,«,éfrfbfg□”,Â,·□B

fXfNfŠ[f“ fTfCfY A%ŮŽ</fo[f` fff< fXfNfŠ[f“ ,ì%Ůđ‘œ“x

fXfNfŠ[f“ fTfCfY

f, fff^ fTfCfY, ì'I, í%ŮA<ÉüŠÇ(CRT), ì'íŠpü, ìCEö]fTfCfY, Å, ·B%ŮŽ<•\Ž|—
 ì^æ, ì'íŠpüfTfCfY, æ, è, à, µ'â, «, È'I, Å, ·B^ê"É"l, È'I, íŽŸ, ì•\, ì, Æ, ", è, Å, ·B

íŠpü, ìCEö]f	íŠpü, ìCEö]f	, ", " , æ, » , ì	^ê"É"l, È%Ůđ‘œ“x
TfCfY (inch)	TfCfY (cm)	%ŮŽ<—	ì^æ (cm)
-----	-----	-----	-----
14"	35,5	27 x 20	800 x 600
17"	43	32 x 24	1024 x 768
20"	51	38 x 29	1280 x 1024

u"v, ífCf" f` A1 inch = 2.54 cm B

%ŮŽ<%Ůđ‘œ“x

%Ůđ‘œ“x, Æ, íA•\Ž|, Å, «, éfsfNfZf<“, ì, ±, Æ, Å, ·B, ½, Æ, !, íA1024 x 768, ìê#A...•½, ìŠe s, É
 1024fsfNfZf<, a•\Ž|, ³, êA, '¼, ìŠe—ñ, É768fsfNfZf<, a•\Ž|, ³, è, Ü, ·B, µ, ½, a, Å, Ä%Ůæ—
 Êã, ì'fsfNfZf<“, í1024 x 768 = 786432, É, È, è, Ü, ·B

'ÉíA13", Ü, Å, ìf, fff^ , ì%Ůđ‘œ“x, í 640 x 480, ÉA14", ©, ç15", ìf, fff^ , ì%Ůđ‘œ“x, í800 x 600, ÉA16", ©, ç
 18", ìf, fff^ , ì%Ůđ‘œ“x, í1024 x 768, ÉA19" ^Êã, ìf, fff^ , ì%Ůđ‘œ“x, í1280 x
 1024, ÉfZfbfg, ³, è, Ü, ·B, ½, ¾, µAÅ, %Ůđ‘œ“x, ìfhfbfg fsfbf` fTfCfY, âÅâ...•½- , Žü" g", È, Ç, ì
 —v^ö, É, æ, Å, Ä^Ü, È, è, Ü, ·B

%Ůđ‘œ“x, ìdpi (Dot Per Inch), Å, à•\Ž|, Å, «, Ü, ·B

fo[f` fff<%Ůđ‘œ“x (fXfNfŠ[f“ , ìpf“)

fo[f` fff< fXfNfŠ[f“ , AfNfefBfu, É, È, Á, Ä, ç, é, ÆAWindows, ìì<Æ—ì^æ, í•\Ž|, ³, è, Ä, ç, é
 %ŮŽ<fXfNfŠ[f“ , æ, è, à'â, «, , È, è, Ü, ·(, Å, Ü, èAfo[f` fff<%Ůđ‘œ“x, í%ŮŽ<%Ůđ‘œ“x, æ, è, à'â, «, -
 , È, é) B

%oB,ê,½—ì^æ,í[Af}fEfX fj□[f]f<,³fXfNfŠ□[f“ ,ì«ŠE,É—^,é,ÆŒ© ,l,é,æ,α,É,È,è,Ü,·□B,» ,ìŒă
%oÂŽ<fXfNfŠ□[f“ ,ì“à—e,³fXfNf□□[f<,³,ê,Ü,·□B,±,ì“®□i,đ,Â□ufpf“□v,Æ,àŒ¾,ç,Ü,·□B

fsfNfZf< fNf[]bfN/MHz

fsfNfZf< fNf[]bfN,Ü,½,ÍfsfNfZf< fCE[]fg,ÍMHz(f[]Kfwf<fc),Å•\,í,³,ê,Ü,·[]B,±,ì'ì"í'í'É[]í10,©,ç250
MHz,Å,·[]B,½,Æ,ì,í[]A%ø'œ"x 1024 x 768[]A75 Hz,Å,í[]A79 MHz,ÍfsfNfZf< fNf[]bfN,ª•K—
v,Å,·[]BfsfNfZf< fNf[]bfN,ì'ì,í[]A1•b,É[]',«[]ž,Ü,ê,éfsfNfZf<[]",ð•S-œ'P^Ê,Åž!,μ,Ü,·[]B

□...•½'-□, Žü"g□"/kHz

□...•½'-□, Žü"g□"□A, ,È,í,ž□A•îĚüŽü"g□",ì'è'è'P^Ê,í kHz,Å,·□B,±,ì'l,ì"í"í"í'Êí 30,©,ç110
kHz,Å,·□B,½,Æ,!,í□A%øđ'œ"x 1024 x 768□A75 Hz,ìê±□A60 kHz,ì...•½'-□, Žü"g□",ª•K—
v,Å,·□B,±,ì'l,í□AfsfNfZf< f%ofCf",ª' ,«□ž,Ü,ê,é'¬,³□A,Â,Ü,è□A"dŽqfr□[f€,ª%oA<ÉüŠÇ,ì†,đ-^•b
%o½□ç%oñ□¶,©,ç%oE,É"®,,ì,©,đŽ!,μ,Ü,·□B

fŠftfCEfbfVf... fCE[]fg/Hz

ftfCE[]f€ fŠftfCEfbfVf...

