Extra Materials

FAT32 VBR

File name	000
File extension	008
Attributes	00B
Read only	:0
Hidden	:1
System	:2
Volume	:3
Directory	:4
Archive	:5
(reserved)	00C
Created time refinement in 10ms (0-199)	00D
Created date/time	00E
Last access date	012
First cluster (high word)	014
Modified date/time	016
First cluster (low word)	01A
File size	01C

Short entry (SHORT.TXT)	000
File name	000
File extension	008
Attributes	00B
Read only	:0
Hidden	:1
System	:2
Volume	:3
Directory	:4
Archive	:5
(reserved)	00C
Created time refinement in 10ms (0-199)	00D
Created date/time	00E
Last access date	012
First cluster (high word)	014
Modified date/time	016
First cluster (low word)	01A
File size (in Bytes)	01C

Long File Name Entry

Offset	Length	Description
0x00	1	Right Nibble - LFN directory entry sequence number
		Left Nibble Last entry in the set Flag
0x01	10	First five characters of LFN entry
0x0B	1	LFN entry Flag – 0x0F
0x0C	1	Reserved, always zero
0x0D	1	Checksum generated from SFN
0x0E	12	Next six characters of LFN entry
0x1A	2	Reserved, always zero
0x1C	4	Last two characters of LFN entry

NTFS VBR

0x03	= OEM ID - NTFS	0x30	= $MFT starting Cluster
0x0B	= Bytes per Sector	0x38	= $MFTMirr starting Cluster
0x0D	= Sectors per Cluster	0x40	= $MFT record size (Clusters)
0x28	= Total sectors in Volume	0x48	= Volume serial number

MFT

Offset	Length	Data
Hex		
0x00	4	Signature
0x04	2	Offset to fix up array
0x06	2	Entries in the fix up Array
0x08	8	$LogFile Sequence Number
0x10	2	Sequence count
0x12	2	Hard Link count
0x14	2	Offset to the first attribute
0x16	2	Allocation status flags
0x18	4	Logical size of $MFT Record
0x1C	4	Physical size of $MFT Record
0x20	8	File reference to base record
0x28	2	Next attribute identification
0x2A	~	Fix-up Array and attributes
0x2C	4	$MFT File Record Number
0x30	~	Fix-up Array and attributes

exFAT

Name	Offset
JMP instruction	000
File system	003
(always zero)	00B
Hidden sectors	040
Total sectors	048
FAT first sector	050
FAT total sectors	054
Reserved sectors	058
Total clusters	05C
Root cluster	060
Serial number	064
Version	068
Volume flags	06A
Bytes per sector shift	06C
Sectors per cluster shift	06D
Number of FATs	06E
Physical drive	06F
Percent in use	070
(reserved)	071
Bootstrap code	078
Signature (55 AA)	1FE

Volume Label Entry	000
Entry type	000
Character count (max 11)	001
Volume label	002
(reserved)	018

Allocation Bitmap Entry	000
Entry type	000
Bitmap flags	001
(reserved)	002
First cluster	014
Data length	018

Up-Case Table Entry	000
Entry type	000
(reserved)	001
Table checksum	004
(reserved)	008
First cluster	014
Data length	018

