

Host Interface Functions Checklist

12-Jan-94

Introduction

This section provides tables showing ANSI host interface control functions that should be supported by VT510 software terminal emulation. To simplify understanding the huge number of functions and corresponding rich interface, this section is divided into a number of largely independent subsections and tables which describe functionally related parts of the ANSI host interface. These subsections are:

Code Extension Functions
Control Coding
Character Coding
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Terminal Management Functions
Character Cell Display Service Class
Display Coordinate System and Addressing
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* Margins and Scrolling
* Cursor Movement
* Horizontal Tabulation
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Keyboard Processing Functions
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Code Extension Functions		
Symbol	Name	1st Used
Control Coding		
CAN	Cancel	VT100
SUB	Substitute	VT100
ESC	Escape	VT100
DCS	Device Control String	VT220
CSI	Control Sequence Introducer	VT100
ST	String Terminator	VT220
OSC	Operating System Command	DECterm
PM	Privacy Message	
APC	Application Program Command	VT420
S7C1T	Select 7-bit C1 Transmission	VT220
S8C1T	Select 8-bit C1 Transmission	VT220
Character Coding		
	Announce Subset of Code Extension Facilities	VT320
LS0	Locking Shift Zero (SI)	VT100
LS1	Locking Shift One (SO)	VT100
LS2	Locking Shift Two	VT220
LS3	Locking Shift Three	VT220
LS1R	Locking Shift One Right	VT220
LS2R	Locking Shift Two Right	VT220
LS3R	Locking Shift Three Right	VT220
SS2	Single Shift Two	VT220
SS3	Single Shift Three	VT220
Graphic Character Sets		
SCS	Select Character Set	VT100
	ASCII	VT100
	DEC Special Graphics (Line Drawing)	VT100
	DEC MCS	VT220
	ISO Latin-1	VT320
	UPSS	VT320
	DEC Technical	VT340, VT420
	ISO Latin-2, Hebrew, Greek, Cyrillic, Turkish	VT510
DECNRCM	(National Replacement) Character Set Mode	VT220
DECAUPSS	Assign User-Preference Supplemental Set	VT320
DECRQUPSS	Request User-Preference Supplemental Set	VT320

Terminal Management Functions		
Symbol	Name	1st Used
Identification, status, and Initialization		
DA1	Primary Device Attributes	VT100
DA2	Secondary Device Attributes	VT220
DECRPTUI	Report Terminal Unit ID	VT420
DSR	Device Status Report	VT100
DECID	Identify Device	VT100
DECTID	Select Terminal ID	VT510
DECSCL	Select Conformance Level	VT220
DECSR	Secure Reset	VT420
DECSRC	Secure Reset Confirmation	VT420
DECSTR	Soft Terminal Reset	VT220
DECSTUI	Set Terminal Unit ID (Restricted)	VT420
RIS	Reset to Initial state	VT100
Emulations		
DECPCTERM	Enter/Exit PC Term Mode from DEC VT mode	VT420PC
DECTME	Terminal Mode Emulation	VT510
Set-Up		
DECSSL	Select Set-Up Language	VT510
DECCRTSM	CRT Save Mode (not required)	VT510
DECOSCNM	Overscan Mode	VT510
DECSRFR	Select Refresh Rate	VT510
DECLTOD	Load Time of Day	VT510
DECLBAN	Load Banner Message	VT510

