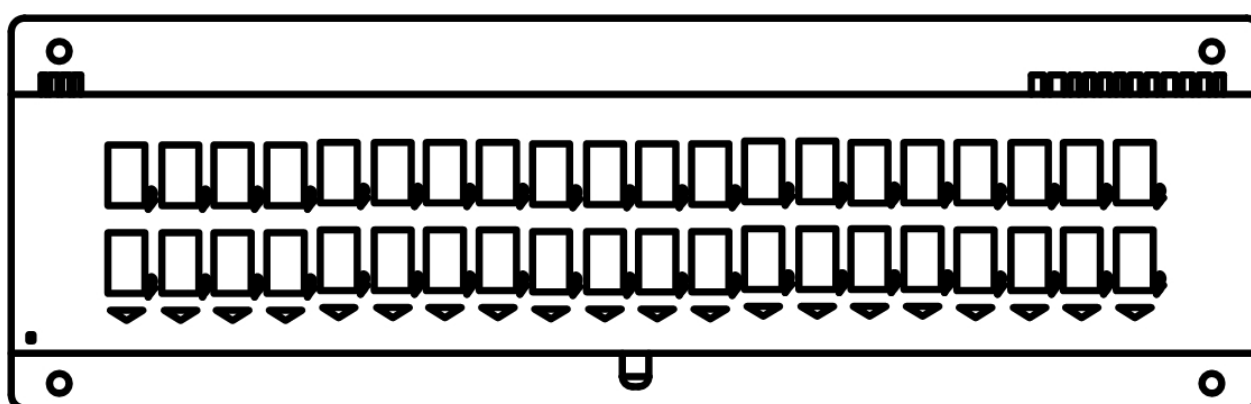


User's Manual

Vacuum Fluorescent Customer Display MODEL : WDB-2029x



WDB-2029x VFD customer display module

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WDB-2029x VFD customer display module

1. FEATURES

- 1.) Data can be displayed on 20 columns x 2 lines.
- 2.) Blue-green color and large character are easy to eye.
- 3.) The commands modes, fonts, baud rate and other parameters are selected by software.
- 4.) CD5220/UTC/EMAX/ADM/EscPOS/DSP-800 emulation command sets.
- 5.) User-defined characters can be downloaded (for Esc/POS /CD5220/DSP-800 command).
- 6.) Provides an interface based on RS232

WDB-2029x VFD customer display module

2. 1GENERAL SPECIFICATIONS(WDB-2029x)

| NO | ITEM | Descriptions |
|----|-----------------------|--|
| 1 | Display method | Vacuum fluorescent display |
| 2 | Number of character | 40 characters (20 columns x 2 lines) |
| 3 | Character font | 5 x 7 dot matrix |
| 4 | Display color | Blue green |
| 5 | Brightness | 700 cd/m ² |
| 6 | Character type | 96 alphanumeric 13 kinds of international character set. 1 kind of user define character |
| 7 | Character size | 9.03 mm x 5.25 mm |
| 8 | Power supply | 5~40Vdc |
| 9 | Power consumption | 2.3W (Max.) |
| 10 | MTBF | 25,000 hours |
| 11 | Module dimensions | 204 (W) x 57.5 (H) x 27.1 (D) mm |
| 12 | Weight | 220g |
| 13 | Operating temperature | 0 ~ 50℃ |
| 14 | Operating Humidity | 5% ~ 95% |
| 15 | Storage Temperature | -20 ~ 60℃ |
| 16 | Storage Humidity | 5% ~ 95% |

WDB-2029x VFD customer display module

3. INTERFACE

3.1 USB connector (CN2)

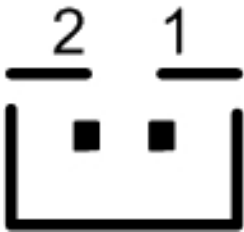
Type: JST/XH/2.0mm/4P
Pin assignment



| No | Signal | Direction | Function description |
|----|--------|-----------|----------------------|
| 1 | 5Vdc | - | Power 5 Vdc |
| 2 | USBD- | - | USB data signal - |
| 3 | USBD+ | - | USB data signal + |
| 4 | GND | - | Signal ground |

3.2 ON/OFF SWITCH CONNECTOR (CN3 FOR USB)

Type: JST/XH/2.5mm/2P



3.3 RS-232C Specifications

| | |
|--------------------|--|
| Data transmission: | Serial |
| Synchronization: | Asynchronous |
| Handshaking: | DTR / DSR |
| Signal level: | 0 ~ +3V |
| Baud rates: | 4800, 9600, 19200, 38400 and 115200bps |
| Parity | None, even and odd |
| Data bit | 7 or 8 data bits |
| Stop bits: | 1 or more |

Table 3-1

WDB-2029x VFD customer display module

4. COMMAND

4.1 CD5220 Standard Mode Command List

| Command | Code (hex) | Function description |
|---------------|-----------------------------|---|
| ESC DC1 | 1B 11 | Overwrite mode |
| ESC DC2 | 1B 12 | Vertical scroll mode |
| ESC DC3 | 1B 13 | Horizontal scroll mode |
| ESC QACR | 1B 51 41 <i>data</i> x m 0D | Set the string display mode, write string to upper line . m ≤ 20 |
| ESC QBCR | 1B 51 42 <i>data</i> x m 0D | Set the string display mode, write string to lower line . m ≤ 20 |
| ESC QDCR | 1B 51 44 <i>data</i> x m 0D | Upper line message scroll continuously . m ≤ 40 |
| ESC [D | 1B 5B 44 | Move cursor left |
| BS | 08 | Move cursor left |
| ESC [C | 1B 5B 43 | Move cursor right |
| HT | 09 | Move cursor right |
| ESC [A | 1B 5B 41 | Move cursor up |
| ESC [B | 1B 5B 42 | Move cursor down |
| LF | 0A | Move cursor down |
| ESC [H | 1B 5B 48 | Move cursor to home position |
| HOM | 0B | Move cursor to home position |
| ESC [L | 1B 5B 4C | Move cursor to left-most position |
| CR | 0D | Move cursor to left-most position |
| ESC [R | 1B 5B 52 | Move cursor to right-most position |
| ESC [K | 1B 5B 4B | Move cursor to bottom position |
| ESC I x y | 1B 6C x y | Move cursor to specified position 1 ≤ x ≤ 20 ,row position 1 ≤ y ≤ 2 ,column position |

WDB-2029x VFD customer display module

| Command | Code (hex) | Function description |
|---|-------------------------------------|--|
| ESC @ | 1B 40 | Initialize display |
| CLR | 0C | Clear display screen , and clear string mode |
| CAN | 18 | Clear cursor line, and clear string mode |
| ESC * n | 1B 2A n | Brightness adjustment $1 \leq n \leq 4$ |
| ESC & s n m [a (P1..pa)]x (m-n+1) | 1B 26 1 n m [a(p1..pa)]x (m-n+1) | Define download characters. $32 < n \leq m \leq 255$ $1 \leq a \leq 5$ p1..p5 =row1..row5 |
| ESC ? | 1B 3F | Deletes download characters. |
| ESC % | 1B 25 | Select/cancel download character set. |
| ESC _ n | 1B 5F n | Set cursor on/off .n = 1 , cursor off .n = 2 , cursor on |
| ESC f n | 1B 66 n | Select international fonts set, refer *2 |
| ESC c n | 1B 63 n | Select code, refer *3 |
| ESC = n | 1B 3D n | Select peripheral device, display or printer .n bit 0 = 1 select printer .n bit 1 = 1 select display |

Table 4-1

WDB-2029x VFD customer display module

***2:** The paramiter of international fonts set control by command “**ESC f n**”

| Paramiter n | International Font Set |
|-------------|------------------------|
| “A” | U.S.A. |
| “G” | Germany |
| “I” | Italy |
| “J” | Japan |
| “U” | U.K. |
| “F” | France |
| “S” | Spain |
| “N” | Norway |
| “W” | Sweden |
| “D” | Denmark I |
| “E” | Denmark II |
| “L” | Slavonic |
| “R” | Russia |

Table 4-2

***3:** The paramiter of the code table control by command “**ESC c n**”

| Paramiter “n” | International font set |
|---------------|-------------------------------|
| “A” | Compliance with ASCII code |
| “J” | Compliance with JIS code |
| “L” | Compliance with SLAVONIC code |
| “R” | Compliance with RUSSIA code |

Table 4-3

WDB-2029x VFD customer display module

4.2 UTC standard mode command list

| Command | Code (hex) | Function description |
|---------|------------|-----------------------------|
| BS | 08 | Back space |
| HT | 09 | Horizontal tab |
| LF | 0A | Line feed |
| CR | 0D | Carriage return |
| DLE | 0F | Display position |
| DC1 | 11 | Over write display mode |
| DC2 | 12 | Vertical scroll mode |
| DC3 | 13 | Cursor on |
| DC4 | 14 | Cursor off |
| US | 1F | Clear display |
| ESC d | 1B 64 | Change to UTC enhanced mode |

Table 4-4

4.3 UTC enhanced mode command list

| Command | Code (hex) | Function description |
|--------------|-----------------------------|---|
| ESC u A ..CR | 1B 75 41 <i>data</i> x m 0D | Upper line display $0 \leq m \leq 20$ |
| ESC u B ..CR | 1B 75 42 <i>data</i> x m 0D | Bottom line display $0 \leq m \leq 20$ |
| ESC u D ..CR | 1B 75 44 <i>data</i> x m 0D | Upper line message scroll continuously $0 \leq m \leq 40$ |
| ESC u E ..CR | 1B 75 45 hh ‘:’ mm 0D | Display time $‘00’ \leq hh \leq ‘23’$ $‘00’ \leq mm \leq ‘59’$ |
| ESC u F ..CR | 1B 75 46 <i>data</i> x m 0D | Upper line message scroll once pass |
| ESC u H ..CR | 1B 75 48 n m 0D | Change attention code $32 \leq n \leq 255$ $32 \leq m \leq 255$ |
| ESC u I ..CR | 1B 75 49 <i>data</i> x m 0D | Two line display $0 \leq m \leq 40$ |
| ESC RS CR | 1B 0F 0D | Change to UTC standard mode |

Table 4-5

WDB-2029x VFD customer display module

4.4 AEDEX mode command list

| Command | Code (hex) | Function description |
|--------------|--------------------------------|--|
| ! # 1CR | 21 23 31 <i>data</i> x m 0D | Upper line display $0 \leq m \leq 40$ |
| ! # 2CR | 21 23 32 <i>data</i> x m 0D | Bottom line display $0 \leq m \leq 40$ |
| ! # 4CR | 21 23 34 <i>data</i> x m 0D | Upper line message scroll continuously $0 \leq m \leq 40$ |
| ! # 5CR | 21 23 35 hh ':' mm 0D | Display time '00' \leq hh \leq '23' '00' \leq mm \leq '59' |
| ! # 8CR | 21 23 38 n m 0D | Change attention code $32 \leq n \leq 255$ $32 \leq m \leq 255$ |
| ! # 9CR | 21 23 39 <i>data</i> x m 0D | Two line display $0 \leq m \leq 40$ |

Table 4-6

4.5 ADM787/788 mode command list

| Command | Code (hex) | Function description |
|---------|------------|--|
| CLR | 0C | Clear display |
| CR | 0D | Carriage return |
| SLE1 | 0E | Clear up line and move cursor to upper line left most end |
| SLE2 | 0F | Clear low line and move cursor to lower line left most end |
| DC0 | 10 n | Set period to upper line last n position $31H \leq n \leq 37H$ |
| DC1 | 11 n | Set line blanking , .n = 31H up line .n = 32H low line |
| DC2 | 12 n | Clear line blanking , .n = 31H up line .n = 32H low line |
| SF1 | 1E | Clear field 1 and move cursor to field 1 fast position |
| SF2 | 1F | Clear field 2 and move cursor to field 2 fast position |

Table 4-7

WDB-2029x VFD customer display module

4.6 DSP-800 mode command list

| Command | Code (hex) | Function descriptions |
|-----------------------|-----------------------|--|
| EOT SOH I n ETB | 04 01 49 n 17 | Select international character set. |
| EOT SOH P n ETB | 04 01 50 n 17 | Move cursor to specified position. $31H \leq n \leq 58H$ |
| EOT SOH C n m ETB | 04 01 43 n m 17 | Clear display range from n position to m position and move cursor to n position. $31H \leq n \leq m \leq 58H$ |
| EOT SOH S n ETB | 04 01 53 n 17 | Save the current displaying data to n layer for demo display. $31H \leq n \leq 35H$ |
| EOT SOH D n m ETB | 04 01 44 n m 17 | Display the saved data $31H \leq n \leq 4FH$ $31H \leq m \leq 33H$ |
| EOT SOH A n ETB | 04 01 41 n 17 | Brightness adjustment. $31H \leq n \leq 34H$ |
| EOT SOH F n ETB | 04 01 46 n 17 | Blink display screen. $0 \leq n \leq 255$ |
| EOT SOH & n [px5] ETB | 04 01 26 n p1...p5 17 | Define download characters $20H < n \leq FFH$ |
| EOT SOH ? n ETB | 04 01 3F n 17 | Delete download characters. $20H < n \leq FFH$ |
| EOT SOH = n ETB | 04 01 3D n 17 | Select peripheral device. .n = 31H,select printer .n = 32H,select display |
| EOT SOH % ETB | 04 01 25 17 | Initialize display |
| EOT SOH @ ETB | 04 01 40 17 | Execute self-test |