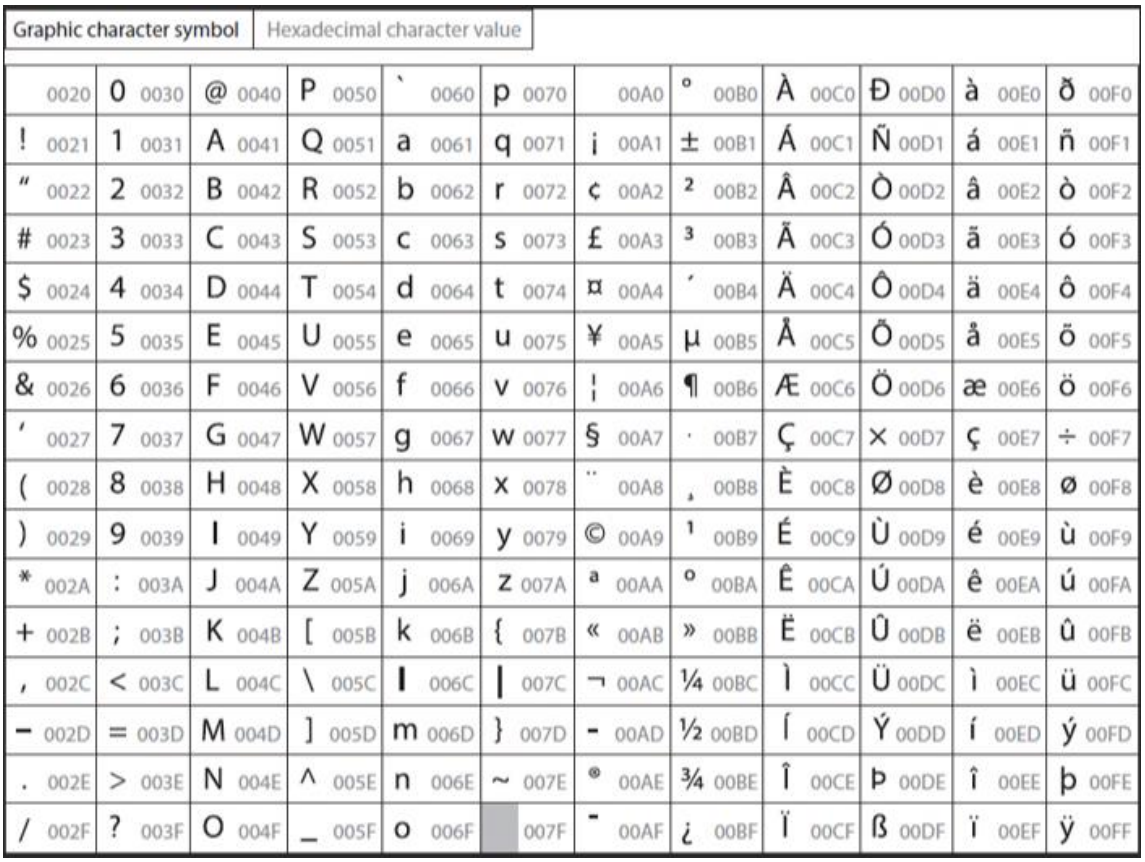
File Directory Entry	000
Entry type	000
Secondary count (must be 2-18)	001
Set checksum	002
File attributes	004
Read only	:0
Hidden	:1
System	:2
Directory	:4
Archive	:5
(reserved)	006
Created date/time	008
Last modified date/time	00C
Last accessed date/time	010
Created 10ms refinement (0-199)	014
Last modified 10ms refinement (0-199)	015
Created timezone offset (in 15 min)	016
Last modified timezone offset (in 15 min)	017
Last accessed timezone offset (in 15 min)	018
(reserved)	019

0x 01 - 0000 0001 - Read Only
0x 02 - 0000 0010 - Hidden
0x 04 - 0000 0100 - System
0x 08 - 0000 1000 - Volume Label
0x 10 - 0001 0000 - Directory
0x 20 - 0010 0000 - Archive

Stream Extension Entry	000
Entry type	000
⌄ General secondary flags	001
Allocation possible (must be 1)	:0
Not FAT chain	:1
(reserved)	002
Name length	003
Name hash	004
(reserved)	006
Valid data length	008
(reserved)	010
First cluster	014
Data length	018

File Name Entry	000
Entry type	000
⌄ General secondary flags	001
Allocation possible (must be 0)	:0
Not FAT chain (must be 0)	:1
File name	002