Display Coordinate System and Addressing		
Symbol	Name	1st Used
Active Position And Cursor		
DECTCEM	Text Cursor Enable Mode	VT220
DECSCUSR	Set Cursor Style	VT510
Margins And Scrolling		
DECSTBM	Set Top and Bottom Margin	VT100
DECSLRM	Set Left and Right Margin	VT420
DECLRMM	Left Right Margin Mode	VT420
DECOM	Origin Mode	VT100
DECSCLM	Scrolling Mode	VT100
IND	Index	VT100
RI	Reverse Index	VT100
DECFI	Forward Index	VT420
DECBI	Back Index	VT420
DECSSCLS	Set Scroll Speed	VT510
Cursor Movement		
BS	Backspace	VT100
LF	Line Feed	VT100
VT	Vertical Tab	VT100
FF	Form Feed	VT100
CR	Carriage Return	VT100
NEL	Next Line	VT100
LNLM	Line Feed/New Line Mode	VT100
CUU	Cursor Up	VT100
CUD	Cursor Down	VT100
CUF	Cursor Forward	VT100
CUB	Cursor Backward	VT100
CUP	Cursor Position	VT100
HVP	Horizontal/Vertical Position	VT100
CPR	Cursor Position Report	VT100
DECXCPR	Extended Cursor Position Report	VT340, VT420
CHA	Cursor Horizontal Absolute	VT510
CNL	Cursor Next Line	VT510
CPL	Cursor Previous Line	VT510
HPA	Horizontal Position Absolute	VT510
HPR	Horizontal Position Relative	VT510
VPA	Vertical Line Position Absolute	VT510
VPR	Vertical Position Relative	VT510
Horizontal Tabulation		
HT	Horizontal Tab	VT100
HTS	Horizontal Tabulation Set	VT100
TBC	Tabulation Clear	VT100
CBT	Cursor Backward Tabulation	VT510
CHT	Cursor Horizontal Forward Tabulation	VT510
DECST8C	Set Tab at every 8 columns	VT420PC
Page Size and Arrangement		
DECCOLM	Column Mode	VT100

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	DECNCSM	No Clear Screen on column Mode	VT510
	DECSCPP	Set Columns Per Page	VT340, VT420
	DECSLPP	Set Lines Per Page	VT340, VT420
	Page Movement		
	NP	Next Page	VT340, VT420
	PP	Preceding Page	VT340, VT420
	PPA	Page Position Absolute	VT340, VT420
	PPR	Page Position Relative	VT340, VT420
	PPB	Page Position Backward	VT340, VT420
	Status Display		
	DECSASD	Select Active Status Display	VT340, VT320
	DECSSDT	Select Status Display Type	VT340, VT320
	Right to Left		
	DECRLM	Right to Left Mode	VT510
	DECRLCM	Right to Left Copy Mode	VT510
	DDD1	VT100 mode Hebrew	VT510
	DDD2	VT100 mode Hebrew	VT510
	DDD3	VT100 mode Hebrew	VT510

Window Management		
Symbol	Name	1st Used
DECHCCM	Horizontal Cursor Coupling Mode	VT340, VT420
DECVCCM	Vertical Cursor Coupling Mode	VT340, VT420
DECPCCM	Page Cursor Coupling Mode	VT340, VT420
DECRQDE	Request Displayed Extent	VT340, VT420
DECSNLS	Select Number of Lines per Screen (exception)	VT420
DECARSM	Auto Resize Mode	DECterm, VT420
SU	Pan Down	VT340, VT420
SD	Pan Up	VT340, VT420
Visual Attributes and Renditions		
Symbol	Name	1st Used
DECSNM	Screen Mode	VT100
	Line Renditions	
DECSWL	Single Width Line	VT100
DECDWL	Double Width Line	VT100
DECDHLT	Double Height Line Top	VT100
DECDHLB	Double Height Line Bottom	VT100
	Character Renditions	
SGR	Select Graphic Rendition	VT100
	0=all off	VT100
	1=bold	VT100
	4=underscore	VT100
	5=blink	VT100
	7=reverse	VT100
	22=not bold	VT220
	24=non underline	VT220
	25=not blink	VT220
	27=non reverse	VT220
Audible Indicators		
Symbol	Name	1st Used
BEL	Warning Bell	VT100
DECSKCV	Set Keyclick Volume	VT510
DECSWBV	Set Warning Bell Volume	VT510
DECSMBV	Set Margin Bell Volume	VT510

