

? WinAnsiEncoding — Feature Overview

What this showcase demonstrates

TerraPDF ships with **extended WinAnsiEncoding width tables** covering the full byte range 32–255 — not just printable ASCII. Every accented character (Å–ÿ), every Windows-1252 typographic special (€, …, ‘, ’, “, ”, —, —, ™) and every Latin-1 symbol is measured with its exact **Adobe AFM glyph width** so word-wrapping and justification stay pixel-perfect in any language.

Content-stream encoding: Non-ASCII characters are octal-escaped (\nnn) in PDF string literals, keeping the content stream pure ASCII while the reader resolves each byte via the font’s /WinAnsiEncoding vector. Metadata and bookmark titles use UTF-16BE hex strings (<FEFF…>) so viewer title bars and outline panels show the correct text too.

? Eighteen European Languages — Correct Rendering & Line-Wrapping

| Language | Native Name | Sample Sentence (illustrates WinAnsi glyph coverage) |
|------------|-------------------|--|
| English | English | The quick brown fox jumps over the lazy dog. |
| French | Français | Le café au lait est servi avec des croissants frais. |
| German | Deutsch | In der Münchener Straße öffnete das Schloß früh. |
| Spanish | Español | El señor Martínez cruzó la montaña en cañón. |
| Portuguese | Português | O coração não mente — é a essência da nação. |
| Italian | Italiano | La città di Venezia è più bella al tramonto. |
| Dutch | Nederlands | Ögenschiijnlijk is het zoiets als déjà-vu. |
| Romanian | Romana | Soarele răsare în fiecare dimineată peste dealuri. |
| Hungarian | Magyar | Gyula és Ágnes sétáltak a városban, ahol a fák zöldek. |
| Norwegian | Norsk | Bjørn gikk på fjordstien i Ålesund om kvelden. |
| Swedish | Svenska | Björk och Åsa åkte till Göteborg på lördag. |
| Finnish | Suomi | Yöllä tähtitaivas heijastuu järven ylle. |
| Polish | Polski | Na starym wzgórzu stoi zamek, a niebo jest modre i jasne. |
| Czech | Cestina | Praha je zlaté srdce Evropy — slavná, stará a nádherná. |
| Turkish | Türkçe | Türk kültürü zengin ve güzel — müzik, dans ve sanat bir arada. |
| Catalan | Català | El Barça jugà a Girona i guanyà per sis a zero. |

| Language | Native Name | Sample Sentence (illustrates WinAnsi glyph coverage) |
|----------|----------------|--|
| Danish | Dansk | Søren Ørsted stod på broen og så på åen. |
| Welsh | Cymraeg | Mae'r iâ ar y mynydd yn toddi yn yr haf. |

All 18 sentences rendered using Helvetica/Times via WinAnsiEncoding — glyph widths sourced from Adobe Core-14 AFM tables.

TerraPDF — Unicode & WinAnsiEncoding Showcase

Typographic Specials & Symbols

? Windows-1252 Specials (byte range 0x80–0x9F)

Unicode code points U+0080–U+009F are C1 controls and are never mapped to WinAnsi. Instead, bytes 0x80–0x9F encode 27 distinct characters — each with its own Unicode code point and AFM advance width.

| Unicode | WinAnsi | Glyph | Name | Example in context |
|---------|---------|-------|-----------------------------|---------------------|
| U+2018 | 0x91 | ‘ | Left single quotation mark | ‘Hello’, he said. |
| U+2019 | 0x92 | ’ | Right single quotation mark | It’s a fine day. |
| U+201C | 0x93 | “ | Left double quotation mark | “She smiled.” |
| U+201D | 0x94 | ” | Right double quotation mark | Said “merci”. |
| U+2013 | 0x96 | — | En dash | Pages 42–47. |
| U+2014 | 0x97 | — | Em dash | Time—and tide—wait. |
| U+2026 | 0x85 | … | Horizontal ellipsis | To be continued… |
| U+2022 | 0x95 | • | Bullet | • First item |
| U+20AC | 0x80 | € | Euro sign | Price: € 1,299.00 |
| U+2122 | 0x99 | ™ | Trade mark sign | TerraPDF™ |
| U+0152 | 0x8C | Œ | OE ligature (capital) | Œuvre complète |
| U+0153 | 0x9C | œ | OE ligature (small) | Manœuvre |
| U+2020 | 0x86 | † | Dagger | See note † below. |
| U+2021 | 0x87 | ‡ | Double dagger | Also ‡ ibid. |
| U+2030 | 0x89 | ‰ | Per mille sign | Error rate: 1.2‰ |
| U+0160 | 0x8A | Š | S with caron (capital) | Škoda Auto |
| U+0161 | 0x9A | š | S with caron (small) | Dušan |

? Typographic Specials in Running Prose

Curly quotes: ‘Single’ and “double” quotation marks look far more professional than straight ASCII apostrophes.