Table 4-8

WDB-2029x VFD customer display module

4.7 EPSON Esc/pos command list

| Command | Code (hex) | Function description |
|------------------------------------|------------------------------------|--|
| HT | 09 | Move cursor right. |
| BS | 08 | Move cursor left. |
| US LF | 1F 0A | Move cursor up. |
| LF | 0A | Move cursor down. |
| US CR | 1F 0D | Move cursor to right-most position. |
| CR | 0D | Move cursor to left-most position. |
| HOM | 0B | Move cursor to home position. |
| US B | 1F 42 | Move cursor to bottom position. |
| US \$ x y | 1F 24 x y | Move cursor to specified position. $1 \leq x \leq 20$ $1 \leq y \leq 2$ |
| CLR | 0C | Clear display screen. |
| US X n | 1F 58 n | Brightness adjustment. $1 \leq n \leq 4$ |
| US E n | 1F 45 n | Blink display screen. $0 \leq n \leq 255$ |
| ESC @ | 1B 40 | Initialize display. |
| ESC t n | 1B 74 n | Select character code table. $0 \leq n \leq 14$ |
| ESC R n | 1B 52 n | Select international character set. $0 \leq n \leq 14$ |
| US r n | 1F 72 n | Select/cancel reverse character. $0 \leq n \leq 1$ |
| US MD1 | 1F 01 | Specify overwrite mode. |
| US MD2 | 1F 02 | Specify vertical scroll mode. |
| US MD3 | 1F 03 | Specify horizontal scroll mode. |
| ESC & s n m [a(p1..pa)]x m-n | 1B 26 1 n m [a(p1..pa)]x m-n | Define download characters. $32 < n \leq m \leq 255$ $1 \leq a \leq 5$ p1..p5 =row1..row5 |

WDB-2029x VFD customer display module

| Command | Code (hex) | Function description |
|----------|------------|---|
| ESC ? | 1B 3F | Delete downloads characters. |
| ESC % | 1B 25 | Select/cancel download character set. |
| ESC = n | 1B 3D n | Select peripheral device. .n bit 0 = 1 select printer .n bit 1 = 1 select display |
| US : | 1F 3A | Set starting/ending position of macro definition. |
| US ^ n m | 1F 5E n m | Execute and quit macro. $0 \leq n \leq 255$, $0 \leq m \leq 255$ |
| US @ | 1F 40 | Execute self-test. |
| US T h m | 1F 54 h m | Display time $0 \leq h \leq 23$, $0 \leq m \leq 59$ |
| US U | 1F 55 | Display time continuously |

Table 4-9

Select international font

| | |
|----|------------|
| .n | 1F 40 |
| 0 | U.S.A. |
| 1 | France |
| 2 | Germany |
| 3 | U.K. |
| 4 | Denmark I |
| 5 | Sweden |
| 6 | Italy |
| 7 | Spain |
| 8 | Japan |
| 9 | Norway |
| 10 | Denmark II |
| 11 | Slavonic |
| 12 | Russia |
| 13 | Portuguese |
| 14 | Greek |
| 15 | Reserved |

Select code table

| | |
|----|------------------------------------|
| .n | Execute self-test. |
| 0 | Page 0, (PC437,USA standard Euro.) |
| 1 | Page 1,(Katakana for Japan) |
| 2 | Page 2,(PC850,Multilingual) |
| 3 | Page 3,(PC860, Portuguese) |
| 4 | Page 4,(PC863,Canadian-French) |
| 5 | Page 5,(PC865,Nordic) |
| 6 | Page 6,(Slavonic) |
| 7 | Page 7,(Russian) |
| 19 | Page 19,(PC858, Euro) |
| 16 | Page 16,(WPC1252.) |
| 12 | Page 12,(Greek) |
| | |
| | |
| | |
| | |
| | |

Table 4-10

WDB-2029x VFD customer display module

5. CHARACTER SET

5.1 USA,standard character set (20h – 7Eh)

| | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 0A | 0B | 0C | 0D | 0E | 0F |
|-----|--------|-------|-------|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 20H | | ..0.. | .0.0. | .0.0. | ..0.. | 00... | .00.. | .00.. | ...0. | .0... | | | | | |0 |
| | | ..0.. | .0.0. | .0.0. | .0000 | 00...0 | 0..0. | ..0.. | ...0. | ..0.. | ..0.. | ..0.. | | | |0 |
| | | ..0.. | .0.0. | 00000 | 0.0.. | ...0. | 0.0.. | ..0.. | ...0. | ...0. | 0.0.0 | ..0.. | | | | ...0. |
| | | ..0.. | | .0.0. | .000. | ..0.. | .0... | | .0... | ...0. | .000. | 00000 | | 00000 | | ...0. |
| | | | | 00000 | ..0.0 | .0... | 0.0.0 | | .0... | ...0. | 0.0.0 | ..0.. | .00.. | | | .0... |
| | | ..0.. | | .0.0. | 0000. | 0..00 | 0..0. | | ..0.. | ..0.. | ..0.. | ..0.. | ..0.. | | .00.. | 0... |
| 30H | | ..0.. | | .0.0. | ..0.. | ...00 | .00.0 | | ...0. | .0... | | | .0... | | .00.. | |
| | .000. | ..0.. | .000. | 00000 | ...0. | 00000 | ..00. | 00000 | .000. | .000. | | | ...0. | | .0... | .000. |
| | 0...0 | .00.. | 0...0 | ...0. | ..00. | 0... | .0... | ...0. | 0...0 | 0...0 | .00.. | .00.. | ..0.. | | ...0. | 0...0 |
| | 0...00 | ..0.. | ...0. | ...0. | .0.0. | 0000. | 0... | ...0. | 0...0 | 0...0 | .00.. | .00.. | .0... | 00000 | ...0. | ...0. |
| | 0.0.0 | ..0.. | ...0. | ...0. | 0.0.0. | 0000. | 0...0 | 0000. | ..0.. | .000. | .0000 | | 0... | | ...0. | ...0. |
| | 00..0 | ..0.. | ..0.. | ...0 | 00000 | ...0. | 0...0 | .0... | 0...0 | ...0. | .00.. | .00.. | .0... | 00000 | ...0. | ..0.. |
| 40H | 0...0 | ..0.. | .0... | 0...0 | ...0. | 0...0 | 0...0 | .0... | 0...0 | ...0. | .00.. | ..0.. | ..0.. | | ...0. | |
| | .000. | .000. | 00000 | .000. | ...0. | .000. | .000. | .0... | .000. | .00.. | | .0... | ...0. | | .0... | ..0.. |
| | 0...0 | .0.0. | 0...0 | 0...0 | 0...0 | 0... | 0... | 0...0 | 0...0 | ..0.. | ...0. | 0.0.0 | 0... | 00.00 | 0...0 | 0...0 |
| | 0.000 | 0...0 | 0...0 | 0... | 0...0 | 0... | 0... | 0... | 0...0 | ..0.. | ...0. | 0.0.0 | 0... | 0.0.0 | 00..0 | 0...0 |
| | 00.00 | 0...0 | 0000. | 0... | 0...0 | 0000. | 0000. | 0.000 | 00000 | ..0.. | ...0. | 00... | 0... | 0.0.0 | 0.0.0 | 0...0 |
| | 0.000 | 00000 | 0...0 | 0... | 0...0 | 0... | 0... | 0...0 | 0...0 | ..0.. | ...0. | 0.0.0 | 0... | 0...0 | 0.00 | 0...0 |
| 50H | 0...0 | 0...0 | 0...0 | 0...0 | 0...0 | 0... | 0... | 0...0 | 0...0 | ..0.. | 0.0.0 | 0.0.0 | 0... | 0...0 | 0...0 | 0...0 |
| | 0...0 | 0...0 | 0...0 | 0...0 | 0...0 | 0...0 | 0...0 | 0...0 | 0...0 | 0...0 | 0...0 | 0...0 | 0... | 0...0 | 0...0 | 0...0 |
| | 0000. | 0...0 | 0000. | .000. | ..0.. | 0...0 | 0...0 | 0...0 | .0.0. | .0.0. | ...0. | .0... | .0... | ...0. | 0...0 | |
| | 0... | 0.0.0 | 0.0.. | ...0 | ..0.. | 0...0 | 0...0 | 0.0.0 | .0.0. | ..0.. | .0... | .0... | ...0. | ...0. | | |
| | 0... | 0.0.0 | 0.0.0 | 0...0 | ..0.. | 0...0 | .0.0. | 0.0.0 | 0...0 | ..0.. | 0... | .0... | ...0. | ...0. | | |
| | 0... | .00.0 | 0...0 | .000. | ..0.. | .000. | ..0.. | .0.0. | 0...0 | ..0.. | 00000 | .000. | | .000. | | 00000 |
| 60H | ..0.. | | 0... | | ...0 | | ...0. | | 0... | ..0.. | ...0. | 0... | .00.. | | | |
| | ...0. | | 0... | | ...0 | | ..0.0 | | 0... | ..0.. | | 0... | ..0.. | | | |
| | | .000. | 0000. | .0000 | .0000 | .000. | ..0.. | .0000 | 0000. | .00.. | ...0. | 0.0.0 | ..0.. | 00.00 | 0.00. | .000. |
| | | ...0 | 0...0 | 0... | 0...0 | 0...0 | .000. | 0...0 | 0...0 | ..0.. | ...0. | 0.0.0 | ..0.. | 0.0.0 | 00..0 | 0...0 |
| | | .0000 | 0...0 | 0... | 0...0 | 00000 | ..0.. | .0000 | 0...0 | ..0.. | ...0. | 00... | ..0.. | 0.0.0 | 0...0 | 0...0 |
| | | 0...0 | 0...0 | 0... | 0...0 | 0... | ..0.. | ...0 | 0...0 | ..0.. | 0.0.0 | 0.0.0 | ..0.. | 0.0.0 | 0...0 | 0...0 |
| 70H | | .0000 | 0000. | .0000 | .0000 | .000. | ..0.. | 0000. | 0...0 | .000. | .00.. | 0.0.0 | .000. | 0...0 | 0...0 | .000. |
| | | | | | ..0. | | | | | | ..00. | ..0.. | .00.. | .00.0 | ..0.. | |
| | 0000. | .0000 | 0.00. | .0000 | 00000 | 0...0 | 0...0 | 0...0 | 0...0 | 0...0 | 00000 | .0... | ..0.. | ...0. | | 0...0 |
| | 0...0 | 0...0 | 00..0 | 0... | ..0.. | 0...0 | 0...0 | 0...0 | .0.0. | 0...0 | ...0. | 0... | | ...0 | | 0...0 |
| | 0000. | .0000 | 0... | .000. | ..0.. | 0...0 | 0...0 | 0.0.0 | ..0.. | .0000 | ..0.. | .0... | ..0.. | ...0. | | 00000 |
| | 0... | ...0 | 0... | ...0 | ..0.0 | 0...0 | .0.0. | 0.0.0 | .0.0. | ...0 | .0... | .0... | ..0.. | ...0. | | |