Mode States			
Symbol	Name	1st Used	
SM/RM	Set Mode/Reset Mode	VT100	
	ANSI		
	20=LNM	VT100	
	2=KAM	VT220	
	4=IRM	VT102	
	12=SRM	VT220	
	3=CRM	VT510	
	DEC Private	VT100	
	1=DECCKM	VT100	
	2=DECANM	VT100	
	3=DECCOLM	VT100	
	4=DECSCLM	VT100	
	5=DECSCNM	VT100	
	6=DECOM	VT100	
	7=DECAWM	VT100	
	8=DECARM	VT100	
	18=DECPFF	VT220	
	19=DECPEX	VT220	
	25=DECTCEM	VT220	
	42=DECNRCM	VT220	
	60=Horizontal Cursor Coupling	VT340, VT420	
	61=Vertical Cursor Coupling	VT340, VT420	
	64=Page Cursor Coupling	VT340, VT420	
	66=DECNKM	VT320	
	67=DECBKM	VT340, VT420	
	68=DECKBUM	VT320	
	69=DECLRMM (DECVSSM)	VT340, VT420	
	73=DECXLRM	VT420	
	81=DECKPM	VT420	
	34=DECRLM	VT510	
	35=DECHEBM	VT510	
	36=DECHCEM	VT510	
	57=DECNAKB	VT510	
	95=DECNCSM	VT510	
	96=DECRLCM	VT510	
	98=DECARSM	VT510	
	99=DECMCM	VT510	
	100=DECAAM	VT510	
	101=DECCANSM	VT510	
	102=DECNULM	VT510	
	103=DECHPDXM	VT510	
	104=DECESKM	VT510	
	106=DECOSCNM	VT510	
	108=DECNUMLK	VT510	
	109=DECCAPSLK	VT510	
	110=DECKLHIM	VT510	

Editing Functions		
Symbol	Name	1st Used
IRM	Insert/Replacement Mode	VT102
ICH	Insert Character	VT102
DCH	Delete Character	VT102
IL	Insert Line	VT100
DL	Delete Line	VT100
DECIC	Insert Column	VT420
DEDCD	Delete Column	VT420
ECH	Erase Character	VT100
EL	Erase in Line	VT100
DECSEL	Selective Erase in Line	VT220
ED	Erase in Display	VT100
DECSER	Selective Erase in Display	VT220
DECSA	Select Character Attribute (selective erase)	VT220
OLTP Features		
Symbol	Name	1st Used
	Rectangular Area Operations	
DECCRA	Copy Rectangular Area	VT420
DECFFRA	Fill Rectangular Area	VT420
DECERA	Erase Rectangular Area	VT420
DECSERA	Selective Erase Rectangular Area	VT420
DECCARA	Change Attribute in Rectangular Area	VT420
DCERARA	Reverse Attribute in Rectangular Area	VT420
DECSACE	Select Attribute Change Extent Mode	VT420
	Data Integrity	
DECRQCRA	Request Checksum of Rectangular Area	VT420
DSR	Device Status Report (Memory Checksum)	VT420
DECKSR	Checksum Report	VT420
	Macros	
DECDMAC	Define Macro	VT420
DECINVM	Invoke Macro	VT420
DECMSR	Macro Space Report	VT420

Saving and Restoring Terminal State		
Symbol	Name	1st Used
Cursor Save Buffer		
DECSC	Save Cursor	VT100
DECRC	Restore Cursor	VT100
Terminal State Interrogation		
DECRQM	Request Mode	VT320
DECRPM	Report Mode	VT320
DECNKM	Numeric Keypad Mode	VT320
DECRQSS	Request Selection or Setting	VT320
DECRPSS	Report Selection or Setting	VT320
DECRQPSR	Request Presentation State Report	VT320
DECPSR	Presentation State Report	VT320
DECCIR	Cursor Information Report	VT320
DECTABSR	Tabulation Stop Report	VT320
DECRSPS	Restore Presentation State	VT320
DECRQTSR	Request Terminal State Report	VT320
DECTSR	Terminal State Report	VT320
DECRSTS	Restore Terminal State	VT320
Keyboard Processing Functions		
Symbol	Name	1st Used
DECARM	Autorepeat Mode	VT100
DECBKM	Backarrow Key Mode	VT420
DECKKM	Cursor Keys Mode	VT100
DECEKBD	Extended Keyboard Report	VT420
DECKBUM	Keyboard Usage Mode	VT320
DECKPAM	Keypad Application Mode	VT100
DECKPM	Key Position Mode	VT420
DECKPNM	Keypad Numeric Mode	VT100
DECNKM	Numeric Keypad Mode	VT320
DSR	Device Status Report (keyboard status)	VT220
KAM	Keyboard Action Mode	VT220
DECLFC	Local Functions Control	VT420
DECLFKC	Local Function Key Control	VT420
DECSMKR	Select Modifier Key Reporting	VT420
DECHEBM	Hebrew Keyboard Map mode	VT510
DEHCEM	Hebrew Encoding Mode	VT510
DECNAKB	NA/Greek Selection	VT510
DECESKM	Secondary Keyboard Language Mode	VT510
DECSLCK	Set Lock Key Style	VT510
DECKBD	Keyboard Dialect Selection	VT510
DECNUMLK	NumLock Mode	VT510
DECCAPSLK	CapsLock Mode	VT510
DECKLHIM	Keyboard LEDs Host Indicator Mode	VT510
DECLL	Load LEDs	VT100