fCE[]fg,·,È,í,¿,¼•ÎCEüŽü”g” ,ì’è’P^Ê,ÍAHZ,Â,·B’Ê[]A’l,ì”í’í,í60,©,ç100

Hz,Â,·BHz,Æ,ÍHertz(fwf,fc),ì—^aCEê,Â,·B75 Hz,È,ç[]A-^•b75,ìftfCE[]f€,^a•\Ž|,³,ê,é,Æ,ç,±,±,Æ,Â,·B

”wCEi,ì,Ù,Æ,ñ,Ç,^a•,ìfAfvfŠfP[]fVf#f” ,ì[]ê[]#[]A60 Hz,Â[]•^a,Â,·B,æ,è”wCEi,ì-³/₄,é,çWindows,ì,æ,±,ÈfAfvfŠfP[]fVf#f” ,ì[]ê[]#[]A,¿,ç,Â,«,ð-hŽ~·,·,é,½,ß,É[]A[]Á’á75 Hz^È[]ä,ÂŽÀ[]s,µ,Ä,-³/₄,³,ç[]B’Ê[]í[]A[]Á”K,ÈfŠftfCEfbfVf... fCE[]fg,í85 Hz,Â,·BfŠftfCEfbfVf... fCE[]fg,^a100 Hz,ð%øz,ì,Ä,à-Ú,ÁŠm”F,Â,«,é%øü’P,ì, ,è,Ü,¹,ñ[]B

’Ê[]í,ìfmf”fCf”f^[]fCE[]fX” @[]ì,Â,Í[]AftfCE[]f€,ìfŠftfCEfbfVf...

fCE[]fg,í,¼•ÎCEüŽü”g” ,Æ”~,¶,Â,·B

’á[]...•½’-[],Žü”g” ,Â,à,ìfŠftfCEfbfVf... fCE[]fg,ð^ó[]Ú•t,~,é,½,ß,ÉfCf”f^[]fCE[]fX fffBfXfvfCEfC,^a%øß<Ž,É,æ,—p,ç,ç,è,Ü,µ,½[]B,±,ìf,[]f[]h,Â,Í[]AŠeftfCE[]f€,^a2•^aŠ,,,³,è,Ü,·B[]Á[]%ø,ì”¼•^a,ìftfCE[]f€,Á<ð[]”f%øfCf” ,^a•`%øæ,³,è[]A1f%øfCf”fV•^afVftfg,µ,ÄŠi[]” ,ìf%øfCf” ,^a•`%øæ,³,è,Ü,·B,µ,½,^a,Á,Ä,¼•ÎCEüŽü”g” ,ìftfCE[]f€ fŠftfCEfbfVf... fCE[]fg,ì” {,É,È,è,Ü,·B,±,ì•\Ž|Žè-@,Í[]AfefCEfr,ÉŽg,í,è,Ä,ç,Ä[]AIBM 8514/Afrffffi fAf_fvf^,É,à[]ì—p,³,è,Ä,ç,Ü,·B,½,³/₄,µ[]A•\Ž|•í^Ê,^aç,ì,ìfmf”fCf”f^[]fCE[]fX f,[]f[]h,ì•ù,Â,·B

ftfCE[]f€ fŠftfCEfbfVf... fCE[]fg,íf,fjf^,ð[]IŠÔ[]HŠw”l,ÉCE©,½[]ê[]#[]A[]d—v,Â,·B75Hz,ð%ø^a%øñ,éfŠftfCEfbfVf... fCE[]fg,â[]AfCf”f^[]fCE[]fX,ìŽg—p,Í[]IŠÔ[]HŠw”l,É[]D,Ü,µ,,È,ç,Æ,³,è,Ä,ç,Ü,·B[]iftfŠfbfj[][,^a-Ú—§,¿,Ü,·j,à,¿,è,ñ[]IŠÔ[]HŠw”l,É,Í[]A•úŽÈ[]ü,^aç,È,ç,±,Æ,â[]Af,fjf^ fTfCfY,~,æ,Ñfhfbfg fsfbf` ,É”K,µ,½%øø’œ”x,È,Ç,ì”Á[]<,à[]ì—¶,³,è,Ü,·B

f}f<f`fXfNfŠ[]f“

fRf“fsf...[]f^,Éf}f<f`fXfNfŠ[]f““í%ž,ìELSAfOf
%oftfBfbfNfXf{[]fh,â•;[]“fCf“fXfg[]f<,³,ê,Ä,“ ,è[]A,³,ç,Éf}f<f`fXfNfŠ[]f““í%žfhf
%ofCfo,âfCf“fXfg[]f<,³,ê,Ä,ç,ê,î[]A•;[]“ ,ìf,ffj^ ,đŽg—
p,μ,ÄWindows,đ•;[]“fXfNfŠ[]f“ (f}f<f`fXfNfŠ[]f“),ĂŽg,κ,±,Æ,â,Ă,«,Û,·[]B
Windows 95<y,ÑNT[]ă,Ă,í[]A“~^ê,ìfOf%oftfBfbfN f,[]fh,Ă[]A“~ ,¶—e—
Ê,ì[]f,fŠ,đŽ[],Ă,½[]A“~“™ ,ìELSAf{[]fh,Ăf}f<f`fXfNfŠ[]f“ŠĂ<<,đ[]\’z%Ă“\,Ă,·[]BWindows
98<y,ÑWindows NT 5.0,É,“ ,ç,Ä,í[]AOSŽ©’ì,â^Û,È,éf^fCfv,ìfOf
%oftfBfbfNfXf{[]fhšÔ,Ă,ìf}f<f`fXfNfŠ[]f“ ,đfTf[]f[]fg,·,é—\’è,Ă,·[]B