Table 5-1

5.2 International Character Sets

Table 5-2

5.3 Page 0 (PC437: USA, Standard Europe) (80H – FFH)

Table 5-3

5.4 Page 1 (Katakana) (80H – FFH)

Table 5-4

5.5 Page 2 (PC850: Multilingual) (80H – FFH)

Table 5-5

5.6 Page 3 (PC860: Portuguese) (80H – FFH)

Table 5-6

5.7 Page 4 (PC863: Canadian-French) (80H – FFH)

Table 5-7

5.8 Page 5 (PC865: Nordic) (80H – FFH)

Table 5-8

5.9 Page 6 (Slavonic) (80H – FFH)

Table 5-9

5.10 Page 7 (Russia) (80H – FFH)

Table 5-10

5.11 Page 19 (PC858 Euro) (80H – FFH)

Table 5-11

5.12 Page 16 (WPC1252) (80H – FFH)

Table 5-12

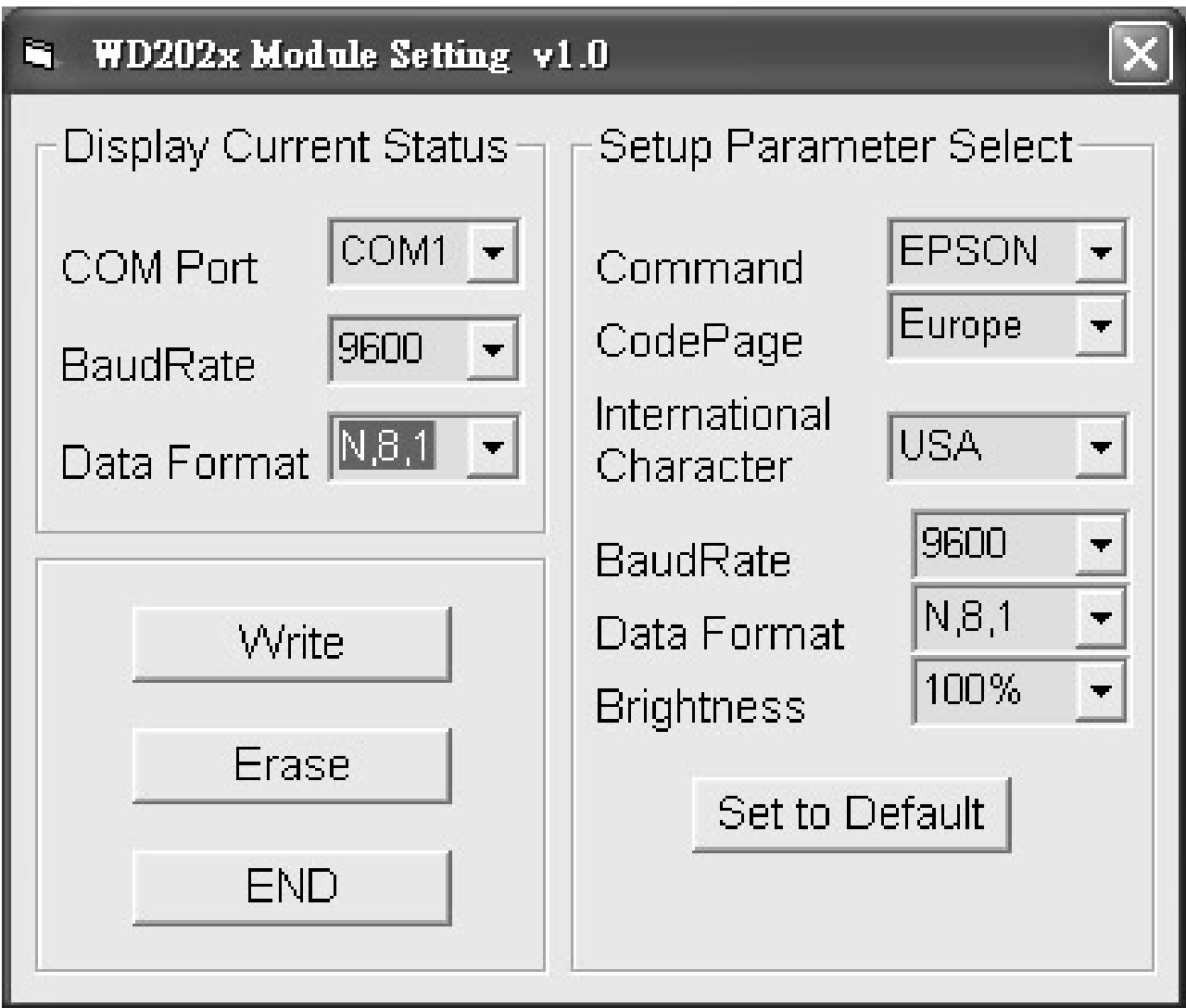
5.13 Page 12 (Greek) (80H – FFH)