Soft Key Mapping (UDK)			
Symbol	Name		1st Used
DECUDK	User Defined Keys		VT220
DSR	Device Status Report (UDK lock)		VT220
DECPKA	Program Key Action		VT510
DECPFK	Program Function Key		VT510
DECPAK	Program Alphanumeric Key		VT510
DECKD	Copy Key Default		VT510
DECRQPKFM	Program Key Free Memory Inquiry		VT510
DECRPKFMR	Program Key Free Memory Report		VT510
DECRQKT	Inquire a Key Type		VT510
DECRPKT	Report a Key Type		VT510
DECRQKD	Inquire a Key Definition		VT510
DECRPFK	Report definition of a Function Key		VT510
DECRPAK	Report definition of a Alphanumeric Key		VT510
Soft Fonts (DRCS)			
Symbol	Name		1st Used
DECDLD	Downline Load		VT220
Printing			
Symbol	Name		1st Used
DECPEX	Print Extent Mode		VT220
DECPFF	Print Form Feed Mode		VT220
DSR	Device Status Report (printer port)		VT220
MC	Media Copy		VT220
DECSPRTT	Select Printer Type		VT510
DECSDPT	Select Digital Printed Data Type		VT510
DECSPPCS	Select Proprinter Character Set		VT510

Terminal Communication and Synchronization		
Symbol	Name	1st Used
BREAK		VT100
XON		VT100
XOFF		VT100
ENQ	Enquiry	VT100
SRM	Send Receive Mode	VT220
DECXRLM	Transmit Rate Limiting Mode	VT420
DECMCM	Modem Control Mode	VT510
DECAAM	Auto Answerback Mode	VT510
DECLANS	Load Answerback Message	VT510
DECCANSM	Conceal Answerback Message Mode	VT510
DECNULM	Ignore Null Mode	VT510
DECHPDXM	Half Duplex Mode	VT510
DECSFC	Select Flow Control	VT510
DECSDDT	Select Disconnect Delay Time	VT510
DECSTRL	Set Transmit Rate Limit	VT510
DECSCS	Select Communication Speed	VT510
DECSCP	Select Communication Port	VT510
DECSPP	Set Port Parameter	VT510
Text Locator Extension		
Symbol	Name	1st Used
DECEFR	Enable Filter Rectangle	UWS
DECELR	Enable Locator Reports	UWS
DECLKD	Locator Key Definition	UWS
DECLRP	Locator Report	UWS
DECRQLP	Request Locator Position	UWS
DECSLE	Select Locator Events	UWS
DSR	Device Status Report (Locator Status)	UWS
Session Management Extension		
Symbol	Name	1st Used
DECES	Enable Sessions	VT340, VT420
Documented Exceptions		
Symbol	Name	1st Used
DECANM	ANSI/VT52 Mode	VT100
DECALN	Screen Alignment	VT100
DECAWM	Autowrap Mode	VT100
DECTST	Invoke Confidence Test	VT100
CRM	Control Representation Mode	VT100