Dashes & ellipsis: An en–dash separates page ranges (pp. 42–47). An em—dash sets off a clause—without spaces. An ellipsis... trails off elegantly.

Symbols: Copyright © 2025, registered trademark ®, trade mark ™. Price: € 1?299.00. Temperature: 23°C ± 0.5°. $3^2 + 4^2 = 5^2$ (Pythagorean triple). Rate: 2.4‰ per mille.

Ligatures & AE: The Œuvre of Æschylus — manoeuvre, nœud, æon — all rendered from WinAnsiEncoding glyphs.

? Latin-1 Supplement Symbol Groups (U+00A0–U+00FF)

| Group | Characters |
|--------------------------|---|
| Punctuation & Spacing | « » ¿ ¡ · ¶ § |
| Mathematical & Technical | ± × ÷ ° μ ^{2 3} ¼ ½ ¾ |
| Currency & Commerce | ¢ £ ¤ ¥ ¦ © ® ¯ |
| Accented Capitals (À–Ö) | À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ð Ñ Ò Ó Ô Õ Ö |
| Accented Capitals (Ø–þ) | Ø Ù Ú Û Ü Ý Þ ß |
| Accented Lowercase (à–ö) | à á â ã ä å æ ç è é ê ë ì í î ï ð ñ ò ó ô õ ö |
| Accented Lowercase (ø–ÿ) | ø ù ú û ü ý þ ÿ |

TerraPDF — Unicode & WinAnsiEncoding Showcase

WinAnsiEncoding Reference Grid

? WinAnsiEncoding — Complete Byte-to-Glyph Reference (0x20–0xFF)

Every cell shows the rendered glyph, its decimal byte value, and Unicode code point. Grey cells are undefined positions. Bytes 0x80–0x9F are Windows-1252 specials; 0xA0–0xFF are Latin-1 Supplement.

| | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 | +A | +B | +C | +D | +E | +F |
|------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 0x20 | · 32 U+0020 | ! 33 U+0021 | " 34 U+0022 | # 35 U+0023 | \$ 36 U+0024 | % 37 U+0025 | & 38 U+0026 | ' 39 U+0027 | (40 U+0028 |) 41 U+0029 | * 42 U+002A | + 43 U+002B | , 44 U+002C | - 45 U+002D | . 46 U+002E | / 47 U+002F |
| 0x30 | 0 48 U+0030 | 1 49 U+0031 | 2 50 U+0032 | 3 51 U+0033 | 4 52 U+0034 | 5 53 U+0035 | 6 54 U+0036 | 7 55 U+0037 | 8 56 U+0038 | 9 57 U+0039 | : | ; 58 U+003A | < 60 U+003C | = 61 U+003D | > 62 U+003E | ? 63 U+003F |
| 0x40 | @ 64 U+0040 | A 65 U+0041 | B 66 U+0042 | C 67 U+0043 | D 68 U+0044 | E 69 U+0045 | F 70 U+0046 | G 71 U+0047 | H 72 U+0048 | I 73 U+0049 | J 74 U+004A | K 75 U+004B | L 76 U+004C | M 77 U+004D | N 78 U+004E | O 79 U+004F |
| 0x50 | P 80 U+0050 | Q 81 U+0051 | R 82 U+0052 | S 83 U+0053 | T 84 U+0054 | U 85 U+0055 | V 86 U+0056 | W 87 U+0057 | X 88 U+0058 | Y 89 U+0059 | Z 90 U+005A | [91 U+005B | \ 92 U+005C |] 93 U+005D | ^ 94 U+005E | _ 95 U+005F |
| 0x60 | ` 96 U+0060 | a 97 U+0061 | b 98 U+0062 | c 99 U+0063 | d 100 U+0064 | e 101 U+0065 | f 102 U+0066 | g 103 U+0067 | h 104 U+0068 | i 105 U+0069 | j 106 U+006A | k 107 U+006B | l 108 U+006C | m 109 U+006D | n 110 U+006E | o 111 U+006F |
| 0x70 | p 112 U+0070 | q 113 U+0071 | r 114 U+0072 | s 115 U+0073 | t 116 U+0074 | u 117 U+0075 | v 118 U+0076 | w 119 U+0077 | x 120 U+0078 | y 121 U+0079 | z 122 U+007A | { 123 U+007B | 124 U+007C | } | ~ 125 U+007D | — 126 U+007E |
| 0x80 | € 128 U+20AC | — | , 130 U+201A | f 131 U+0192 | „ 132 U+201E | … 133 U+2026 | † 134 U+2020 | ‡ 135 U+2021 | ^ 136 U+02C6 | % 137 U+2030 | Š 138 U+0160 | < 139 U+2039 | Œ 140 U+0152 | — | Ž 142 U+017D | — |
| 0x90 | — | ‘ 145 U+2018 | ’ 146 U+2019 | “ 147 U+201C | ” 148 U+201D | • 149 U+2022 | — 150 U+2013 | — 151 U+2014 | ~ 152 U+02DC | ™ 153 U+2122 | š 154 U+0161 | > 155 U+203A | œ 156 U+0153 | — | ž 158 U+017E | ÿ 159 U+0178 |
| 0xA0 | · 160 U+00A0 | ¡ 161 U+00A1 | ¢ 162 U+00A2 | £ 163 U+00A3 | ¤ 164 U+00A4 | ¥ 165 U+00A5 | ¦ 166 U+00A6 | § 167 U+00A7 | ¨ 168 U+00A8 | © 169 U+00A9 | ª 170 U+00AA | « 171 U+00AB | ¬ 172 U+00AC | ­ 173 U+00AD | ® 174 U+00AE | ¯ 175 U+00AF |
| 0xB0 | ° 176 U+00B0 | ± 177 U+00B1 | ² 178 U+00B2 | ³ 179 U+00B3 | ´ 180 U+00B4 | µ 181 U+00B5 | ¶ 182 U+00B6 | · 183 U+00B7 | ¸ 184 U+00B8 | ¹ 185 U+00B9 | º 186 U+00BA | » 187 U+00BB | ¼ 188 U+00BC | ½ 189 U+00BD | ¾ 190 U+00BE | ¿ 191 U+00BF |
| 0xC0 | À 192 U+00C0 | Á 193 U+00C1 | Â 194 U+00C2 | Ã 195 U+00C3 | Ä 196 U+00C4 | Å 197 U+00C5 | Æ 198 U+00C6 | Ç 199 U+00C7 | È 200 U+00C8 | É 201 U+00C9 | Ê 202 U+00CA | Ë 203 U+00CB | Ì 204 U+00CC | Í 205 U+00CD | Î 206 U+00CE | Ï 207 U+00CF |
| 0xD0 | Ð 208 U+00D0 | Ñ 209 U+00D1 | Ò 210 U+00D2 | Ó 211 U+00D3 | Ô 212 U+00D4 | Õ 213 U+00D5 | Ö 214 U+00D6 | × 215 U+00D7 | Ø 216 U+00D8 | Ù 217 U+00D9 | Ú 218 U+00DA | Û 219 U+00DB | Ü 220 U+00DC | Ý 221 U+00DD | Þ 222 U+00DE | ß 223 U+00DF |
| 0xE0 | à 224 U+00E0 | á 225 U+00E1 | â 226 U+00E2 | ã 227 U+00E3 | ä 228 U+00E4 | å 229 U+00E5 | æ 230 U+00E6 | ç 231 U+00E7 | è 232 U+00E8 | é 233 U+00E9 | ê 234 U+00EA | ë 235 U+00EB | ì 236 U+00EC | í 237 U+00ED | î 238 U+00EE | ï 239 U+00EF |
| 0xF0 | ð 240 U+00F0 | ñ 241 U+00F1 | ò 242 U+00F2 | ó 243 U+00F3 | ô 244 U+00F4 | õ 245 U+00F5 | ö 246 U+00F6 | ÷ 247 U+00F7 | ø 248 U+00F8 | ù 249 U+00F9 | ú 250 U+00FA | û 251 U+00FB | ü 252 U+00FC | ý 253 U+00FD | þ 254 U+00FE | ÿ 255 U+00FF |

- Printable ASCII (0x20–0x7E)
- Win-1252 Specials (0x80–0x9F)
- Latin-1 Supplement (0xA0–0xFF)
- Undefined

All 224 defined WinAnsiEncoding positions (32–255) — each glyph measured with its Adobe AFM advance width.