f}f<f`fXfNfŠ[]f“ ,đŽg—p,·,é[]Û,É,í[]ADirect3D,â[]AOpenGL,ìfAfvfŠfP[]fVf+f“,É’½[]-
,ì[]\$EÀ,â[]¶,¶,Û,·[]B<ì’ì“ì,É,í[]Afn[]fhfEfFfA fAfNfZf%ofCE[]fVf+f“,í^ê-±-Û,ìfOf
%oftfBfbfNfXf{[]fh’κ,Ă,μ,©[]s,í,ê,È,ç[]A,à,μ,,ìftf<%œ-Ê,ĂŽÀ[]s,μ,½,Æ,«,μ,©[],’-
%œ»,³,ê,È,ç[]A,È,Ç,Ă,·[]B

fEfCf“fhfE,ì[]\$Eä,âf,ffj^ ,ì[]±”Ô,ì•ï[]X,đ[]s,κ,É,í[]A ELSA WINman (ELSA[]Ý’è) ,đŽg—p,μ,Ä,,¾,³,ç[]B

ftfHf“fg fTfCfY

Windows, ÅŽg—p, ·, éftfHf“fg fTfCfY, í² @ %oÅ”\, Å, · BftfHf“fg fTfCfY, í A800x600, Ü, Å, ì%ođ‘œ“x, Å, í 96dpi (□¬) □A1024x768^È□ã, ì%ođ‘œ“x, Å, í 120dpi (‘â), ¢• □’ÊŽg—p, ¢, ê, Ü, · □B

f, fff^ ff[]f^, iC^'è

ELSA fOf%oftfBfbfN f{[]fh, ðf, fff^, É"K[]#, ³, ¹, é, É, í[]Af, fff^" @[]), ìff[]f^, Æ"í^í, ðC^'è, :, é, ±, Æ, ³, K—
 v, Å, ·[]B
 , ±, ±, Å, í[]Af, fff^, ì[]Å'â[]... ·½'—[], Žü" g[]" (kHz), ³"Á, É[]d—v, Å, ·[]B, ±
 , ì[]ãCÈÀ, ð', :, é, Æ[]A[]Å^«, ì[]ê[]f, fff^, ÉCÈ[]á, ð, «, ½, :, ±, Æ, ³, , è, Ü, ·[]B

f, fff^, ìf[][]fj[][]Af, fff^, ì@Ží-¼

'É[]í[]Af[][]fj[][], "æ, ÑC^—¼, ìf, fff^, ì"w-Ê, É, , è, Ü, :, ³[]A, È, ç[]ê[]#, ìf, fff^ f} fff... fAf<, ðŽQ[]Æ, µ, Ä, -
 , ¾, ³, ç[]B

Cö[]f, fff^ fTfCfY

f, fff^ fTfCfY, ì'l, í[]A%oA<É[]üŠÇ(CRT), ì'ÍŠp[]ü, ìCö[]ìTfCfY, Å, ·[]B, ±, è, í[]A%oAŽ<·Ž|—
 ì^æ, ì'ÍŠp[]ü, ìTfCfY, æ, è, à[], µ'â, «, È'l, Å, ·[]B ê"É"l, È'l, í[]A14" (35.5 cm)[]A17" (43 cm) []A, Ü, ½, í20" (51
 cm), Å, ·[]B<L[]t[]u"[]v, ìfCf"f` (2.54 cm), ð·\, µ, Ü, ·[]B

[]... ·½'—[], Žü" g[]", ì"í^í (kHz)[]A
 [], ¼fŠftfCfBfVf... fC[][]fg, ì"í^í (Hz)

[]Å'â, "æ, Ñ[]Å'â, ì[]... ·½'—[], Žü" g[]", ÆfŠftfCfBfVf... fC[][]fg, í[]A, "Žè<, ìf, fff^ f} fff...
 fAf<, É<L[]Ú, ³, è, Ä, ç, Ü, ·[]B
 , ±, ±, Å, í[]Af, fff^, ì[]Å'â[]... ·½'—[], Žü" g[]" (kHz), ³"Á, É[]d—v, Å, ·[]B, ±
 , ì[]ãCÈÀ, ð', :, é, Æ[]A[]Å^«, ì[]ê[]f, fff^, ÉCÈ[]á, ð, «, ½, :, ±, Æ, ³, , è, Ü, ·[]B, »; ì'¼, ì'l, ³C^, Ü, ç, È, ç[]ê[]#[]Af
 [f[], ì, Ü, Ü, É, µ, Ä, "ç, Ä, ©, Ü, ç, Ü, ¹, ñ[]B

f, fff^, ìfvf[]fpfefB, iC^'è

f, fff^, ìfvf[]fpfefB, ðC^'è, :, é, É, í[]AZŽ, ÉŽ!, ·, ç, , Å, ©, ì·û-@, ³, , è, Ü, ·[]B

f, fff^ f} fff... fAf<:

f, fff^, ì<Z[]pŽd—l, í[]Af, fff^, É·t' @, :, éf} fff... fAf<, É<L[]Ú, ³, è, Ä, ç, Ü, ·[]B

f, fjjf^ f}fjjf...fAf<

ELSA fOf%oftfBfbfN f{ [fh, ðf, fjjf^, ÉÅ“K, Èó‘Ô, Å“K†, ³, ¹, é, ½, ß, ÉAZÿ, ÉŽ!, ·ff [f^, ðf, fjjf^, ìf}fjjf... fAf<, Å‘T, μ, Ä,, ¾, ³, çB

f, fjjf^ f [f] [Af, fjjf^, ì<@Ží-¼ AfCf“f` ,Ü, ½, ìfZf“f` ‘P^Ê, ì‘íŠpü, ìœö ìf, fjjf^ fTfCY (= fCf“f` ,Ü, ½, ìfZf“f` ‘P^Ê, ìCRT, ì‘íŠpüüfTfCY) AkHz‘P^Ê, ìÅ‘á, “, æ, ÑÅ‘â... •½’- , Žü”g” (= ... •½•îœüŽü”g” = ‘- , f [fg] AHZ‘P^Ê, ìÅ‘á, “, æ, ÑÅ‘â, ¼ftf [f€fŠftfCbVf... f [fg (= , ¼•îœüŽü”g”)B

