GSV2501 Product Brief

HDMI 2.0 Tx with Embedded MCU, eARC/ARC Rx

General Description

Gscoolink GSV2501 is a high-performance, low-power HDMI 2.0 transmitter with CEC, ARC Rx and eARC Rx. By integrating enhanced microcontroller based on RISC-V, GSV2501 has created a cost-effective solution that provides time-to-market advantages. GSV2501's HDMI Transmitter supports up to 18Gbps (TMDS, 6G/3Lane). The superior architecture of GSV2501 provides economical smaller footprint solutions using QFN64, targeting applications of HomeAV and ProAV.

HDMI Transmitter Features

- Compliant with HDMI 2.0b, HDMI 1.4b
- Data rate up to 18Gbps (TMDS 6Gbps/3 Lane)
- Programmable Voltage Swing, Slew-Rate and Pre-emphasis
- Support AC-coupling on TMDS
- Support Color Space Converter
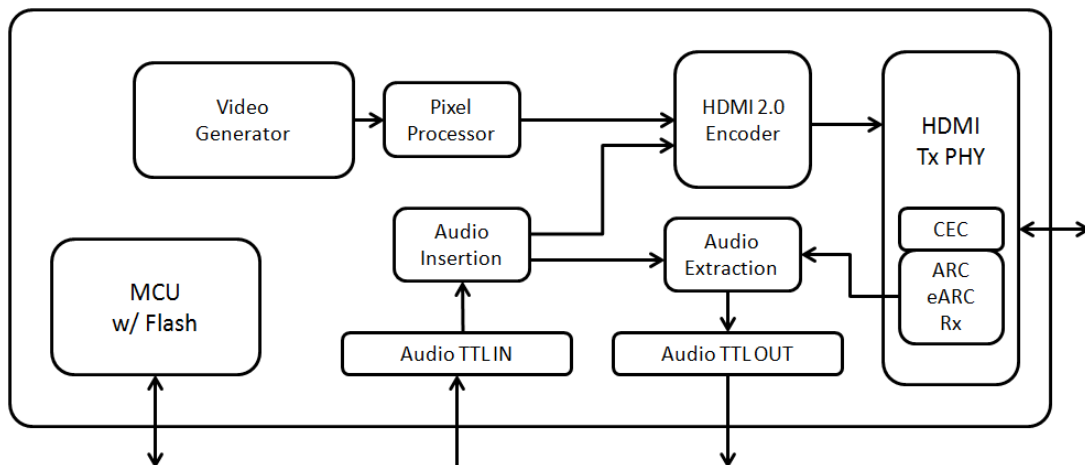- Hardware CEC Engine for Low Level protocol decoding

- 5V tolerance on DDC/HPD/CEC pins
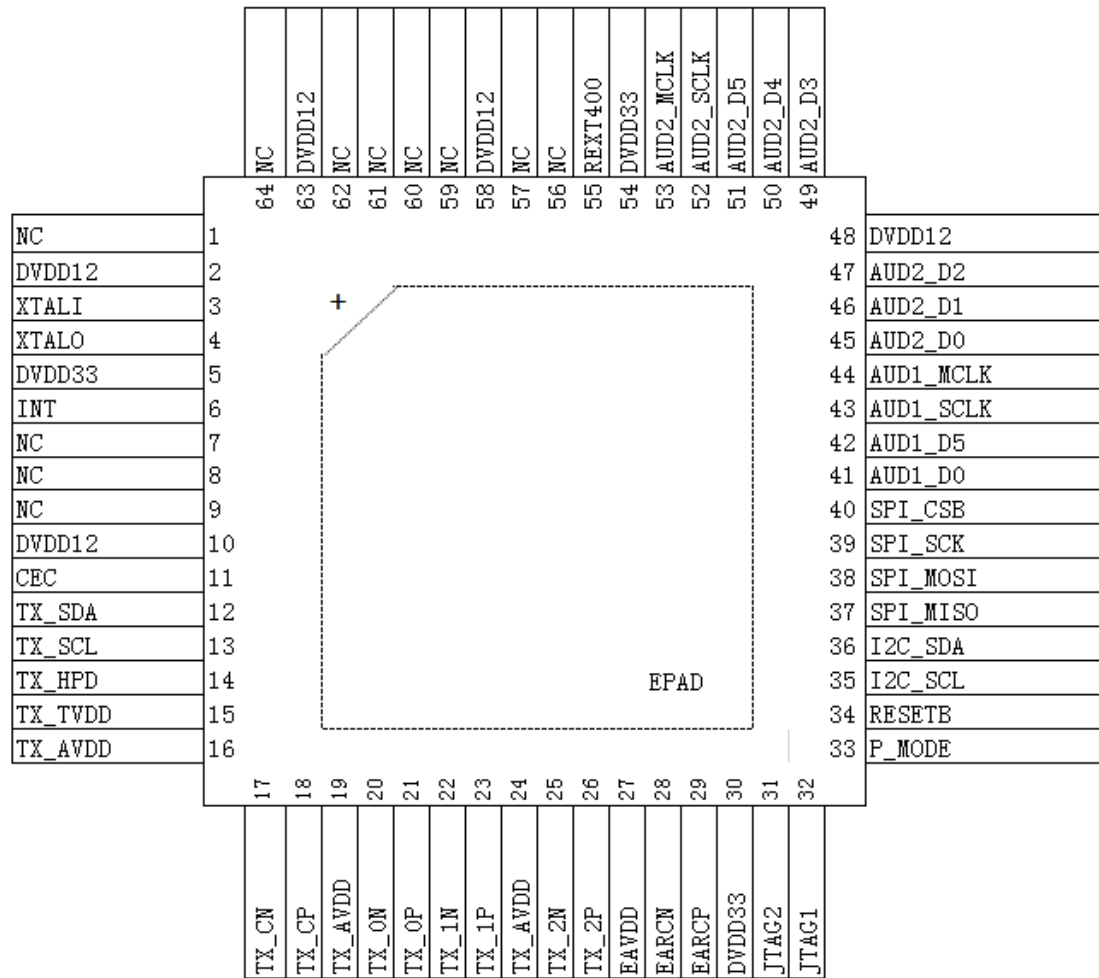
Audio Input/Output Features

