

Product Transition Guide

Old PN: NHD-C128128BZ-FSW-GBW_Rev1A | New PN: NHD-C128128BZ-FSW-GBW_Rev1B

The ST7528 controller IC used in this display has been discontinued by the IC manufacturer. The controller IC in the new revision of the LCD has been upgraded to ST75160i. The new IC's instruction set and initialization sequence are different than the previous IC. Details of the changes are described below.

The new LCD version adds support for I²C interface which can be selected by using the interface select signals. There is a small change to the mechanical dimensions of the FPC, which is detailed below.

The new revision of the display does not require external capacitors to be added by the user. These capacitors have been added on the FPC cable as a design improvement. The pins that previously required a capacitor have been changed to no-connects. Details of the pinout change are described below.

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

Design Improvements

- Controller/driver IC upgraded to ST75160i
 - New IC supports additional commands and has better long-term availability
- Additional interface support
 - New LCD revision supports I²C interface
- V_{OUT}, V_{IN}, V₄, V₃, V₂, V₁, V₀, and INTR pins changed to no-connect (Capacitors added to FPC)
 - User does not need to add capacitors externally



Display Models

	NHD-C128128BZ-FSW-GBW_Rev1A	NHD-C128128BZ-FSW-GBW_Rev1B
Display Type	STN(+)	STN(+)
Display Mode	Transflective	Transflective
Resolution	128 x 128	128 x 128
Outer Dimensions	71.3 x 75.41 x 5.9mm	71.3 x 75.41 x 5.9mm
Active Area	56.3 x 56.3mm	56.3 x 56.3mm
FPC Size & Shape	See datasheet	See datasheet
Pinout	See below	See below
Driver IC	ST7528i	ST75160i
Software Timing	See datasheet	See datasheet
Interface	Parallel 8080	Parallel 8080
	Parallel 6800	Parallel 6800
	3-line SPI	3-line SPI
	4-line SPI	4-line SPI
		I ² C
LCD Voltage	2.7V – 3.3V	2.7 – 3.3V
Backlight	45mA @ 3.3V	45mA @ 3.3V
Optimal View	6:00	6:00