, ±, ±, Å, í Af, fjjf^, ì<—e Å‘â... •½’- , Žü”g” (kHz), ²“Á, É d—v, Å, ·B, ± , ìăœÀ, ð’ , !, é, Æ A Å^«, ìê†f, fjjf^, Éœ ìá, ð, «, ½, ·, ±, Æ, ², , è, Ü, ·B

WINman.MON

ELSA f,fjf^<L□qftf@fCf<WINman.MON,ÉŽg—p,·,éf,fjf^,ª<“,ª,Á,Ä,ç,ê,Î□A,»±
,©,ç“®□ì”íí,ª•ª,©,è,Ü,·□B,±,ìftf@fCf<,É,Í□Af|fsf...f%□[,Èf,fjf^,ìŽâ,È“Á□«,Æ□\$CEÀ,ª<L
%□,ª,è,Ä,ç,Ü,·□B

,±,ìASCIIfefLfxfg ftf@fCf<,É,Íf,fjf^,ìff□[f^,ª<L□q,ª,è,Ä,ç,Ü,·□B,»ì<L□q,ìfGf“fgfŠ,ÍŽŸ,ì,Æ,“,è,Á,·□B
f,fjf^,ìf□□[f□□Af,fjf^,ì<@Ží-¼□AfCf“f`'P^Ê,ì'ÍŠp□ü,ìCEö□ìf,fjf^
fTfCfY□Akhz'P^Ê,ì□Á'á,“,æ,Ñ□Á'â□...•½'-□,Žü”g□”□AHz'P^Ê,ì□Á'á,“,æ,Ñ□Á'â□,¼ftfCE□[f€
fŠftfCEfbvf... fCE□[fg□Af~fŠ'P^Ê,ìfsfNfZf< fTfCfY/fhfbfg fsfbf` □B

,±,ìftf@fCf<,Á,Íf,fjf^,ì<L□q,Í—á,ì,ìŽŸ,ì,æ,ᄡ,É,È,è,Ü,·□B
ELSA, GDM-17E40, 17", 29-82kHz, 50-150Hz, 0.26mm

VESA VDI f, f, f ^ < L q f t f @ f C f <

VDIF, í, f, f ^ Ž d — l, ð < L q, , é, ½, ß, ì f t f @ f C f < Ć Ž ©, ð ' è ` , , é VESA < K Š i, Ā, . BVDIF f t f @ f C f <, É, í % œ —
É, ì ' Í Š p ü f T f C f Y, È, Ç, ì, f, f, f ^ " Á < , â A A ' á < — e ... • ½ ' — , Ž ü " g " (kHz), È, Ç, ì, f, f, f ^, ì " ® ì " í ^ í, É, Ā, ç
, Ā, ì f f [f ^ , ð Š Ü, Ü, ê A, » , ì [P R E A D J U S T E D _ T I M I N G] , ì f Z f N f V f f " , É, Í Š Y " — , , é, f, f, f ^ , É " K, μ, ½ f, f, f ^
f ^ f C f ~ f " f O, É, Ā, ç, Ā, ì f f [f ^ f Z f b f g, ð < L q, , é, Ā, ç, Ü, . B

VDIF f t f @ f C f <, ð Ž g — p, , é, Ā f A f, f, f ^ f f [f ^ , ì • Ű ' ¶ A ^ ø " n, μ A A — ~ — p, ð, Ā, «, Ü, . B

*. VDA VDIF, í A S C I I f t f @ f C f <, È, ì, Ā A • W ¶ € , ì f e f L f X f g f G f f f B f ^ , ð Ž g, Ā, Ā ì — , , æ, Ñ C C , , é, ±
, Ā, ð, Ā, «, Ü, . B

*. VDB VDIF, ì f o f C f i f Š f R [f h f t f @ f C f <, È, ì, Ā A " Á Ž è, È f t f g f E f f A, ¾, , Ā Ž g — p, , é, Ü, . B
W I N m a n (E L S A ¶ Ý " è) , í * . V D A

VDIF f t f @ f C f <, ì " Ç, Ý Ž æ, è, Ā ¶ ' , « ¶ Ž, Ý, ð, Ā, «, Ü, . B W I N m a n, ð f t f @ f C f <, ð ¶ ' , « ¶ Ž, b, Ā, «, í A W I N m a n, É Š Ö
Ć W , , é ¶ € — Ú, ¾, , ð < L " ü, , é, Ü, . B W I N m a n, Ā ì — , , é, ½ f t f @ f C f <, ð ' ¼, ì f t f g f E f f A, ð Ž g —
p, , é ê ¶ A u = ¶ v < L ¶ t, ì % E, ì ó — " , É A • s ' «, μ, ½ ¶ ^ ñ, ð f e f L f X f g f G f f f B f ^ , ð Ž g, Ā, Ā < L " ü, , é, ±
, Ā, ð • K — v, Ā, . B

*. VDA VDIF f t f @ f C f <, í A Ž Ý, É Ž ! , , ç, , Ā, © , ì f Z f N f V f f " , Ā ì — , , é, Ā, ç, Ü, . B

[VERSION]

VESA < K Š i, ì f o [f W f f " " Ő ¶ B

[MONITOR_DESCRIPTION]:

Manufacturer = f, f, f ^ f [f j [[A M o d e l N u m b e r = f, f, f ^ , ì < Ž í — ¼ A C R T S i z e = % œ —
É, ì ' Í Š p ü f T f C f Y, È, Ç, ì ^ è " É " I, È, f, f, f ^ < L q B