Unicode Table



Graphic character symbol	Hexadecimal character value											
0020	0 0030	@ 0040	P 0050	` 0060	p 0070	00A0	° 00B0	À 00C0	Ð 00D0	à 00E0	ð 00F0
! 0021	1 0031	A 0041	Q 0051	a 0061	q 0071	¡ 00A1	± 00B1	Á 00C1	Ñ 00D1	á 00E1	ñ 00F1
" 0022	2 0032	B 0042	R 0052	b 0062	r 0072	¢ 00A2	² 00B2	Â 00C2	Ò 00D2	â 00E2	ò 00F2
# 0023	3 0033	C 0043	S 0053	c 0063	s 0073	£ 00A3	³ 00B3	Ã 00C3	Ó 00D3	ã 00E3	ó 00F3
$ 0024	4 0034	D 0044	T 0054	d 0064	t 0074	¤ 00A4	´ 00B4	Ä 00C4	Ô 00D4	ä 00E4	ô 00F4
% 0025	5 0035	E 0045	U 0055	e 0065	u 0075	¥ 00A5	µ 00B5	Å 00C5	Õ 00D5	å 00E5	õ 00F5
& 0026	6 0036	F 0046	V 0056	f 0066	v 0076	¦ 00A6	¶ 00B6	Æ 00C6	Ö 00D6	æ 00E6	ö 00F6
' 0027	7 0037	G 0047	W 0057	g 0067	w 0077	§ 00A7	· 00B7	Ç 00C7	× 00D7	ç 00E7	÷ 00F7
(0028	8 0038	H 0048	X 0058	h 0068	x 0078	¨ 00A8	¸ 00B8	È 00C8	Ø 00D8	è 00E8	ø 00F8
) 0029	9 0039	I 0049	Y 0059	i 0069	y 0079	© 00A9	¹ 00B9	É 00C9	Ù 00D9	é 00E9	ù 00F9
* 002A	: 003A	J 004A	Z 005A	j 006A	z 007A	ª 00AA	º 00BA	Ê 00CA	Ú 00DA	ê 00EA	ú 00FA
+ 002B	; 003B	K 004B	[005B	k 006B	{ 007B	« 00AB	» 00BB	Ë 00CB	Û 00DB	ë 00EB	û 00FB
, 002C	< 003C	L 004C	\ 005C	l 006C	| 007C	¬ 00AC	¼ 00BC	Ì 00CC	Ü 00DC	ì 00EC	ü 00FC
- 002D	= 003D	M 004D	] 005D	m 006D	} 007D	00AD	½ 00BD	Í 00CD	Ý 00DD	í 00ED	ý 00FD
. 002E	> 003E	N 004E	^ 005E	n 006E	~ 007E	® 00AE	¾ 00BE	Î 00CE	Þ 00DE	î 00EE	þ 00FE
/ 002F	? 003F	O 004F	_ 005F	o 006F	007F	¯ 00AF	¿ 00BF	Ï 00CF	ß 00DF	ï 00EF	ÿ 00FF

ASCII Table

Dec	Hex	Oct	Char	Dec	Hex	Oct	Char	Dec	Hex	Oct	Char	Dec	Hex	Oct	Char
0	0	0		32	20	40	[space]	64	40	100	@	96	60	140	`
1	1	1		33	21	41	!	65	41	101	A	97	61	141	a
2	2	2		34	22	42	"	66	42	102	B	98	62	142	b
3	3	3		35	23	43	#	67	43	103	C	99	63	143	c
4	4	4		36	24	44	$	68	44	104	D	100	64	144	d
5	5	5		37	25	45	%	69	45	105	E	101	65	145	e
6	6	6		38	26	46	&	70	46	106	F	102	66	146	f
7	7	7		39	27	47	'	71	47	107	G	103	67	147	g
8	8	10		40	28	50	(	72	48	110	H	104	68	150	h
9	9	11		41	29	51	)	73	49	111	I	105	69	151	i
10	A	12		42	2A	52	*	74	4A	112	J	106	6A	152	j
11	B	13		43	2B	53	+	75	4B	113	K	107	6B	153	k
12	C	14		44	2C	54	,	76	4C	114	L	108	6C	154	l
13	D	15		45	2D	55	-	77	4D	115	M	109	6D	155	m
14	E	16		46	2E	56	.	78	4E	116	N	110	6E	156	n
15	F	17		47	2F	57	/	79	4F	117	O	111	6F	157	o
16	10	20		48	30	60	0	80	50	120	P	112	70	160	p
17	11	21		49	31	61	1	81	51	121	Q	113	71	161	q
18	12	22		50	32	62	2	82	52	122	R	114	72	162	r
19	13	23		51	33	63	3	83	53	123	S	115	73	163	s
20	14	24		52	34	64	4	84	54	124	T	116	74	164	t
21	15	25		53	35	65	5	85	55	125	U	117	75	165	u
22	16	26		54	36	66	6	86	56	126	V	118	76	166	v
23	17	27		55	37	67	7	87	57	127	W	119	77	167	w
24	18	30		56	38	70	8	88	58	130	X	120	78	170	x
25	19	31		57	39	71	9	89	59	131	Y	121	79	171	y
26	1A	32		58	3A	72	:	90	5A	132	Z	122	7A	172	z
27	1B	33		59	3B	73	;	91	5B	133	[	123	7B	173	{
28	1C	34		60	3C	74	<	92	5C	134	\	124	7C	174	|
29	1D	35		61	3D	75	=	93	5D	135	]	125	7D	175	}
30	1E	36		62	3E	76	>	94	5E	136	^	126	7E	176	~
31	1F	37		63	3F	77	?	95	5F	137	_	127	7F	177	