- I2S and SPDIF Audio Extraction from HDMI Rx
- I2S/SPDIF Audio Insertion to HDMI Tx
- SPDIF/I2S/HBR/DSD/TDM Format Supported for Audio Extraction and Insertion
- SPDIF to I2S Conversion using single TTL bus in Bi-direction

System Features

- Optional External MCU (via I2C)/ Internal MCU mode for chip control
- Embedded MCU and Flash
- External pins of Flash QSPI interface
- External 25MHz Crystal required
- Available Pins for UART/Timer/GPIO
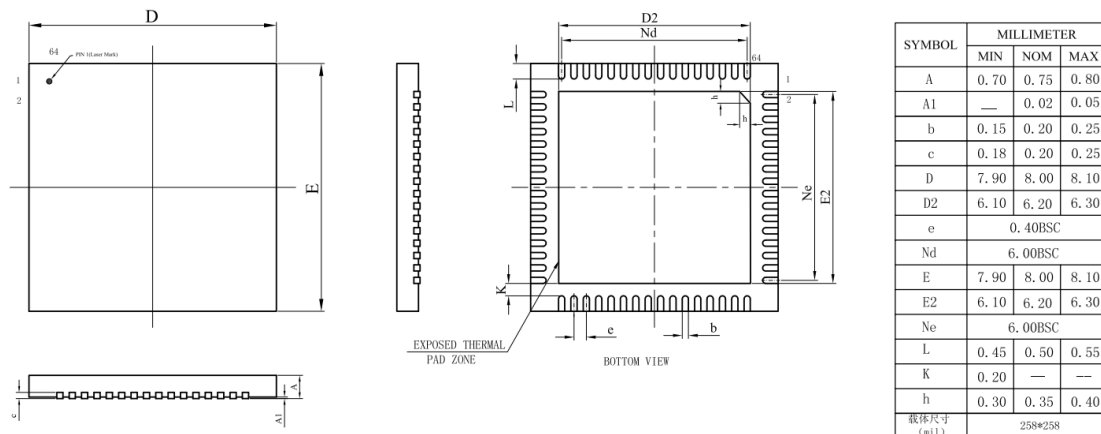- Temperature Sensor Monitoring Circuit

Pin Description

GSV2501 QFN64 Pin Diagram

Package Information

SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.70	0.75	0.80
A1	—	0.02	0.05
b	0.15	0.20	0.25
c	0.18	0.20	0.25
D	7.90	8.00	8.10
D2	6.10	6.20	6.30
e	0.40BSC		
Nd	6.00BSC		
E	7.90	8.00	8.10
E2	6.10	6.20	6.30
Ne	6.00BSC		
L	0.45	0.50	0.55
K	0.20	—	--
h	0.30	0.35	0.40
载体尺寸 (mil)	258*258		

Package Dimensions (QFN64)