[OPERATIONAL_LIMITS]:

MinHorFrequency = ¶ Á ' á ... • ½ ' — , Ž ü " g " ¶ A M a x H o r F r e q u e n c y = ¶ Á ' á ... • ½ ' —
¶ , Ž ü " g " ¶ A M i n V e r F r e q u e n c y = ¶ Á ' á , ¼ f Š f t f Ć f b f V f ... f Ć [f g ¶ A M a x V e r F r e q u e n c y =
¶ Á ' á , ¼ f Š f t f Ć f b f V f ... f Ć [f g, È, Ç, ì, f, f, f ^, ì " ® ì " í ^ í B

[PREADJUSTED_TIMING]:

PreadjustedTimingName = f ^ f C f ~ f " f O — ¼ A H o r P i x e l / V e r P i x e l = X / Y • Ű Ć ü, ì
% œ ð ' œ " x A H o r F r e q u e n c y = ¶ ... • ½ ' — , Ž ü " g " ¶ A V e r F r e q u e n c y = ¶ , ¼ f Š f t f Ć f b f V f ...

fCE[]fg[]APixelClock = fsfNfZf< fNf[]fbfN fCE[]fg[]ATotalTime = ŽžŠÔ[]‡CEv[]AAddrTime = •\
Ž!ŽžŠÔ[]ABlankStart = •\Ž!,Žn,Ü,Á,Ä,©,çfuf%of“fLf“fO,Žn,Ü,é,Ü,Â,ìŽžŠÔ[]ABlankTime = fuf
%of“fLf“fOŽžŠÔ[]ASyncStart = •\Ž!,Žn,Ü,Á,Ä,©,ç“Šúfpf<fX,Žn,Ü,é,Ü,Â,ìŽžŠÔ[]ASyncTime =
“Šúfpf<fX,ìŽ[]±ŠúŠÔ,È,Ç,ìf,fjf^ f^fCf~f“fO,ìff[]f^ fZfbfg[]B

VESA VDI F f, f j f ^ < L q f t f @ f C f < , i " Ç , Ý Ž æ , è

ELSA fOf%oftfBfbfN f{[]fh, ðf, f j f ^ , É " K ð † , ³ , ¹ , é , ½ , ß , É [] Af, f j f ^ " @ [] , ì f f [] [f ^ , Æ " í ^ í , ð Ç È ^ ' è , , , é , ± , Æ , ² • K — v , Å , · [] B Ž g — p f , f j f ^ , É Š Y " — , , é VESA VDI F f, f j f ^ < L q f t f @ f C f < (* . VDA) , ² , , è , Ì [] A , » , ì f t f @ f C f < , ð Ž g — p , µ , Ä , , ¾ , ³ , ç [] B , » , ì ' ¼ , ì • ù — @ , Ì [] Af, f j f ^ f f [] [f ^ , Ì Ç È ^ ' è , Æ , ç , æ Ç È [] o , µ , Å [] à — ¾ , ³ , è , Ä , ç , Ü , · [] B

[WINman (ELSA[]'è)], Ì [VESA VDI F f, f j f ^ < L q f t f @ f C f < , ð " Ç , Ý Ž æ , é], ì f _ f C f A f [] f O , Å [] A , Ü , , • K — v , È f j f %oo [] [f f f v f X (' Ê [] í [] A8 b p p = 256 [] F) , ð ' I ' ð , µ , Ü , · [] B f j f %oo [] [f f f v f X , ² , , ç , Æ [] A ' I ' ð , Å , « , é f , f j f ^ f ^ f C f ~ f " f O , Ì ' I , Í Ž © " @ " I , É [] ¬ , ³ , , È , è , Ü , · [] B Ž Y , É • K — v , È f , f j f ^ f ^ f C f ~ f " f O , ð ' I ' ð , µ , Ü , · [] B [] Å [] %oo , Ì 2 , Å , Ì ' I , Í X , Æ Y , Ì %oo ð ' œ " x ([] ... • ½ , Æ [] , ¼ , Ì %oo ð ' œ " x) , ð • \ , í , µ , Ü , · [] B %oo ð ' œ " x , Ì f , f j f ^ f t f C f Y , ² 15 " , Ü , Å , Ì f , f j f ^ , É , Í 800 x 600 [] A 16 " , © , ç 18 " , Ü , Å , Ì f , f j f ^ , É , Í 1024 x 768 [] A 19 " ^ È [] ä , Ì f , f j f ^ , É , Í 1280 x 1024 , ² • [] ' È , Å , · [] B Ž Y , Ì ' I , Ì f t f Ç [] [f € , Ì f Š t f Ç f b f v f ... f Ç [] [f g (f t f Ç [] [f € / • b) , ð H z ' P ^ Ê , Å • \ , í , µ , Ä , ç , Ü , · [] B " w Ç È , Ì , Ü , Æ , ñ , Ç , ² • , Ì f A f v f Š f P [] [f v f † " , Ì [] è [] † [] A 60 H z , Å [] \ • ² , Å , · [] B , æ , è " w Ç È , Ì — ¾ , é , ç Windows , Ì , æ , æ , È f A f v f Š f P [] [f v f † " , Ì [] è [] † [] A , ç , ç , Å , « , ð — h Ž ~ , , , é , ½ , ß , É [] A [] Á ' á 75 H z ^ È [] ä , Å Ž À [] s , µ , Ä , - , ¾ , ³ , ç [] B ' È [] í [] A [] Å " K , È f Š t f Ç f b f v f ... f Ç [] [f g , Í 85 H z , Å , · [] B f Š t f Ç f b f v f ... f Ç [] [f g , ² 100 H z , ð %oo z , Ì , Ä , à — Ú , Å Š m " F , Å , « , é %oo ü ' P , Í , , è , Ü , ¹ , ñ [] B — ² Ç È è [] u i [] v , " , æ , Ñ [] u n i [] v , Í [] A , » , è , ¼ , è f C f " f ^ [] [f Ç È [] [f X , " , æ , Ñ f m f " f C f " f ^ [] [f Ç È [] [f X , ð • \ , í , µ , Ä , ç , Ü , · [] B k H z , Ì ' I , Í ... • ½ ' — [] , Ž ü " g [] " , ð • \ , í , µ , Ü , · [] B , ± , è , ² f , f j f ^ , Ì [] Å ' å ... • ½ ' — [] , Ž ü " g [] " , ð ' ' , Ì , Ä , Í , ç , , Ü , ¹ , ñ (VDI F f t f @ f C f < , Å ' ' , Ì , é , ± , Æ , Í , , è , Ü , ¹ , ñ) [] B M H z , Ì ' I , Ì f s f N f Z f < f N f [] f b f N , ð • \ , í , µ , Ü , · [] B f O f %o f t f B f b f N f { [] [f h , Í [] A , » , Ì f s f N f Z f < f N f [] f b f N , ð ¶ [] ¬ , Å , « , é , ± , Æ , ² • K — v , Å , · (W I N m a n , ² f ^ f f b f N , µ , Ü , ·) [] B