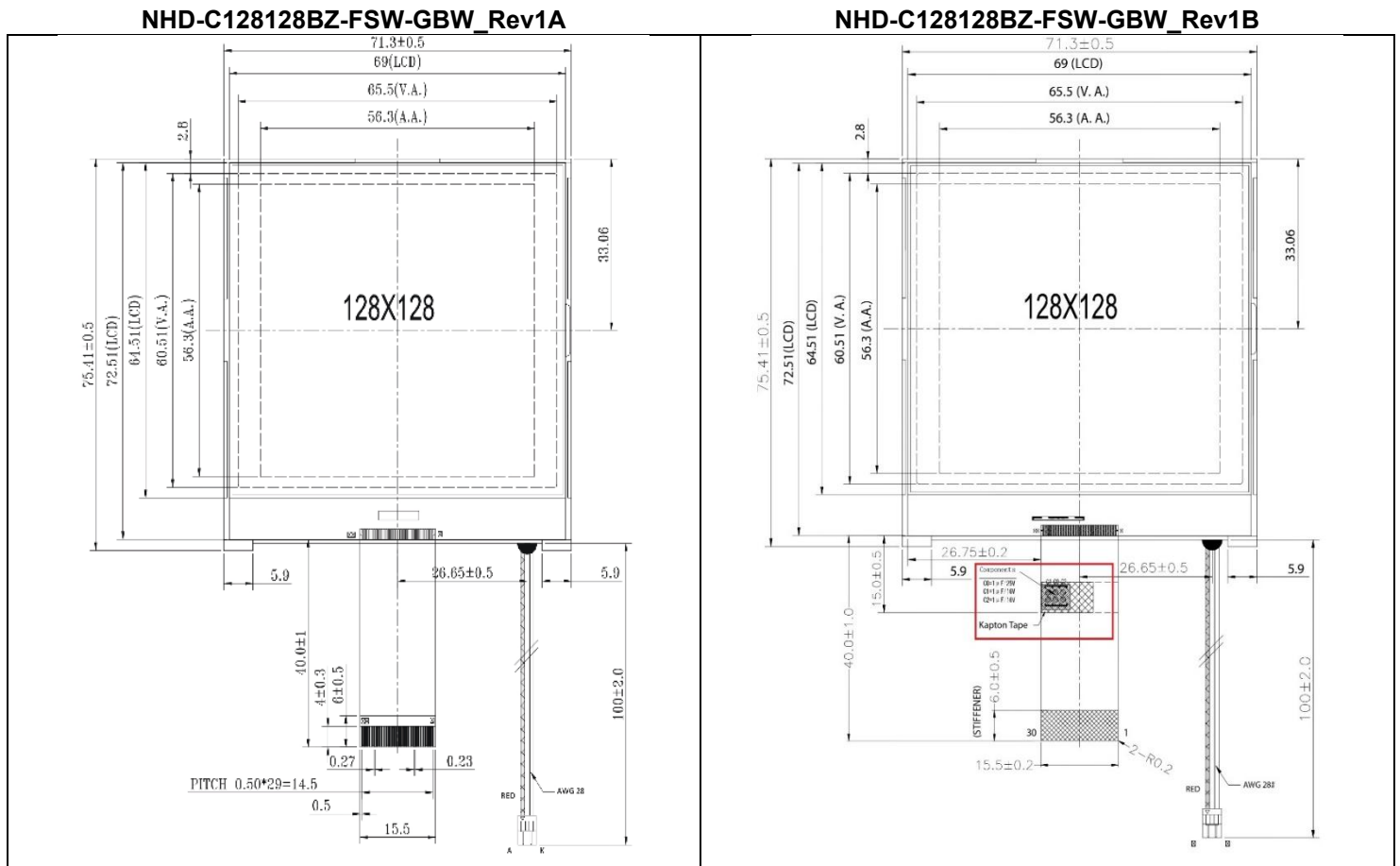
Pinout Comparison

	NHD-C128128BZ-FSW-GBW_Rev1A	NHD-C128128BZ-FSW-GBW_Rev1B
Pin #	Signal	Signal
1	PS0	IF0
2	PS1	IF1
3	PS2	IF2
4	CSB	CSB
5	RST	RSTB*
6	A0	A0
7	R/W	R/W
	/WR	/WR
8	E	E
	/RD	/RD
9-16	DB0-DB7	DB0-DB7
17-18	V _{DD}	V _{DD}
19-20	V _{SS}	V _{SS}
21	V _{OUT}	NC
22	V _{IN}	NC
23	V ₄	NC
24	V ₃	NC
25	V ₂	NC
26	V ₁	NC
27	V ₀	NC
28	V _R	NC
29	INTRS	NC
30	NC	NC

*Symbol notation changed but functionality is the same

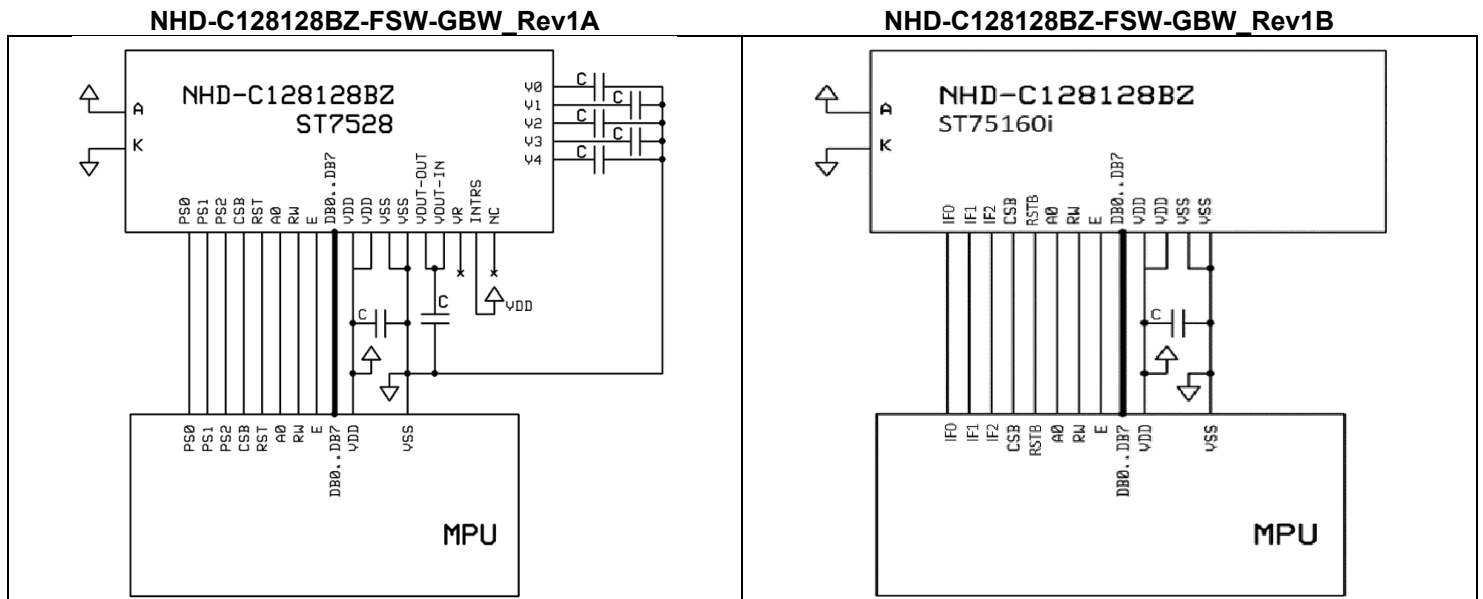


Mechanical Comparison



Hardware

➤ Wiring Diagram



Software

- Initialization
 - Please refer to the initialization section of the [example code](#) for this display
- Instruction Table
 - Please refer to the instruction table on page 55 of the [ST75160i datasheet](#)

For additional support on transitioning to our new COG LCD, 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

