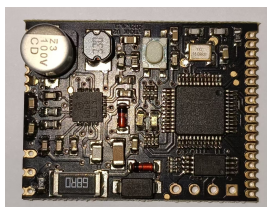


Reference design board for KNX touch panel



Fully assembled board developed for performance evaluation only,
not available for sale

Features

- Input DC voltage: 21-32 V DC (KNX bus)
- Panel type C 5 V as power supply
- KNX module (STM32G070, STKNX) for KNX communication
- Real-time control and display KNX information

Description

The **STDES-HARMONYKNX** is a solution based on a KNX module that allows to expand the functionalities of the Harmony OS touch panel for smart home applications (for example, to control the KNX light, shutter, HVAC, and other KNX end-devices).

The **STDES-HARMONYKNX** is designed with STKNX as KNX device transceiver, SMAJ40CA as transient voltage suppressor (TVS) and STM32G070CB as main controller.

The **STDES-HARMONYKNX** reference design communicates with the Harmony OS board via UART.

The system represents a complete solution for smart home with a graphical user interface for touch-panel control, thanks to the LCD display supported by the Harmony OS board.

Harmony OS panel is based on the STM32MP1 platform as its main processor.

USB connection allows to supply the Harmony OS board and to debug it on a terminal window on the PC.

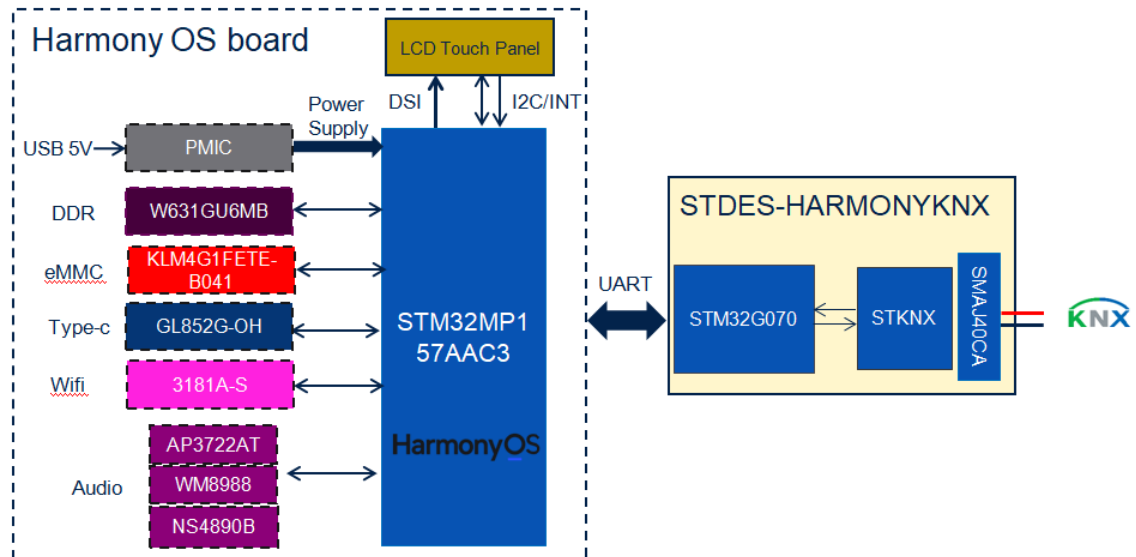
The **STDES-HARMONYKNX** supports the KNX smart home/building protocol.

Product summary	
Reference design board for KNX touch panel	STDES-HARMONYKNX
Software for STDES-HARMONYKNX	STSW-HARMONYKNX
Mainstream Value line, Arm Cortex-M0+ MCU	STM32G070CBT6TR
Miniature KNX transceiver with voltage regulators	STKNXTR
400 W, 40 V TVS in SMA	SMAJ40CA-TR
Applications	Smart home

1 Solution overview

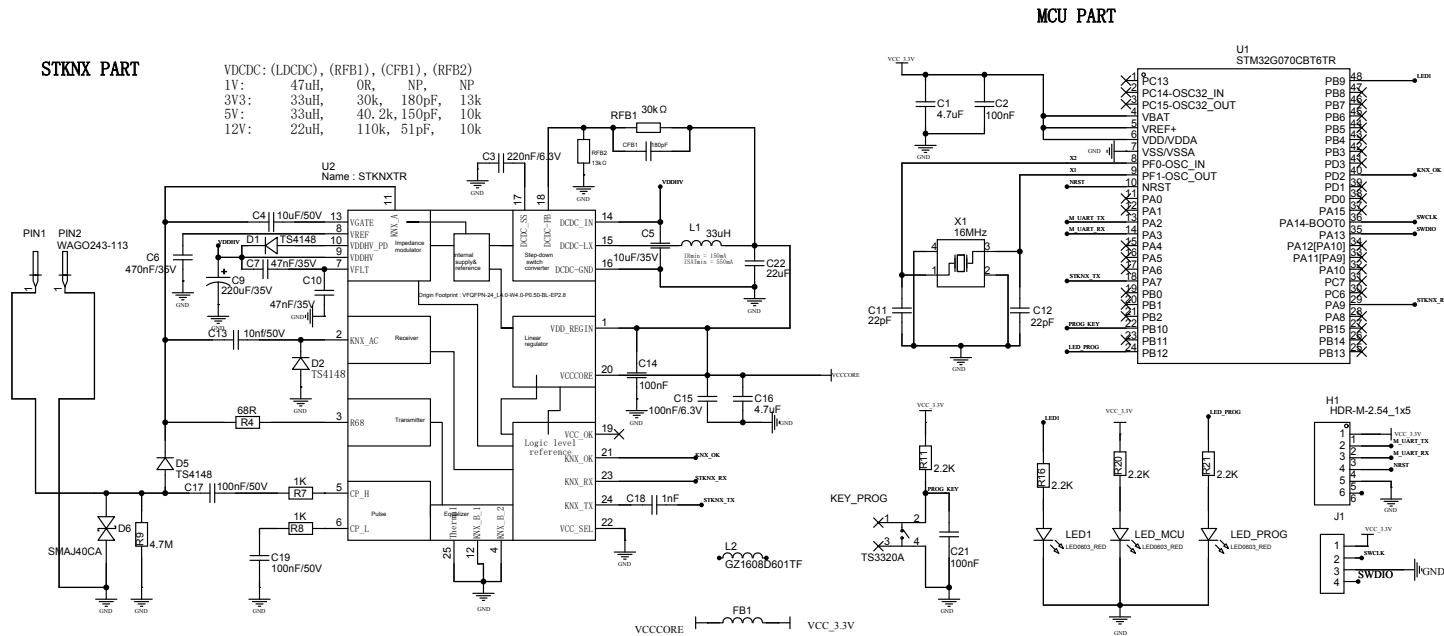
The solution includes a panel based on Harmony OS and KNX slim module and communicates with UART between two modules.

Figure 1. Block diagram



2 Schematic diagrams

Figure 2. STDES-HARMONYKNX circuit schematic



Revision history

Table 1. Document revision history

Date	Revision	Changes
19-Nov-2024	1	Initial release.

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