f.fjf^ f^fCf~f"fo,ð VESA VDIF ftj@fCf<,Æ,μ,Ä•Û'¶,.,é

[WINman (ELSA ¶'è)],lf_fCfA fO[VESA VDIF f.fjf^<Lqftf@fCf<,Æ,μ,Ä•Û'¶],Ä,íA V,μ,çf.fjf^
f^fCf~f"fo,ª VESA VDIF f.fjf^<Lqftf@fCf<(*.VDA),É•Û'¶,³,è,Û,·B

,±,±,Ä,íA Windows,íV,μ,çfOf%oftBfbfN f,¶fh,É,íØ,è'Ö,í,è,Û,¹,ñB

VDIF,íA f.fjf^ "Á«,ð<Lq,.,é,½,ß,lf¶[f^CE'Ž®,ð'è<`.,,éVESA<KŠi,Ä,·BVDIFftj@fCf<,É,í%æ-
É,í'špüfTfCfY,È,Ç,lf.fjf^ "Á«,âA A'â<—e...•½'-¶,Žü"gp"(kHz),È,Ç,lf.fjf^,ì"®"í^í,É,Ä,ç
,Ä,lf¶[f^,ªSÜ,Û,èA,»],ì[PREADJUSTED_TIMING],lfZfNfvf¶",É,ÍŠY"-.,,é,f.fjf^,É"K,μ,½f.fjf^
f^fCf~f"fo,É,Ä,ç,Ä,lf¶[f^ fZfbfg,ª<Lq,³,è,Ä,ç,Û,·B
VDIFftj@fCf<,ðŽg—p,.,,é,ÆA f.fjf^ ff¶[f^,ì•Û'¶A^ø"n,μA A~—p,ª,Ä,«,Û,·B

[WINman (ELSA ¶'è)],íA V<KVDIFftj@fCf<—
p,lfef"fvfCE¶[fg,ð¶¶—,μ,Û,·B WINTM,Ä,í,.,x,Ä,í¶€—Ú,ª"ü—í,³,è,é,í,¯,Ä,È,¶Aftj@fCf<,ð~—
p,.,,é,ì,É¶"Ç,Ýžž,Ý,.,é•K—v,ì,.,é¶€—Ú,¾,¯,Ä,·Bftj@fCf<,ð'¼,lfvf¶Of%of€,ÄŽg—
p,.,,éê¶A'¼,í¶€—Ú,à"ü—í,μ,È,¯,è,î,È,è,Û,¹,ñB¶L¶[f¶¶fh,ª,.,,é,ì,É¶A u=¶v<L¶t,ì%oE'α
,ª<ó",ìó'Ö,Ä,.,è,íA•s'«.,μ,½¶î•ñ,ð<L'ü,μ,È,¯,è,î,È,è,Û,¹,ñB*.VDA VDIF,í¶f^,È
ASCIIftj@fCf<,È,ì,ÄA^È¶ã,ì¶<Æ,í•W¶€,lfefLfxfg fGfffBf^,Äs,í,Û,·B
WINman,í,.,x,Ä,lf.fjf^ f^fCf~f"fo,É'í,μ,ÄV<Kftj@fCf<,ð¶¶—,μ,Û,·B"^^êf.fjf^,É•i¶",lf.fjf^
f^fCf~f"fo,ª®.,μA,».,è,ç,ð,Ð,Æ,Ä,É,.,éê¶¶AfeLfxfg
fGfffBf^,ðŽg,Ä,ÄA'¼,lfj@fCf<,ì[PREADJUSTED_TIMING]fZfNfvf¶",ðA¶%,lfj@fCf<,ì¶,í,è,É'Ç
%oÄ,μ,È,¯,è,î,È,è,Û,¹,ñB

VDIFftj@fCf<-¼

VDIFftj@fCf<,ìA¶%,ì 3•¶Žš,lf.fjf^ f¶¶[f¶¶[-¼,ÄA'±, 5,Ä,ì•¶Žš,Û,½,í¶"Žš,lf.fjf^,ì<@Ží-
¼,Ä,·Bftj@fCf<-¼,ìŠg'£Žq,í.VDA,É,μ,Ä,,¾,³,ç¶B"ü—í,³,è,½fpx-
¼,íA,Ä,«.,è,lfj@fCf<[fffBfxFN,Ä,È,fn¶fh
fffBfxFN,ÉŽw'è,μ,Û,·Bftj@fCf<[fffBfxFN,ÉŽw'è,.,,é,ÆA•Û'¶,É,©,È,è',çŽžŠÔ,ð—v,μ,Û,·B