Table 5-13

WDB-2029x VFD customer display module

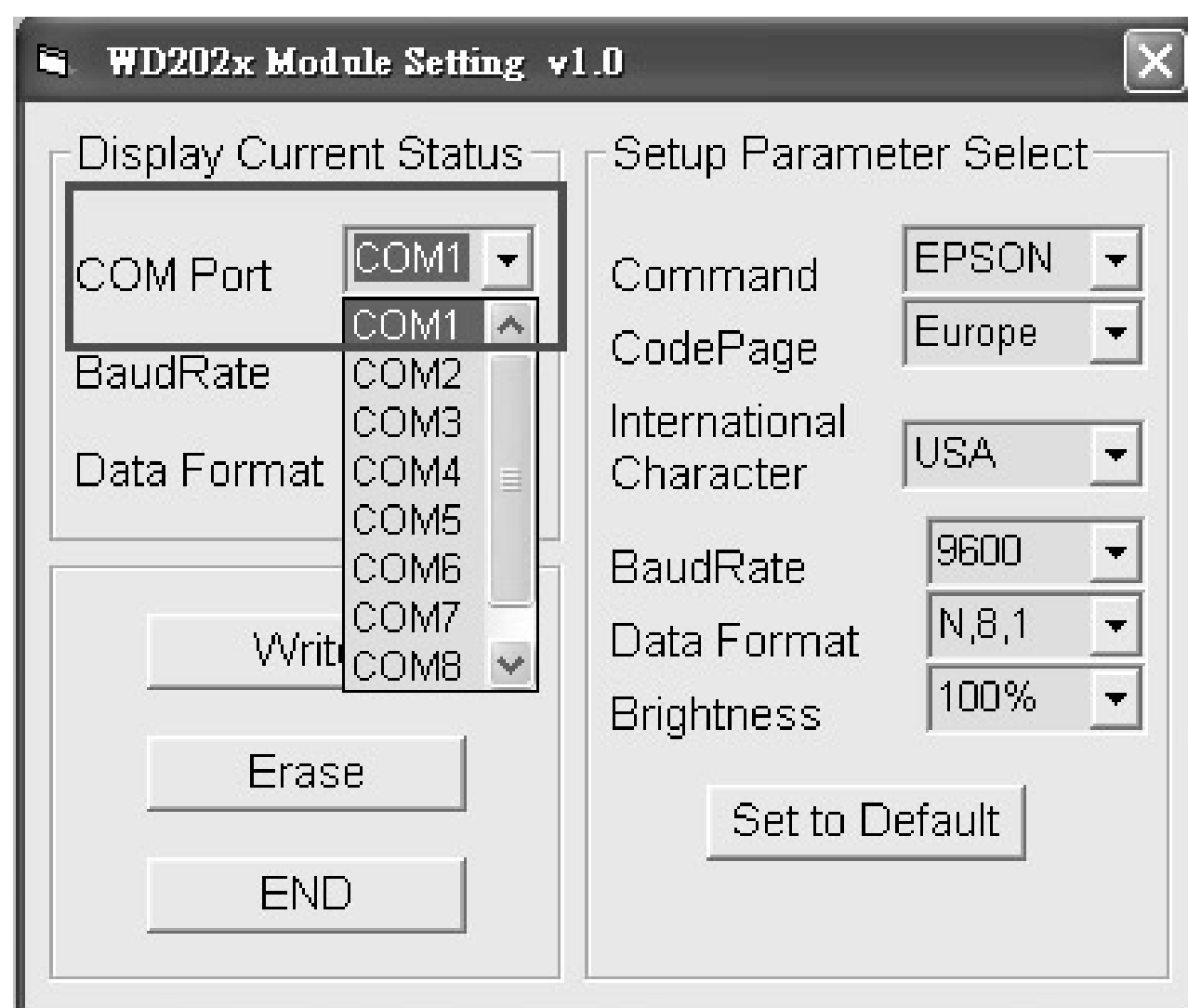
6. CONFIGURE

6.1 Run WD2029 Module Set.exe

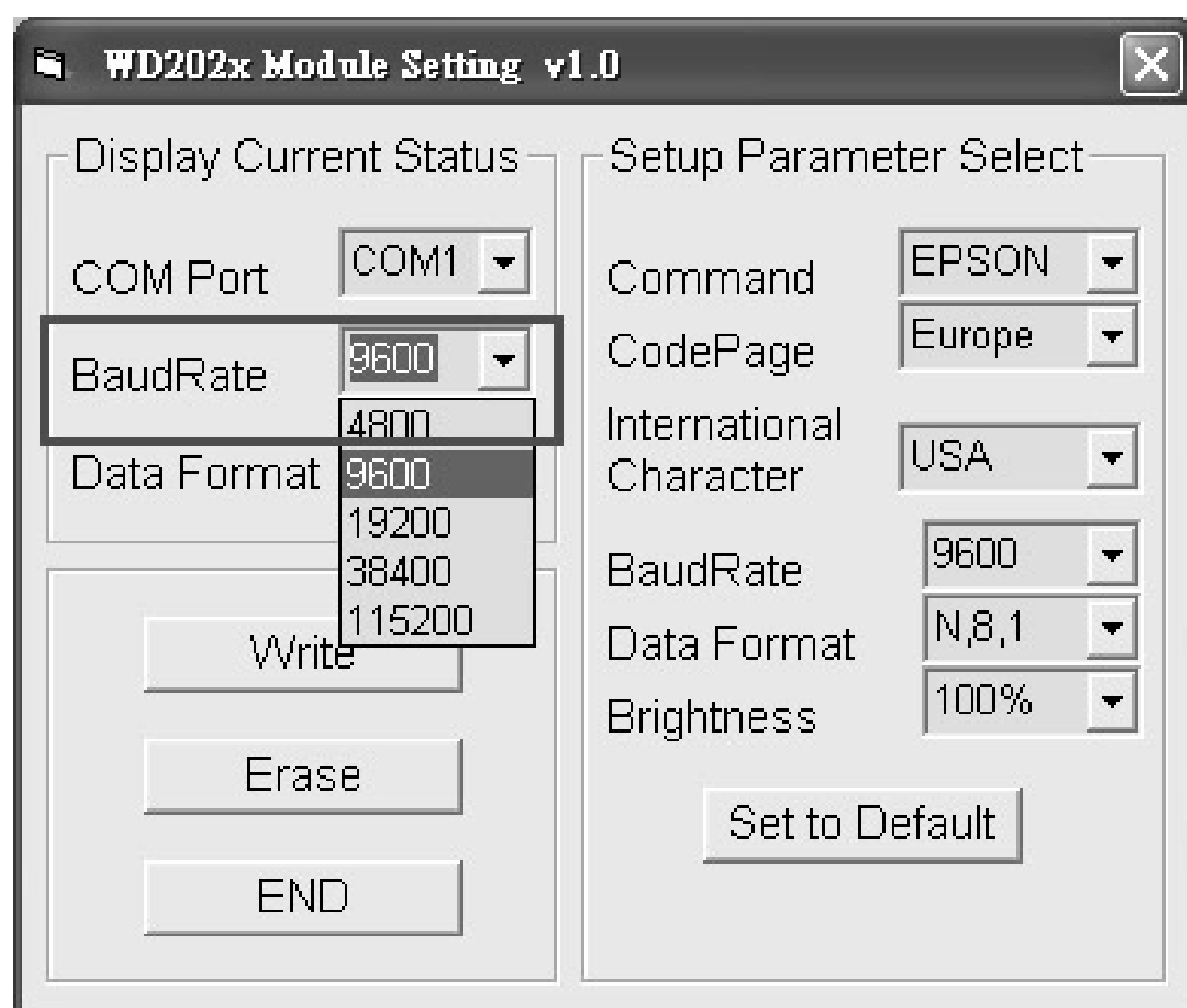


WDB-2029x VFD customer display module

6.2 Select Current Com Port

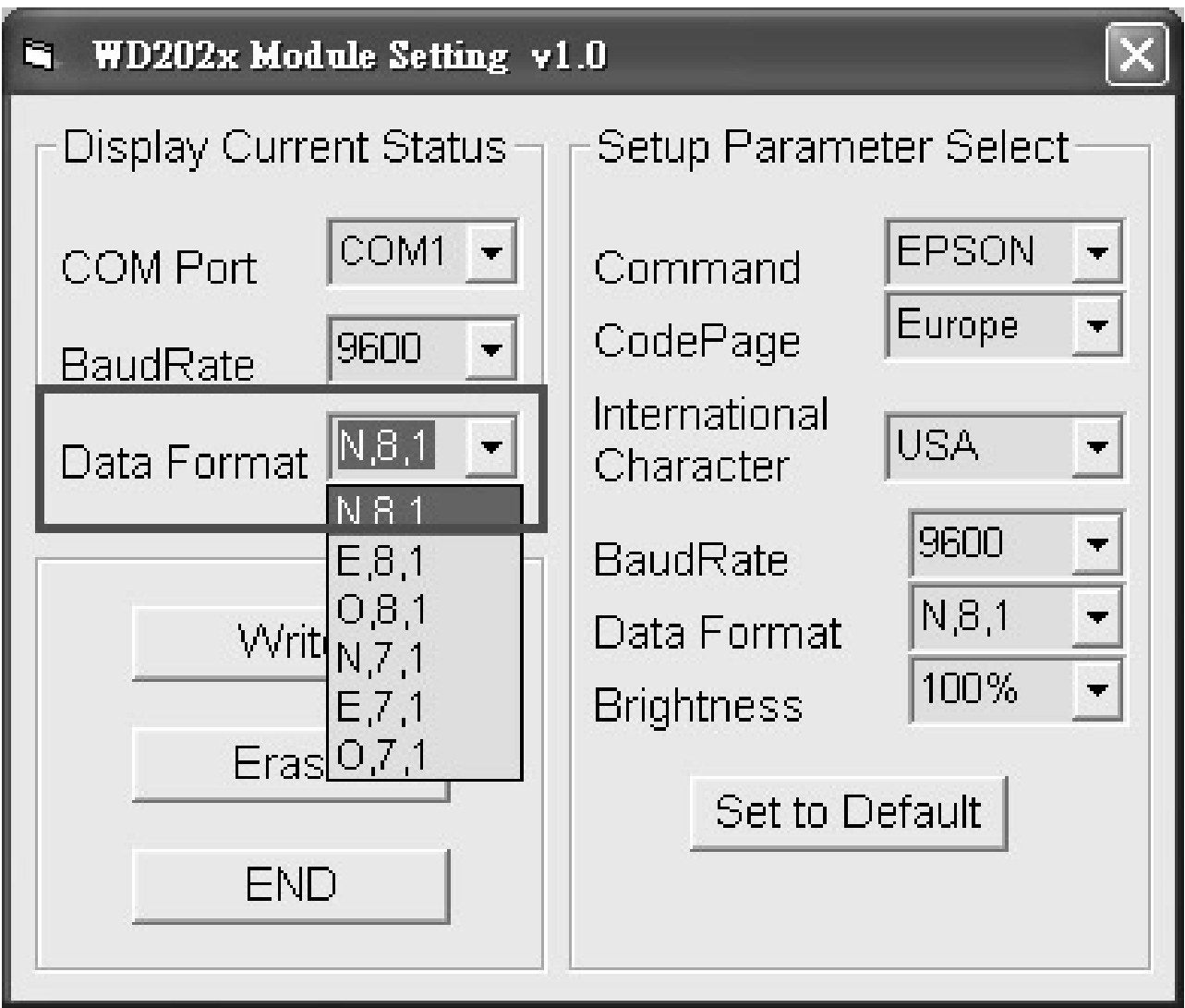


6.2 Select Current Baud Rate

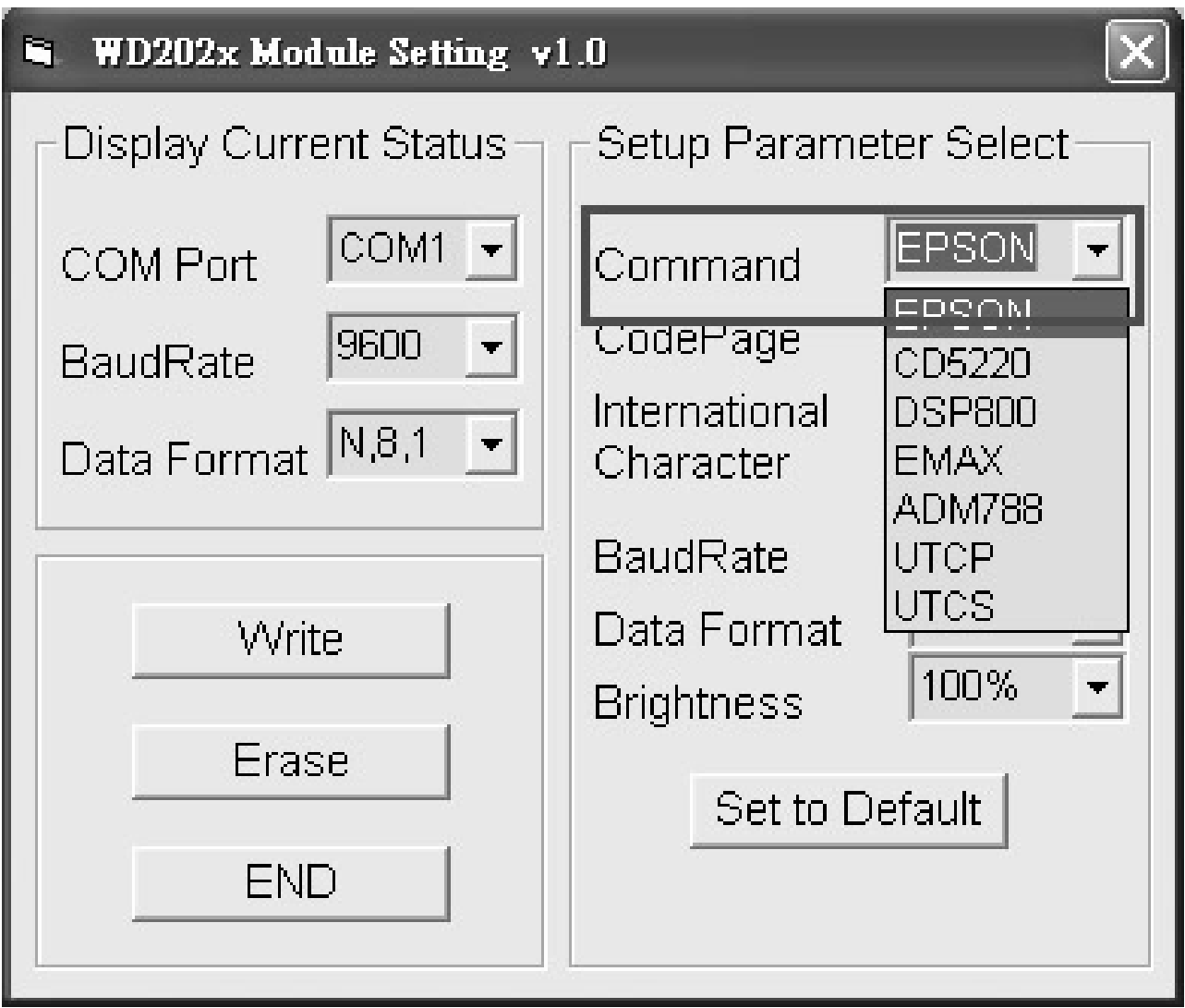


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6.3 Select Current Data Format

