GSV1201E

DisplayPort 1.2 to HDMI 1.4 Converter with Embedded MCU

May, 2023

Preliminary Product Specification

1. General Description

1.1 General Information

Gscoolink GSV1201E is a high-performance, low-power, USB Type-C Alternate Mode DisplayPort 1.2 to HDMI 1.4 converter. By integrating enhanced microcontroller and flash, GSV1201E has created a cost-effective solution that provides time-to-market advantages. The DisplayPort Receiver supports up to 21.6Gbps (HBR2, 4-lane) and HDMI Transmitter supports up to 9Gbps (TMDS, 3G3Lane). Integrated Power Delivery 3.0 controller handles Type-C CC interface for USB power management and DisplayPort mode entry. The superior architecture of GSV1201E provides economical smaller footprint solutions using QFN64, targeting application of Type-C Hub.

GSV1201E supports all DisplayPort SDP packets pass-through to HDMI output. HDCP 1.4 is implemented in GSV1201E for both DisplayPort Rx and HDMI Tx. Color Space Conversion, 444/422-420 Converter are supported at HDMI Tx in TMDS mode.
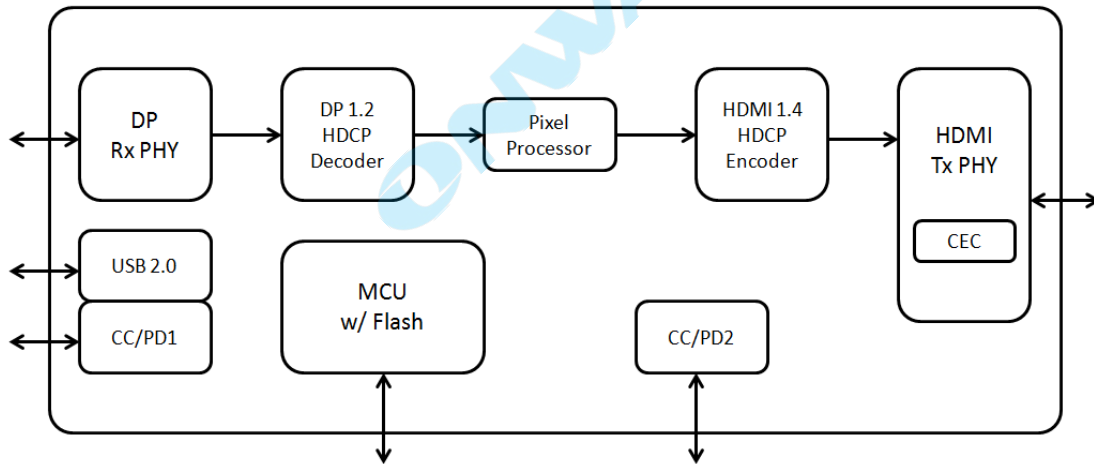

Figure 1. Top Diagram

The supported audio formats are listed in Table 1

Table 1. Supported Audio Format

Packet ID	Packet Type	Sampling Frequency (KHz)		
		32/44.1/48/88.2/ 96/176.4/192	256/352.8/384/ 512/705.6/768	64/128
0x02	Audio Sample Packet (LPCM and Compressed Audio)	Y		Y

4. Package Information

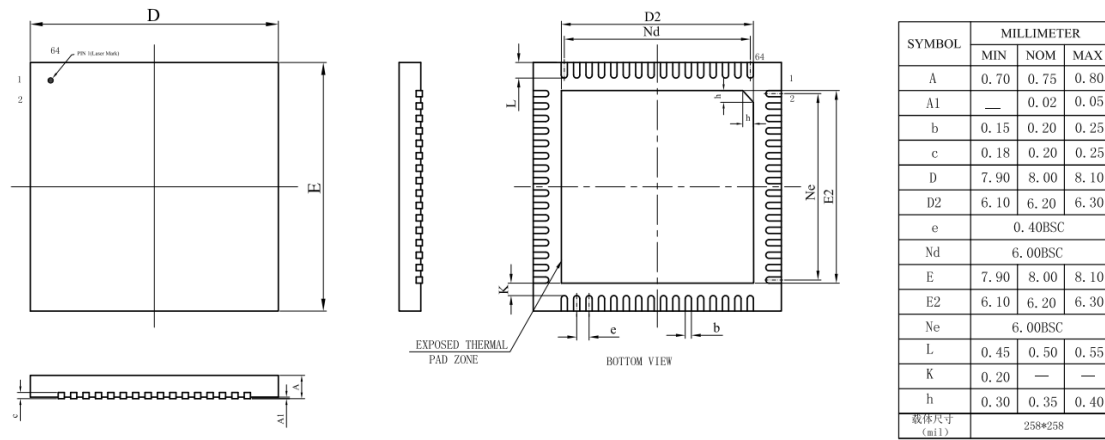| SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.70	0.75	0.80
A1	—	0.02	0.05
b	0.15	0.20	0.25
c	0.18	0.20	0.25
D	7.90	8.00	8.10
D2	6.10	6.20	6.30
e	0.40BSC		
Nd	6.00BSC		
E	7.90	8.00	8.10
E2	6.10	6.20	6.30
Ne	6.00BSC		
L	0.45	0.50	0.55
K	0.20	—	—
h	0.30	0.35	0.40
载体尺寸 (mil)	258*258		

Figure 7. Package Dimensions (QFN64)

5. Ordering Guide

Table 6. Ordering Information

Part Number.	Temperature Range	Package Description	Packing Type
GSV1201E	0°C to +70°C	QFN64	Tray