CHANGELOG

STM32 EMBEDDED 7" DISPLAY

Rev. 1.1
2026-02-10

Product Name	Description
RVT70HSSNWN00	IPS, 7.0", 1024x600, 1000cd/m^2, STM32, no touch panel,
RVT70HSSFWN00	IPS, 7.0", 1024x600, 1000cd/m^2, STM32, no touch panel, metal frame
RVT70HSSNWC00-B	IPS, 7.0", 1024x600, 850cd/m^2, STM32, uxTouch, optical bonding
RVT70HSSNWC00	IPS, 7.0", 1024x600, 800cd/m^2, STM32, uxTouch, air bonding
RVT70HSSNWCA0	IPS, 7.0", 1024x600, 800cd/m^2, STM32, aTouch, air bonding
RVT70HSSFWCA0	IPS, 7.0", 1024x600, 800cd/m^2, STM32, aTouch, air bonding, metal frame

1. REVISION RECORD

REV NO.	REV DATE	CONTENTS	REMARKS
1.0	2024-05-20	Initial Release	
1.1	2026-02-10	Added revision V2.0	

2. CONTENTS

3. PCB REV. 2.0

- The 5V DC-DC converter was changed from SIC473ED-TI-GE3 to AP66300.
- The ESD protection circuit was updated by replacing CM1624 (U14, EOL) with ESD diodes and pull-up resistors.
- VSUPPLY signal was added to pin 3 of U9A to support the 2.0 LAN addon.
- The backlight circuit layout was updated.
- DAC1 and DAC2 nets on the Expansion connector were re-routed.
- The SMPS circuit was re-routed.
- Protection diodes were added to the battery circuit according to UL requirements.
- Power and protection circuits were improved through component updates and DC-DC optimization.
- Layout and routing optimizations were introduced to improve signal integrity and manufacturability.
- Changes were implemented to support future expandability (LAN addon readiness).
- Component replacements were introduced due to end-of-life (EOL) availability.
- No software compatibility impact was introduced.
- EEPROM has been added to store hardware revision information for product identification and traceability. This change does not affect product functionality.
- Removed heatsink.

4. PCB REV. 1.3

- The ADC1 In1N_P and ADC3 IN1N_P were re-routed to function differentially.
- LSE X2, C32, and C33 were added to ensure the proper functioning of the RTC.
- The connection of USR_BTN2 to Boot was established, along with the removal of the boot resistor R67.
- USR_BTN2 is connected to PC0 of MCU.
- The 1.27mm backlight select jumpers were replaced with PCB bridges for improved configuration.
- Footprints for U5 and SICxx (DC-DC converter) were meticulously verified and adjusted.
- An ESD diode (D20) was integrated on SWD for enhanced protection.
- The introduction of new capacitors C34 and C35 was effected to enhance the input filter circuit and address EMI concerns.
- R70 was incorporated to bolster the EMC performance for LAN ADDON.
- R69 was added to secure the input enable for the DC-DC converter.
- L12 was modified from 6.8uH to 10uH, C51 was adjusted from 4.7uF to 470nF, and C52 was omitted due to alterations in the backlight driver.
- C129 was eliminated due to space constraints and its non-critical necessity.
- Changed USR_BTN2 resistor from R52 10k to 1k

5. PCB REV. 1.2

- Verified the presence of all spacers Footprints within the GTP.
- Inspected and adjusted the footprint of U5, SICxx (DC-DC converter).
- Evaluated the footprint of L3;
- Evaluated the footprint of L1;
- Established connection of PB12 USB ID to USB molex connector, now designated as PC0.

6. PCB REV. 1.1

- Corrected the pin numbering on the RS485 connector.
- Updated the logo to the latest version.
- Incorporated series resistors for the 7" and 10.1" displays.
- Modified the footprint of the CAN ESD diode to feature a wider solder path.
- Expanded the backlight SOT23 to include a 6th pin for potential future use.
- Introduced mux resistors to PB3 to enable SWO functionality.
- Included a PWR EN pin for the LAN addon.
- Updated footprints for components D22, D25, and PESD1CAN-UX.
- Transitioned to using IS42S32200L-6BLI for a broader temperature range.
- Labeled pin numbers for the POE ADDON connectors (U9A, U9B).
- Changed the MCU to STM32H757XIH6.
- Incorporated a battery holder component.
- Increased the maximum input voltage to 48.0V.
- Implemented BOOT MODE functionality.