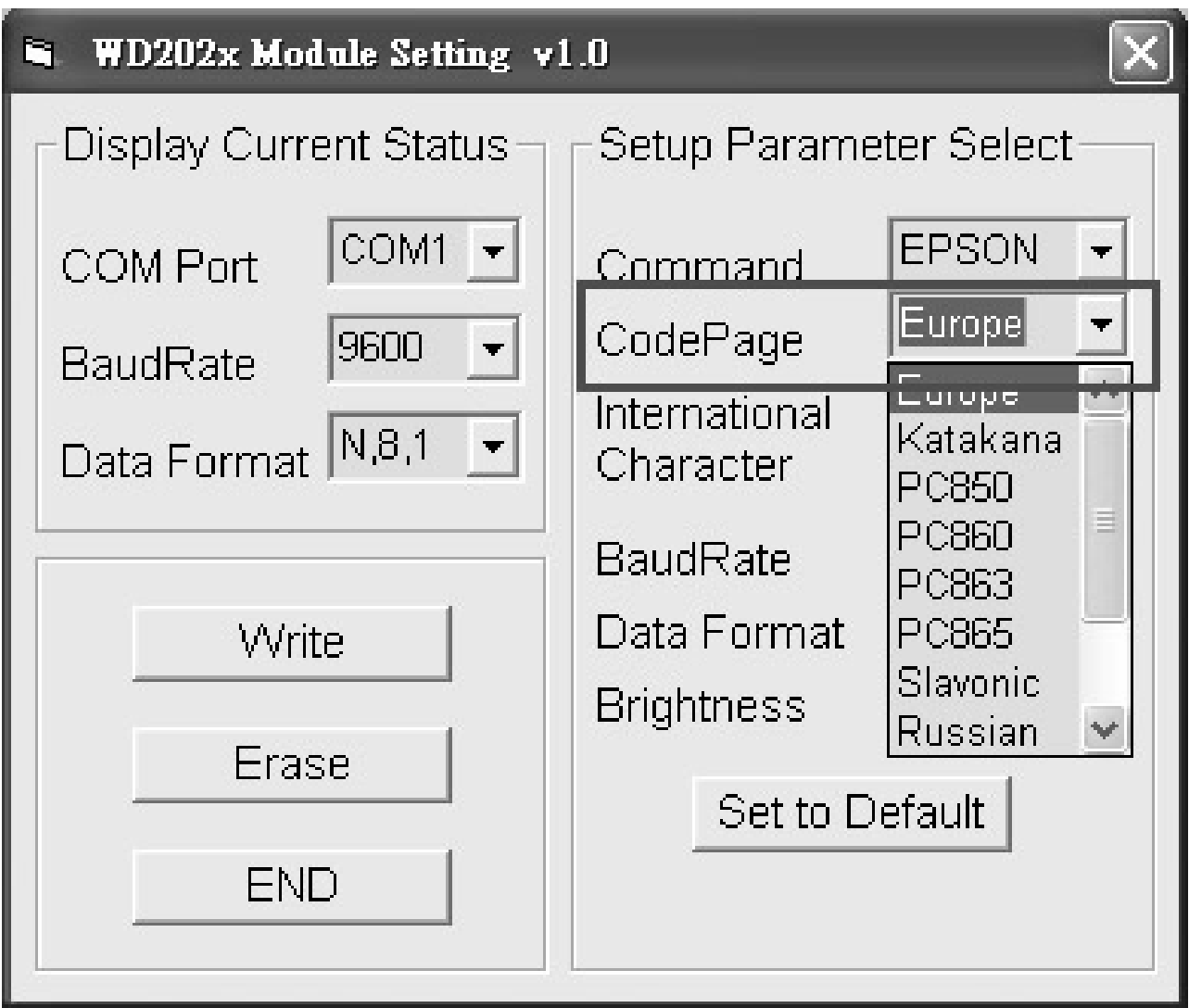


6.4 Select Command

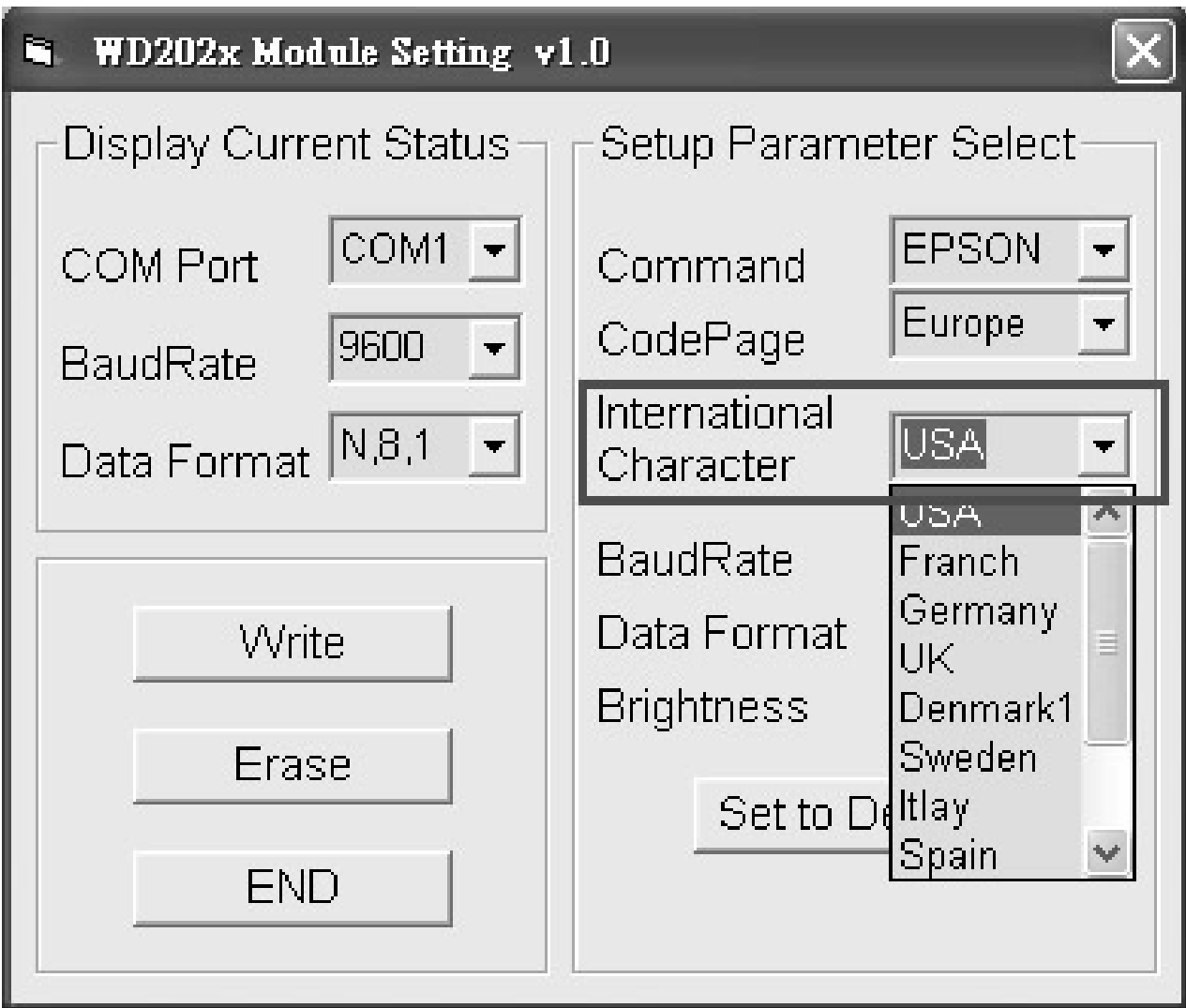


WDB-2029x VFD customer display module

6.5 Select Codepage

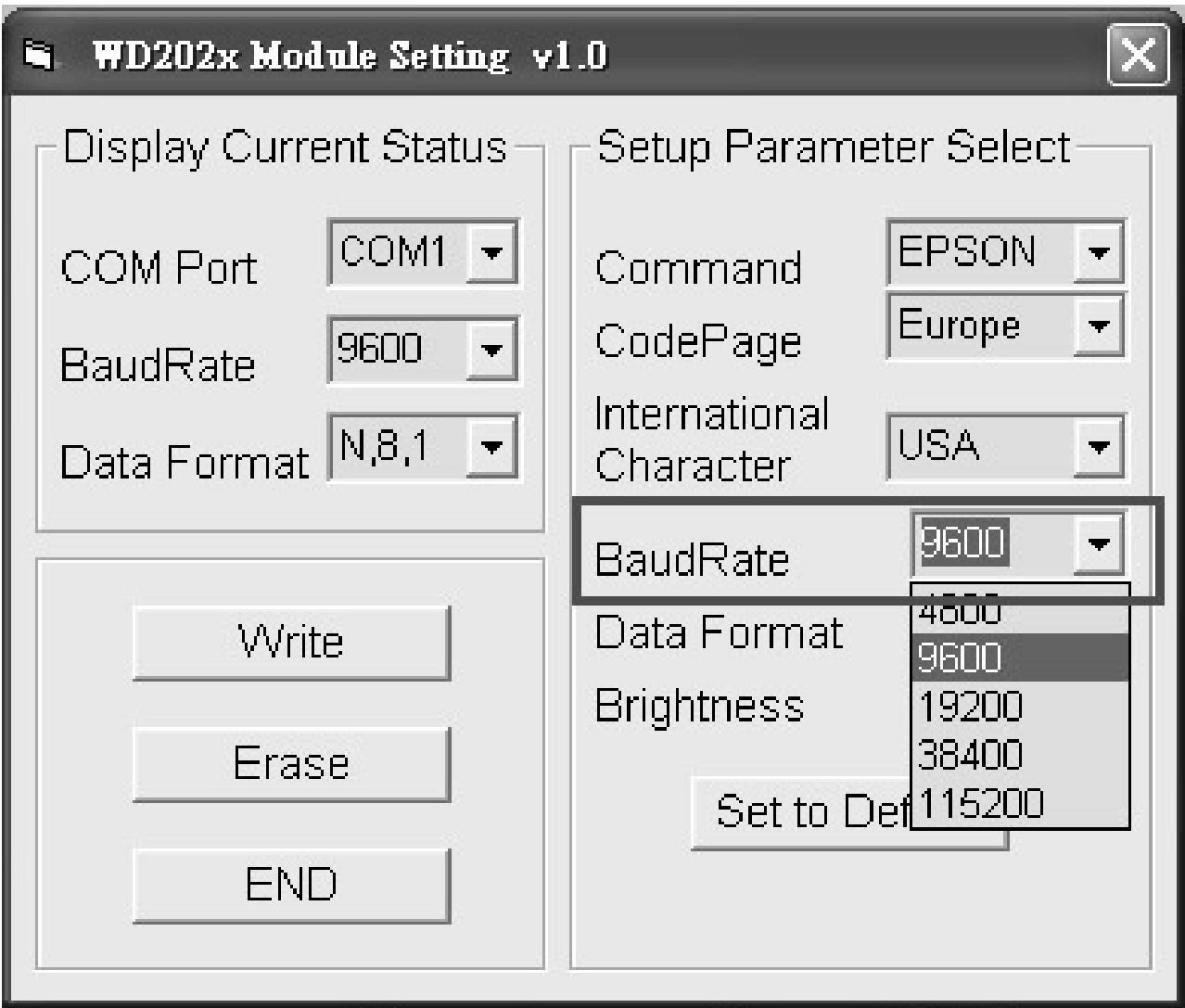


6.6 Select International Character

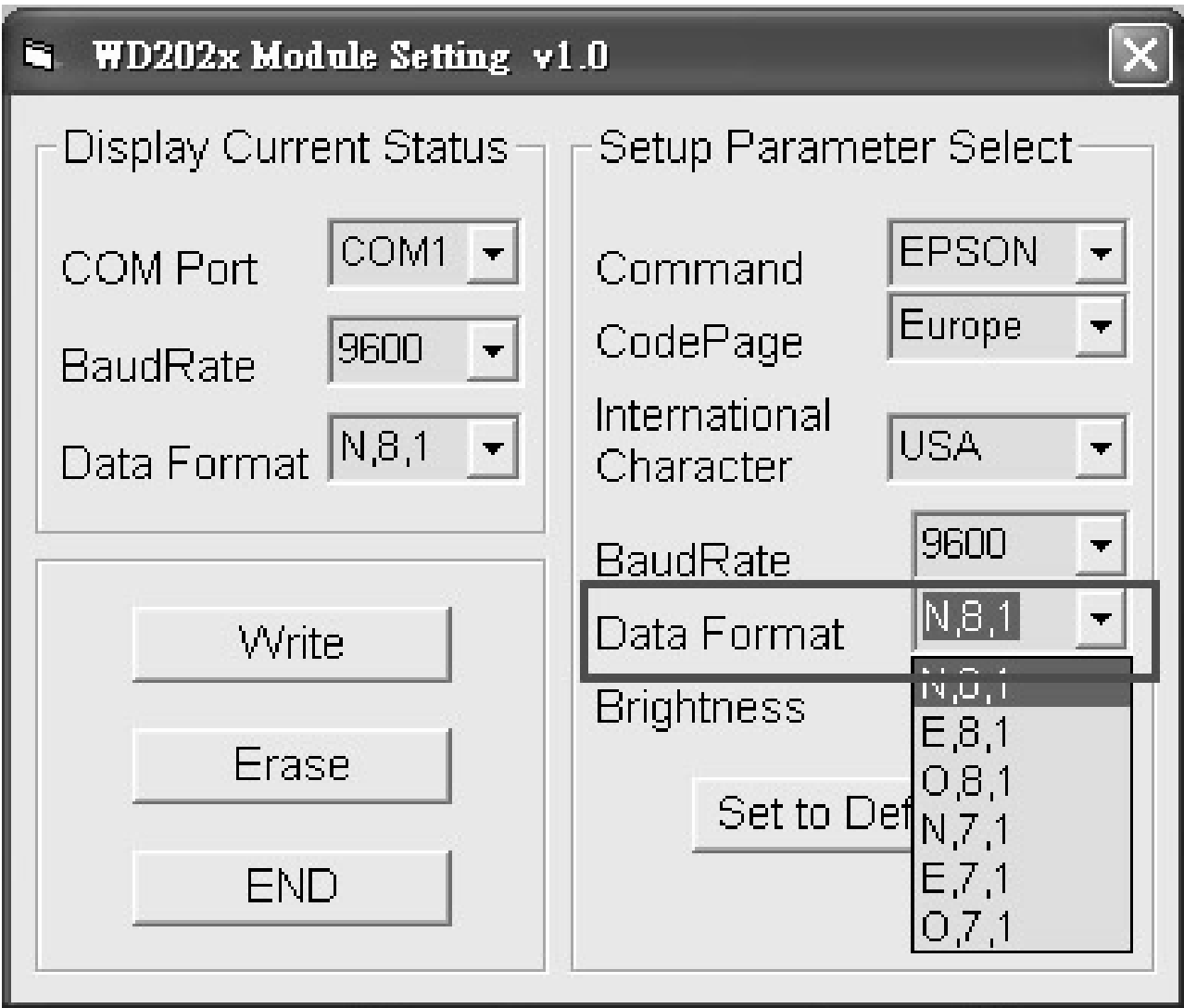


WDB-2029x VFD customer display module

6.7 Select Baud Rate

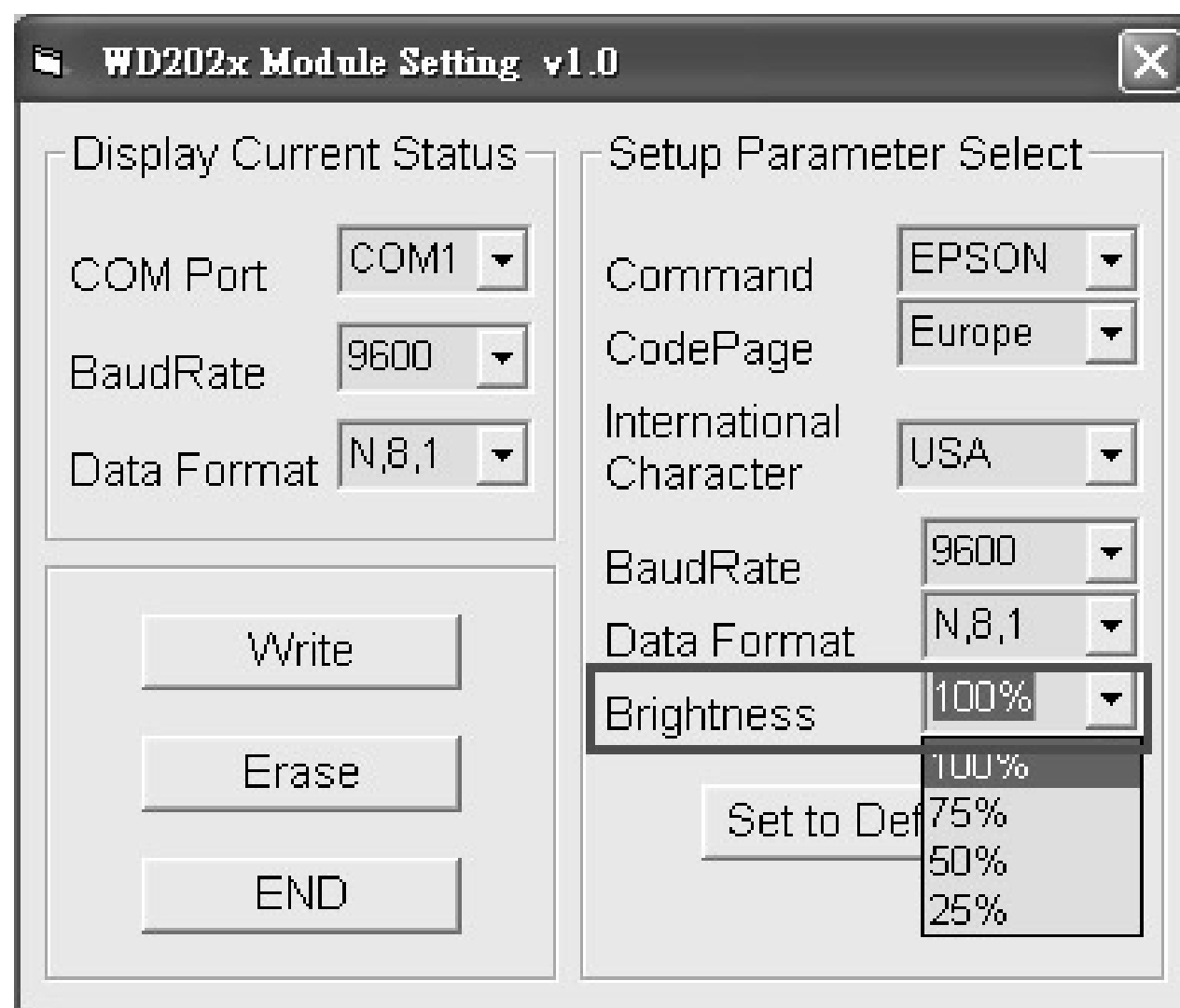


6.8 Select Data Format

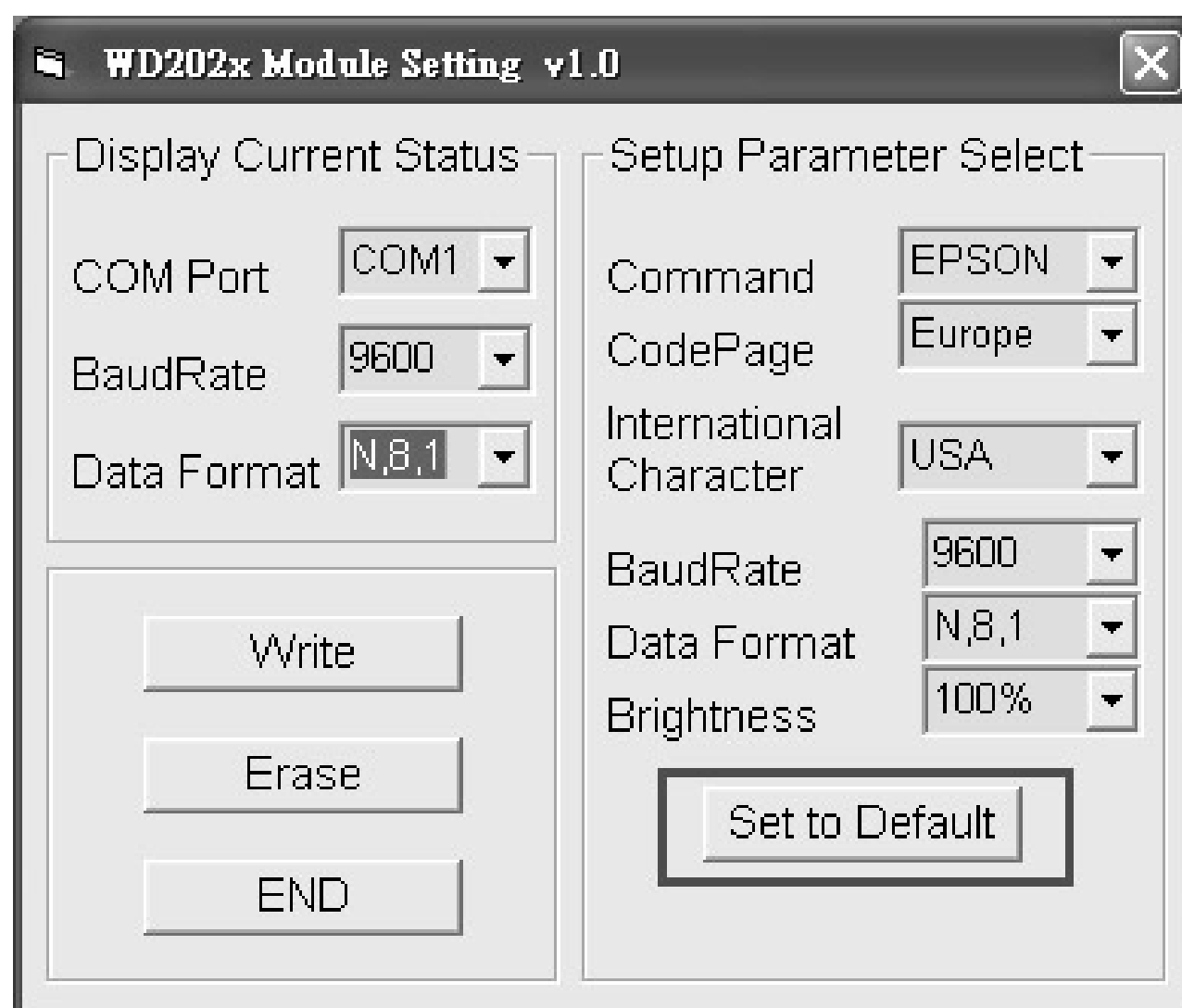


WDB-2029x VFD customer display module

6.9 Select Brightnes

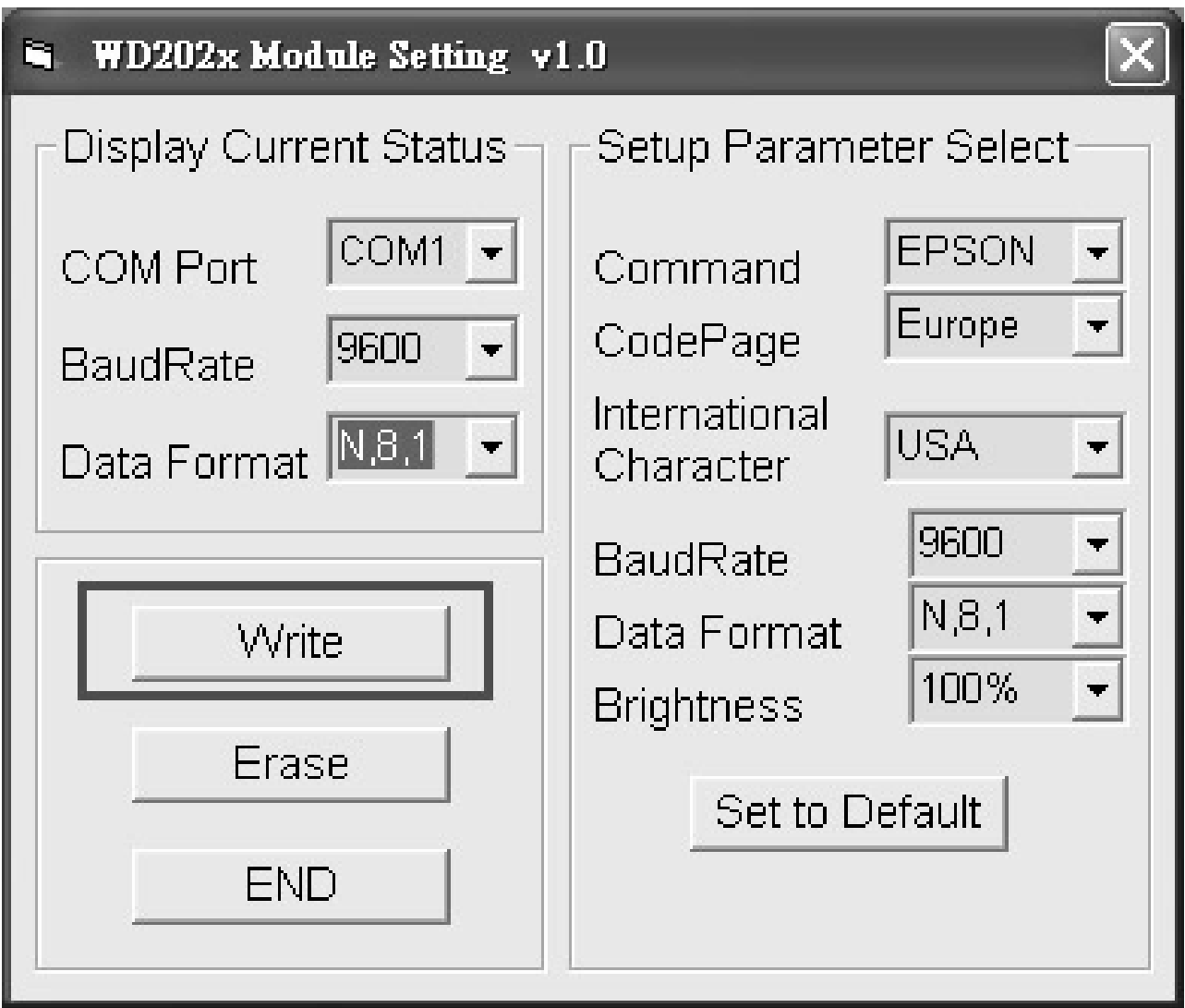


6.10 Set to Default

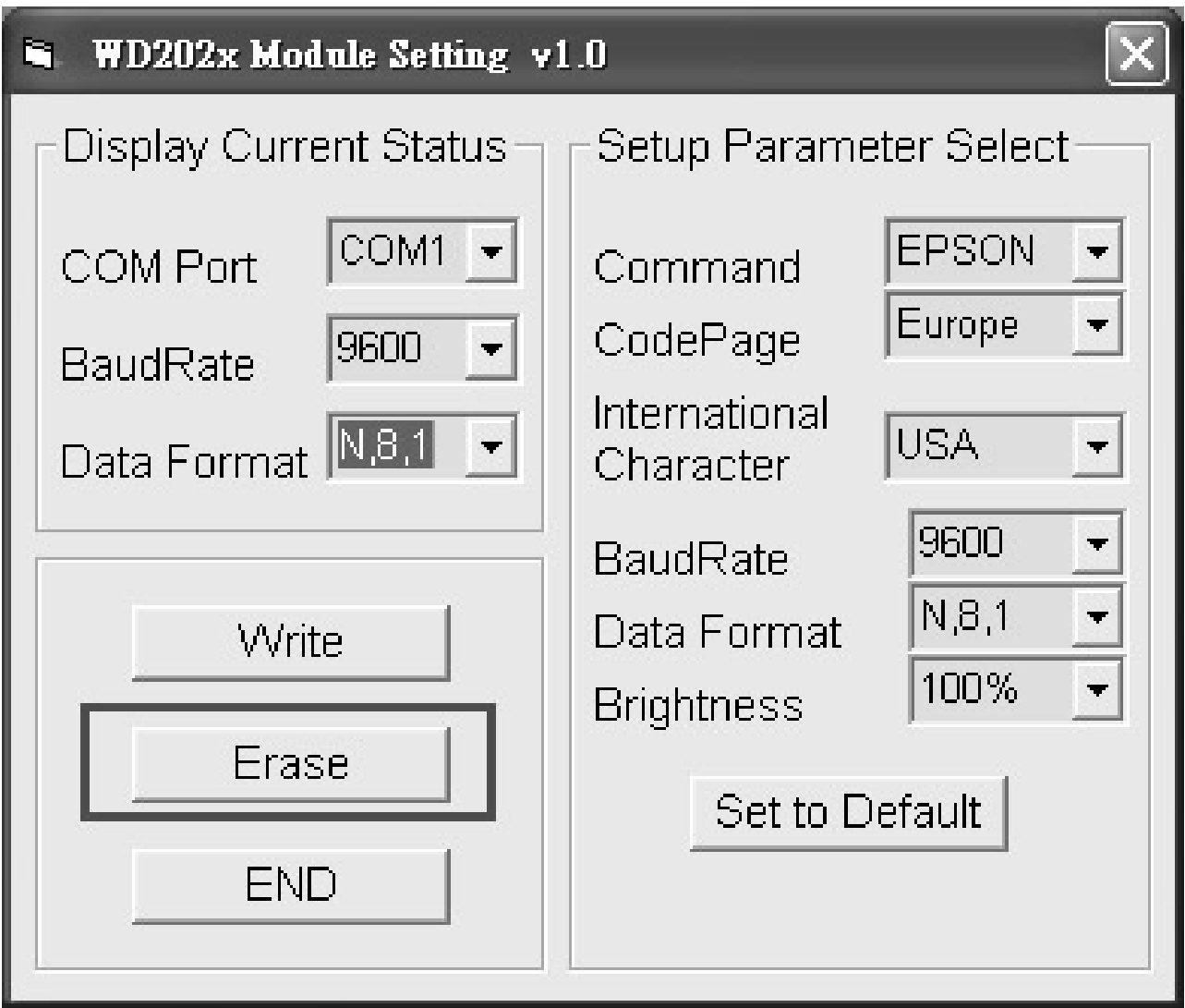


WDB-2029x VFD customer display module

6.11 Write to Display

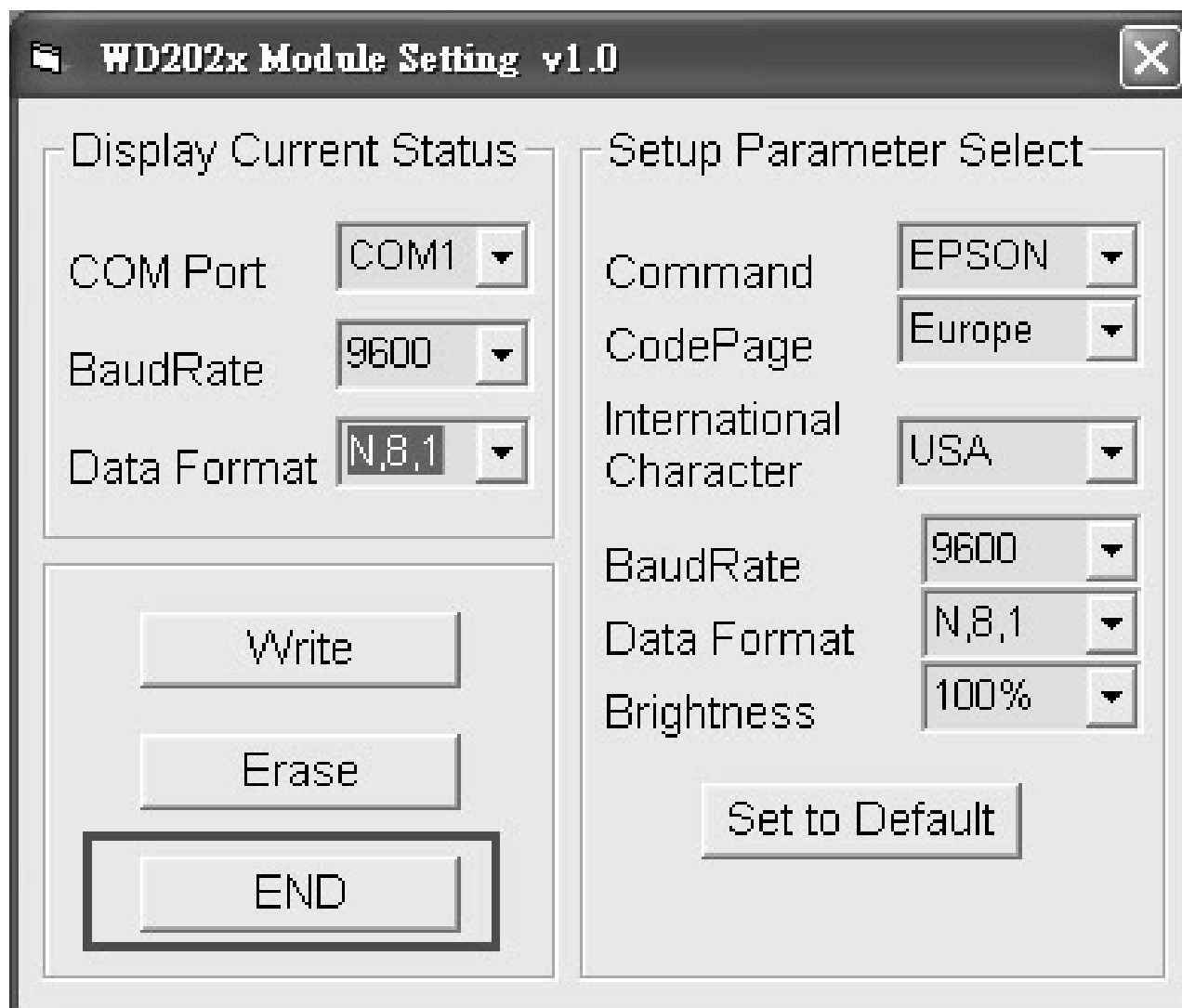