CEö¶lf.fjf^ ftfCfY

f.fjf^ ftfCfY,ì'í,íA%oA<ÉüšÇ(CRT),ì'špü,ìCEö¶lfTfCfY,Ä,·B,±,è,íA%oÄŽ<•Ž!—
ì^æ,ì'špüfTfCfY,æ,è,à¶,μ'â,«.,È'í,Ä,·B"è^É"í,È'í,íA14" (35.5 cm)¶A17" (43 cm) ¶A20" (51 cm)
,Ä,·B<L¶t¶u"v,lfCf" f` (2.54 cm),ì,±,Æ,Ä,·Bfvf¶Of%of€,ªŽg—p,.,,é,ì,lfCf" f` ,ì'í,¾,¯,Ä,·,ªA,±
,ì'í,ðCE^,ß,é,ì,È¶A'špü,lfTfCfY,ðfZf" f` ,Ä•\,í,μ,ÄA%oÄŽ<%oæ-É—

î^æ, ðfzf" f^, Å' a' è, µ, ½, Ý, Ä, à, æ, ç, Å, µ, å, x □ B

kHz □ ... • ½' - □, Žü" g □ " " í ^ í □ A

Hz □, '¼ fŠftfCEfbfVf... fCE □ [fg, ì" í ^ í

□ Å' á, Æ □ Å' å, ì □ ... • ½' - □, Žü" g □ " " í ^ í □ A, ÆftfCE □ [f€, ìfŠftfCEfbfVf... fCE □ [fg, íf, fíf ^ f} fíf... fAf<.

, É, à < L □ Ú, ³, ê, Ä, ç, Ü, · □ B

, ±, ±, Å, í □ Af, fíf ^, ì □ Å' å □ ... • ½' - □, Žü" g □ " (kHz), ³ " Á, É □ d — v, Å, · □ B, ±

, ì □ ä CE À, ð' , !, é, Æ □ A □ Å ^ «, ì □ ê □ † f, fíf ^, É CE ì □ á, ð, «, ½, ·, ±, Æ, ³, , è, Ü, · □ B

VESA DDC (•\Ž!ff[]f^ f`fff“f|f<)

f, fjjf^ ,^aVESA DDC, ðfTfj[]f_g, μ[]Af, fjjf^ fP[]fuf<, ^a DDC, É“K, μ[]AfOf%oftfBfbfN f{[]fh, ^aVESA DDCÉÝŠ, []ê[]#[]Af, fjjf^ ff[]f^ , ðfOf%oftfBfbfN f{[]fh, Éf, fjjf^ fP[]fuf<, ð%ôî, μ, ÄŽ©“®“I, É’— []M, Å, «, Ü, ·[]B

ŽŸ, ÉŽ!, ·, Æ, ¨, è[]ADDC1[]ADDC2B[]ADDC2AB, Æ, ç, x 3, Å, ì^Ù, È, Á, ½<KŠi, ^a, , è, Ü, ·[]B

DDC1

f, fjjf^ fP[]fuf<, lf%ofCf“, í[]Af, fjjf^ , ©, çfOf%oftfBfbfN, Ö•P•ûCEü, ì~A’±, μ, ½ff[]f^ fXf_gfŠ[]f€ , ð’— []M, ·, , é, ì, ÉŽg—p, ³, è, Ü, ·[]B•W[]€, ì IBM VGACEÝŠ• 15-fsf“ f, fjjf^ fRf|fNf^ , []ê[]#[]Afsf“ 12 (^È’O[]Af, fjjf^ IDf_rf_bf_g 1, Æ, μ, ÄŽg—p), Íff[]f^—[]M, ÉŽg—p, ³, è[]Afsf“ 14, ì, ‘¼“~Šú[]M[]t, í’— []MfNf[]fbfN(VCLK), Æ, μ, ÄŽg—p, ³, è, Ü, ·[]B128f_of_Cf_g, ìEDID ff[]f^ fZf_bf_g(Šg’£fffBfXfvfCEfCID), í[]EJ, è•Ô, μ’—[]M, ³, è[]A, », ±, ©, çfRf“fsf...[]f^ , ÍŽâ—v, Éf, fjjf^ ff[]f^ , ð“Ç, ÝŽæ, é, ±, Æ, ^a, Å, «, Ü, ·[]B, ± , lf[]f^ , ì\[]¬—v’f, í[]A3•¶Žš, ìf[][]fj[] , ìEISA-CFG fL[][]Af, fjjf^ fTfCfY[]ADPMSfTfj[]f_g, ì’í^í[]Afjf %o[][“Á[]«[]AfTfj[]f_g, ³, è, Ä, ç, é VESA f, fjjf^ f^fCf~f“fO, ìfŠfXf_g[]A, ç, , Å, ©, ìŽ©— R, É’è<^ , ì, Å, «, éf, fjjf^ f^fCf~f“fO, È, Ç, Å, ·[]B

DDC2B

12Cf_vf[]f_gfRf<, ÉŠî, Å, ‘o•ûCEüff[]f^ f`fff|f<, ^a[]Af, fjjf^ , ÆfOf%oftfBfbfN f{[]fhŠÖ, ì’É[]M, ÉŽg— p, ³, è, Ä, ç, Ü, ·[]B•W[]€, ì IBM VGACEÝŠ• 15-fsf“ f, fjjf^ fRf|fNf^ , []ê[]#[]Afsf“ 12 (^È’O[]Af, fjjf^ IDf_rf_bf_g 1, Æ, μ, ÄŽg—p), Íff[]f^—[]M, ÉŽg—p, ³, è(SDA)[]Afsf“ 15(^È’O[]Af, fjjf^ IDf_rf_bf_g 3, Æ, μ, ÄŽg—p), í’— []MfNf[]fbfN(SCL), Æ, μ, ÄŽg—p, ³, è, Ü, ·[]BfOf%oftfBfbfN f{[]fh, í’Z, çEDID[]î•ñ(DDC1ŽQ[]Æ), Æ[]A, æ, è•ïŠ‡“I, ÈVDIF[]î•ñ(VESAfffBfXfvfCEfCŽ~•Êftf@fCf<), ð<x, É—v<[] , Å, «, Ü, ·[]B

