

Product Transition Guide

Old PN: NHD-1.69-160128UGC3 | New PN: NHD-1.69-160128UBC3

The new 1.69" OLED display has been designed with the same mechanical footprint as the older display. However, the new OLED display is not a drop-in replacement for the old model. The new display uses the SSD1333 driver IC, which has a different command table than the previous driver IC.

The purpose of this document is to highlight and explain the key differences that need to be accounted for when transitioning to the new 1.69" OLED display model.

Design Improvements

- Controller IC upgraded to SSD1333
 - Supports a wider input voltage range
 - Adds support for I²C interface

Display Models

	NHD-1.69-160128UGC3	NHD-1.69-160128UBC3
Display Type	Color OLED	Color OLED
Resolution	160 x 128	160 x 128
Outer Dimensions	45.0 x 52.0 x 5.1 mm	45.0 x 52.0 x 5.1 mm
Active Area	33.575 x 26.864 mm	33.575 x 26.864 mm
Pinout	See below	See below
Driver IC	SEPS525	SSD1333
Software Timing	See datasheet	See datasheet
Interface	8-bit 6800	8-bit 6800
	8-bit 8080	8-bit 8080
	4-wire SPI	4-wire SPI
Supply Voltage	2.7V – 3.3V	I ² C
		2.7V - 3.5V
Brightness	90 cd/m ²	100 cd/m ²



Pinout Comparison

	NHD-1.69-160128UGC3	NHD-1.69-160128UBC3
Pin #	Signal	Signal
1	GND	GND
2	V _{DD}	V _{DD}
3	NC	NC
4	D/C	*D/C#
5	R/W	*R/W#
	/WR	*WR#
6	E	E
	/RD	*RD#
7	DB10	*D0
8	DB11	*D1
9	DB12	*D2
10	DB13	*D3
11	DB14	*D4
12	DB15	*D5
13	DB16	*D6
14	DB17	*D7
15	GND	GND
16	/RES	*RES#
17	/CS	*CS#
18	GND	GND
19	PS	BS1
20	CPU	BS2

*Symbols have been updated for the new model; however, the same electrical function can be expected.
 Parallel interface pinout shown. For SPI and I²C pinout, see datasheet.

Software

- Initialization
 - Please refer to the initialization section of the [example code](#) for this display
- Command Table
 - Please refer to the command table on pages 8-13 of the [SSD1333 Appendix](#)

For additional support on transitioning to our new OLED module, or questions about other products, please contact us through any of our technical support channels listed below:

Email: nhtech@newhavendisplay.com

Online Support Center: [Contact an Engineer](#)

Forum: [Community Forum](#)

Phone: (847) 844-8795