6.12 Erase



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6.13 Close Program



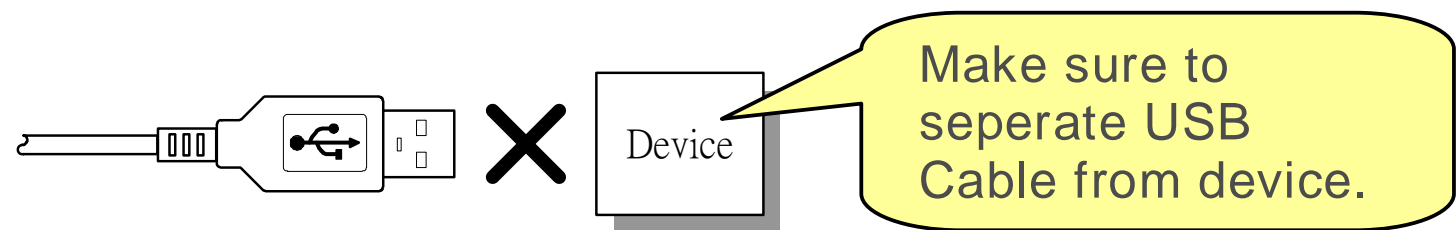
The image shows a Windows-style dialog box titled "WD202x Module Setting v1.0". It is divided into two main sections: "Display Current Status" on the left and "Setup Parameter Select" on the right. The "Display Current Status" section contains three dropdown menus: "COM Port" set to "COM1", "BaudRate" set to "9600", and "Data Format" set to "N,8,1". Below these are three buttons: "Write", "Erase", and "END" (which is highlighted with a thick border). The "Setup Parameter Select" section contains five dropdown menus: "Command" set to "EPSON", "CodePage" set to "Europe", "International Character" set