DDC2AB

DDC2B, ìŽŸ, ìDDC2AB, Å, í[]A%oæ-É, ì^É’u, â-¾, é, ³, ì²[]® , È, Ç[]Af, fjjf^ []\$CEä, ìfRf}f“fh, ðfRf“fsf... []f^ , ©, ç’—[]M, ·, , é, ±, Æ, ^a, Å, «, Ü, ·(ACCESSf_ofX, É<ß, ç)[]B

VESA DPMS

ffBfXfvfCfC,ì“d—ÍŠÇ—□□M□†

VESA DPMS<KŠi,í□Af,fjf^—çŽg—pŽž,ì□È“d—Íf,□[fh,É□Ø,è’Ö,ì,é•û-@,ð<L□q,μ,Ä,ç,Ü,·□B,±,ì•û-
@,ÍfXfNfŠ□[f“ fZ□[fo□[fvf□fOf%of€È,Ç,É,æ,èŽ©“®“I,É<N“®,Å,«,Ü,·□B,±
,è,ÍfL□[f{□[fh,Æf}fEfX,ª, ,é^è’è,ìŽžŠÔŽg—p,³,è,È,ç,Æ□Af,fjf^,ð□È“d—Íf,□[fh,É,μ,Ü,·□BfL□[,ð
%oÿ,·,©f}fEfX,ð“®,©,·,Æ□Af,fjf^,í□³í,È“®□ì,É□Ø,è’Ö,í,è,Ü,·□B

,±,±,Å’è<` ,³,è,éDPMS□ó’Ô,Ížÿ,ì4,Å,Å,·□B

ON

“d—Í,ì□ß-ñ,È,μ□A□³í“®□□AfffBfXfvfCfC,ÍfAfNfefBfu□B

fXf^f“fofC

“d—Í,ì□ß-ñ,í,í,·,©□A•œ<AZžŠÔ,í’Z,ç□B
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,±,Íf,□[fh,í□í,ÉfTf|□[fg,³,è,Ä,ç,é,í,¯,Å,í, ,è,Ü,¹,ñ□B

fTfXfyf“fh

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%oæ-Ê,ðfuf%of“fN,É,μ□A□,¼“~Šú□M□†,ðfift,É,·,é,±,Æ,Åf,fjf^,É’—□M,³,è,Ü,·□B

OFF

□Å’å,ì□È“d—Í□A•œ<AZžŠÔ,í□Å’·□B
%oæ-Ê,ðfuf%of“fN,É,μ□A□...•½□,¼,ì“~Šú□M□†,ðfift,É,·,é,±,Æ,Åf,fjf^,É’—□M,³,è,Ü,·□B

fCEfWfXfgfŠ,ìft[fU fAfJfEf“fgCE —

fCEfWfXfgfŠ,Ö,ì□',«□ž,ÝCE —~,ðŽ□,Á,Ä,ç,È,ç,½,ß,É□A[OK],Ü,½,í[“K—p]f{f^f“,ð
%oÿ,µ,½CEã,É□AfOf%oftfBfbfN f,□[fh,ð□Ø,è'Ö,!,é,±,Æ,ì,Ä,«,È,çŽ|,ð'm,ç,¹,éfGf
%o□[f□fbfZ□[fW,ª□o,½□ê□#□AZÿ,ÉŽ!,.,Æ,“,è□AŞÇ—□ŽÒ,É,»,ìCE —~,ð—v<□,µ,Ä,,¾,¾,ç□B

fCEfWfXfgfŠ,Å□A[HKEY_LOCAL_MACHINE]□AZÿ,É[System\CurrentControlSet\Services\WINNER]
,Æ□i,ñ,ÅfL□[,ð'ì'ð,µ,Ü,·□B[fZfLf...fŠfefB]¤[fAfNfZfXCE]
,ð'ì'ð,µ,Ä□Af_fCfAf□fO[fCEfWfXfgfŠfL□[,ìfAfNfZfXCE],ðŠJ,«,Ü,·□B
,±,ìfL□[,É'í,µ,Ä□A•K—v,Èft□[fU fOf<□[fv('Ê□í□AçUsers£,Ü,½,íçPower User£)
,ì[fCEfWfXfgfŠfL□[,ìfAfNfZfXCE],ðŠg'£,µ,Ü,·□B,Â,Ü,è,±,ìfOf<□[fv,É'í,µ,Ä□A[“ÁŽè,ÈfAfNfZfXCE ...]
,ì,Æ,±,è,Å□A['ì,ì□Æ%oï]□A['ì,ì□Ý'è]□A[fTfu fL□[,ì□ì□¬]□A[fTfu fL□[,ì—ñ<“]□A[□í□œ]
,ìŠefAfNfZfXCE ,ð—^,!,Ä□A[fAfNfZfXCE],ð□C□³,µ,Ü,·□Bf_fCfAf□fO[fCEfWfXfgfŠfL□[,ìfAfNfZfXCE]
,Åf`fFfbfNf{fbfNfX[Šù'¶,ìfTfu fL□[,ìfAfNfZfXCE ,ð'u,«Š·,!,é],ðfAfNfefBfu,É,µ,Ü,·□B