to "USA", "BaudRate" set to "9600", and "Data Format" set to "N,8,1". There is also a "Brightness" dropdown menu set to "100%". At the bottom of this section is a "Set to Default" button.

| Section | Parameter | Value |
|------------------------|-------------------------|--------|
| Display Current Status | COM Port | COM1 |
| | BaudRate | 9600 |
| | Data Format | N,8,1 |
| Setup Parameter Select | Command | EPSON |
| | CodePage | Europe |
| | International Character | USA |
| | BaudRate | 9600 |
| | Data Format | N,8,1 |
| | Brightness | 100% |

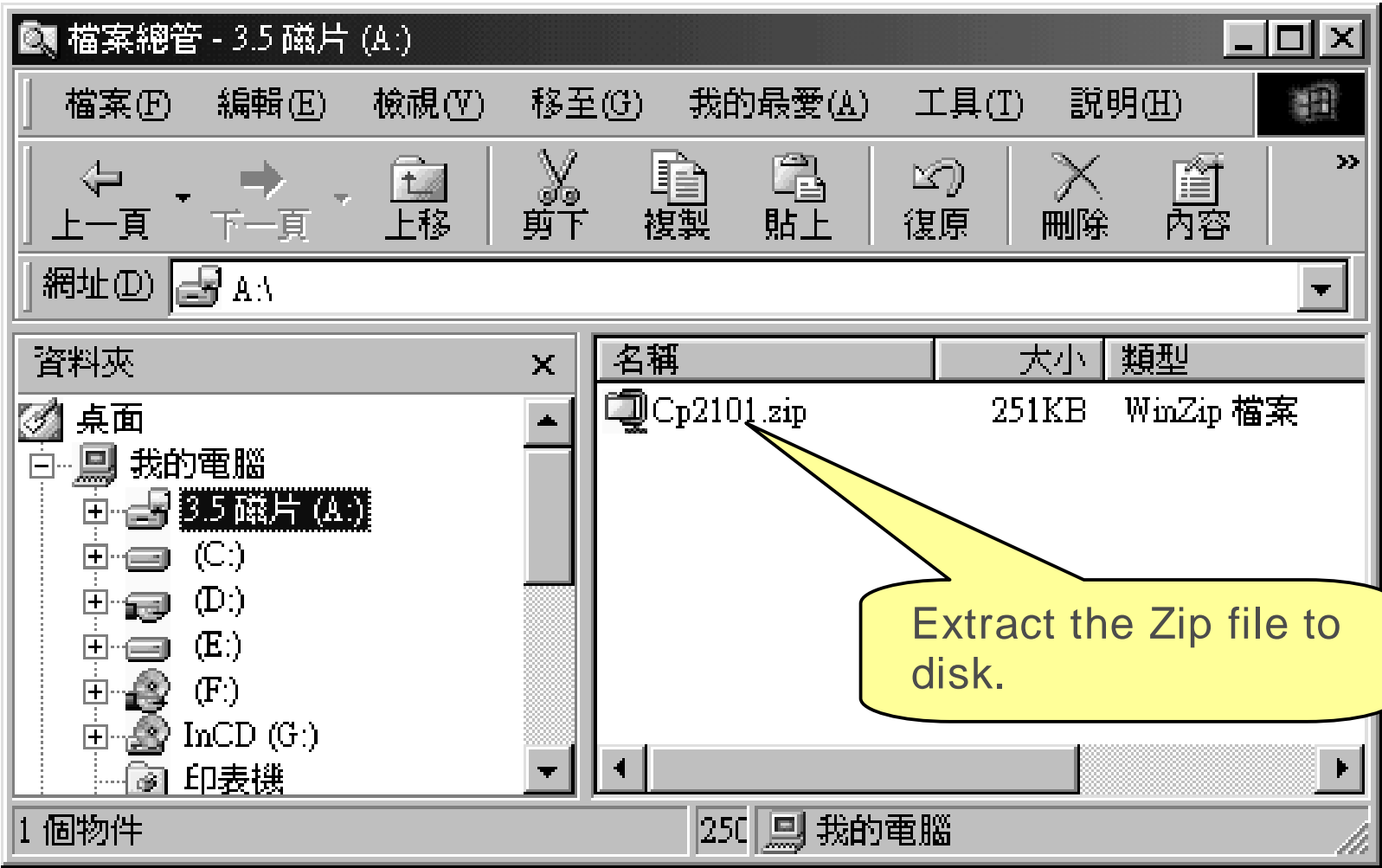
WDB-2029x VFD customer display module

7. USB Bridge Driver installation process

1.

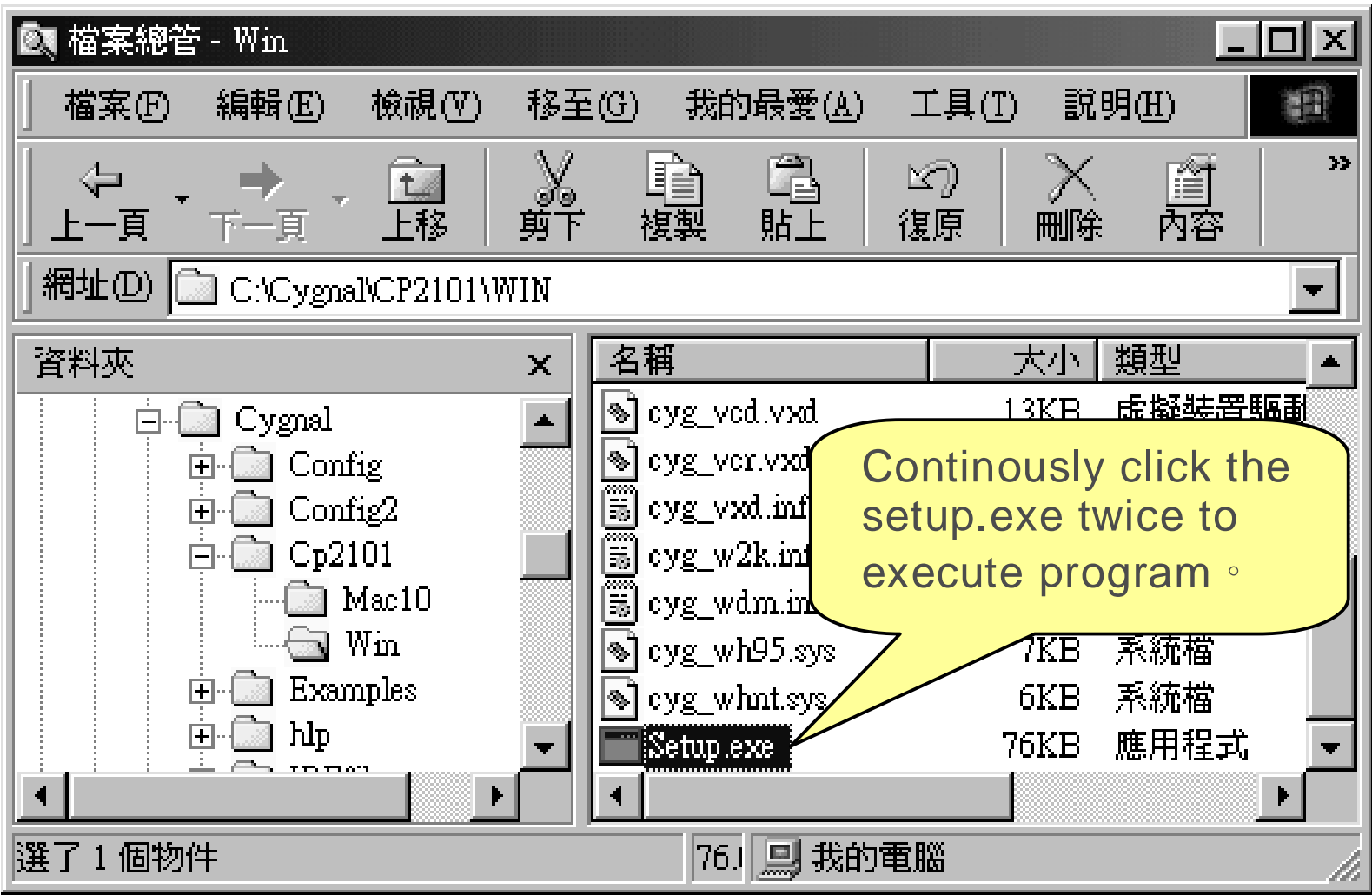


2.

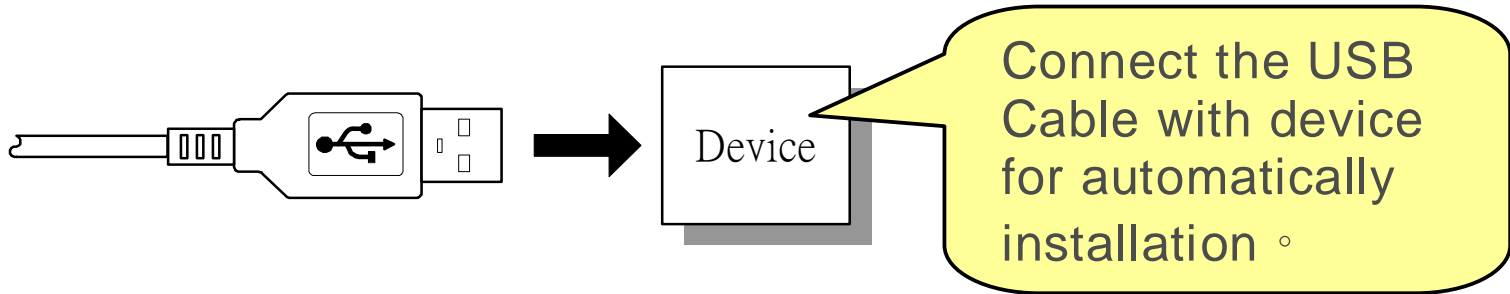


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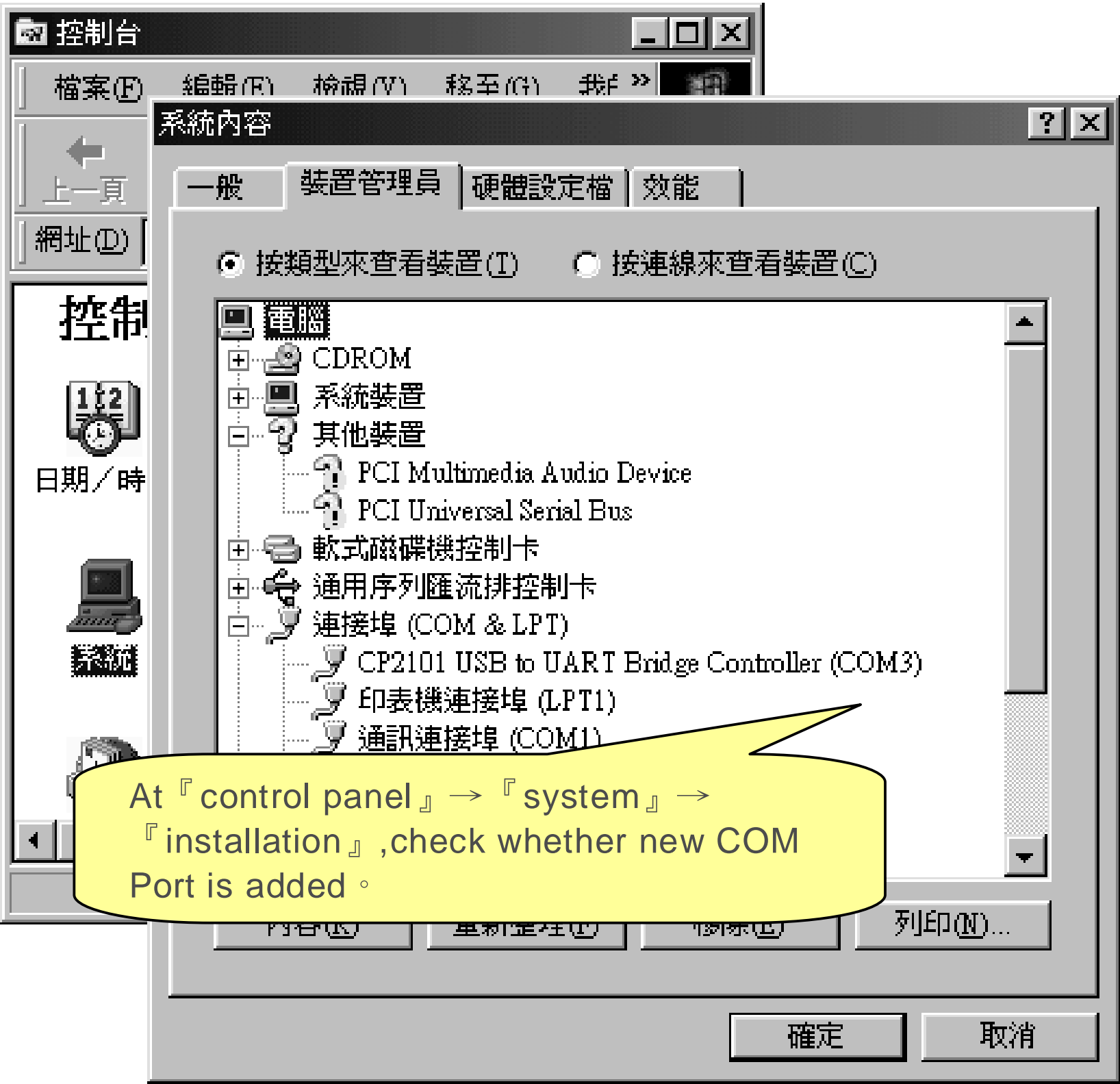
3.



4.

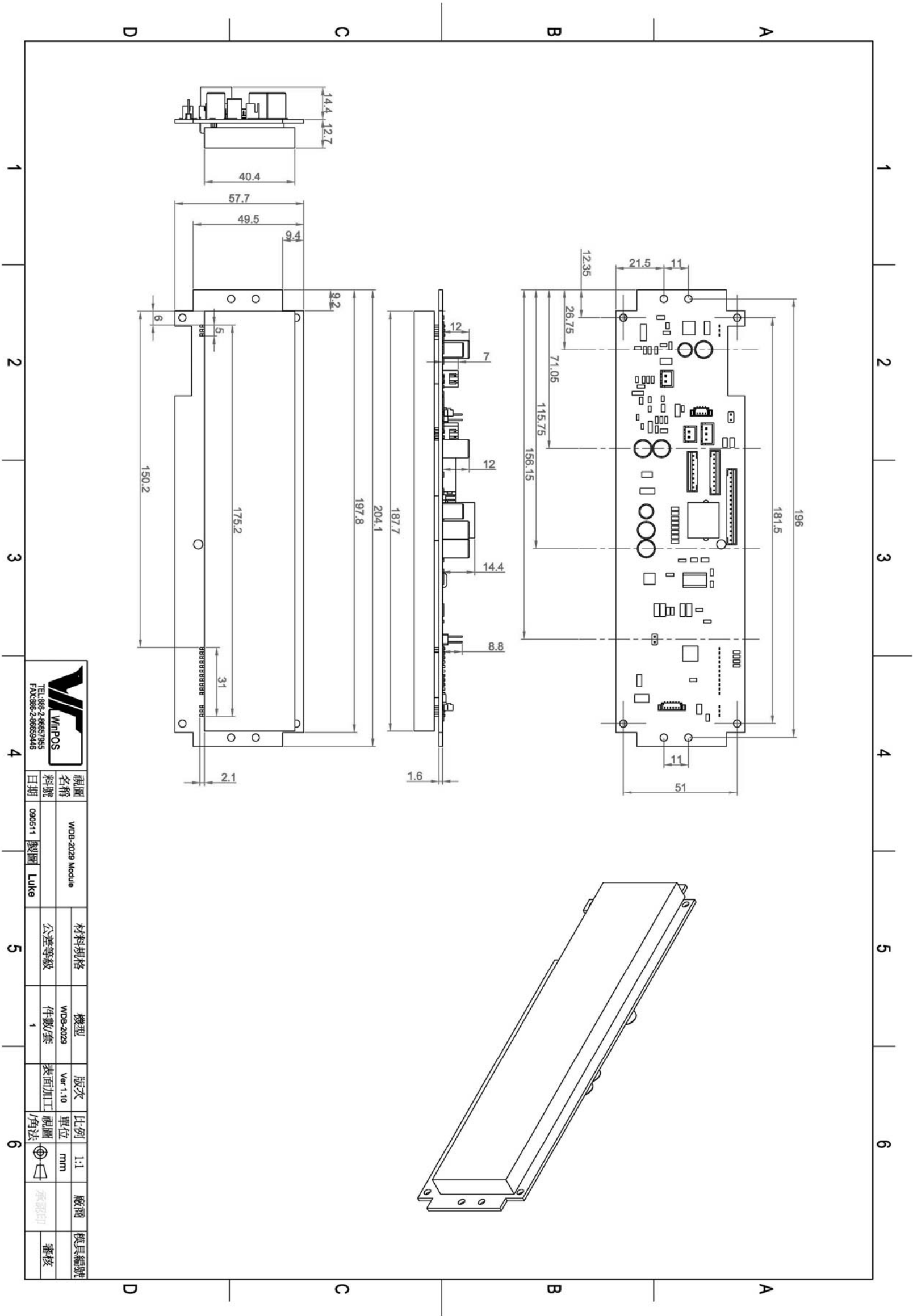


5.

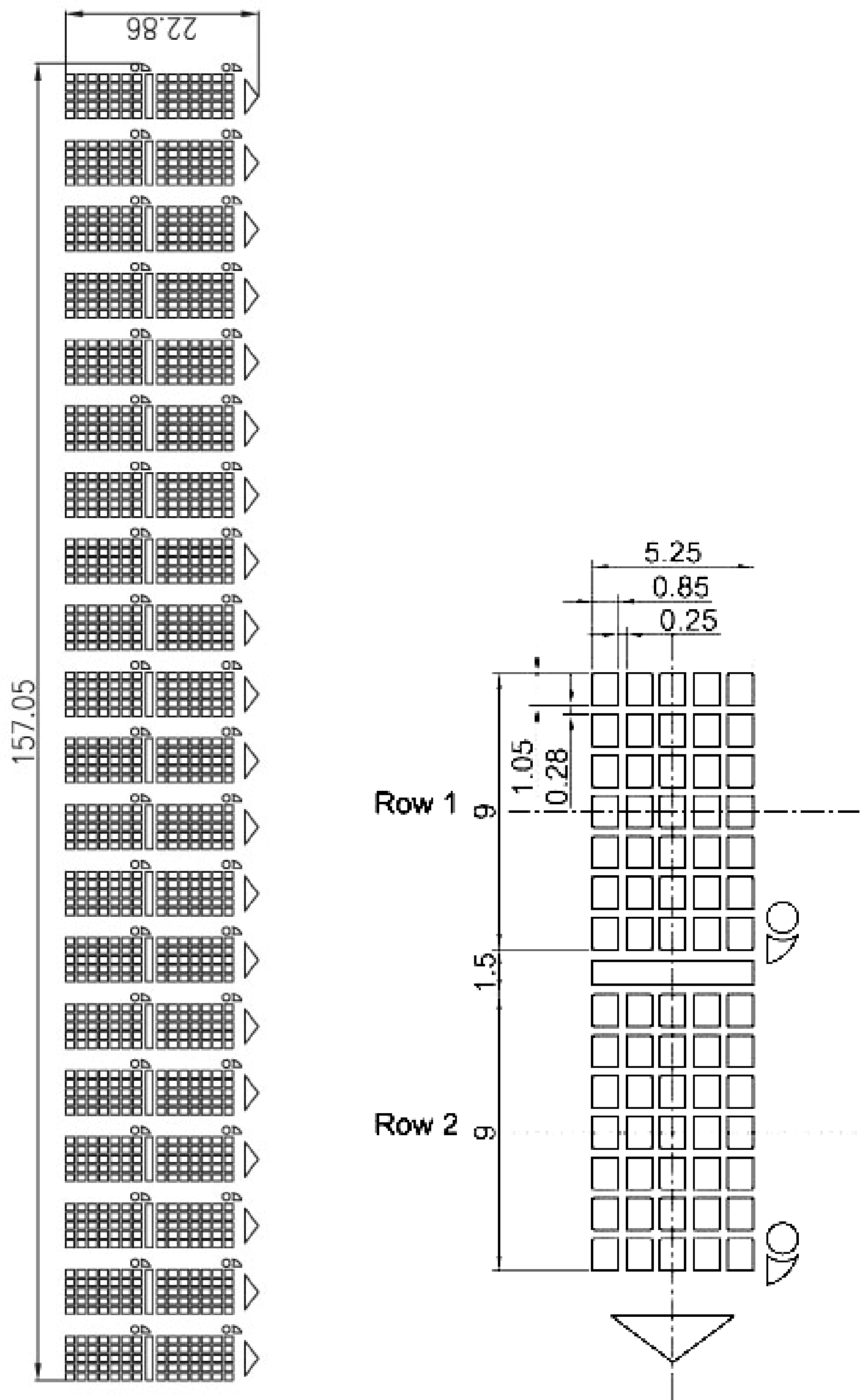


WDB-2029x VFD customer display module

APPENDIX A: Display Module Dimension



WDB-2029x VFD customer display module



WDB-2029x VFD customer display module

Unit : mm

Outline Drawing (Unit:mm)

