Crystal Image through
Imaging **Innovation**

PIXELPLUS

2 CH Multi-Standard Analog HD Video Receiver with

MIPI Interface

PR2100K

Brief Datasheet

Rev 0.3

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1. General Description

1.1. Product Overview

The PR2100 is 2 channel HD/SD video receiver which accepts Any Standard and Resolution of Analog HD/SD video and guarantees high quality image for Long-Reach Analog HD applications. It accepts Single-ended/Differential analog HD/SD video signal from camera, then Cable Equalizer compensates cable attenuation, and HD/SD video decoder converts analog video signal to digital component data. The PR2100 supports both 8bit parallel interface with BT1120/BT656 standard and MIPI-CSI2 interface compliant with MIPI-DPHY v1.0 and MIPI-CSI2 v1.0. The PR2100 also provides Bi-Directional Coaxial/UTP PTZ interface so that host can control PTZ camera and receive information from camera with 2-wire serial interface.

1.2. Features

- ◆ **Video Decoder**
  - ✓ Multi-standard Analog HD and SD Video with Auto-Detection
    - - *All Kind of Analog HD Standard and NTSC/PAL*
  - ✓ Any Resolution of Analog HD and SD Video with Auto-Detection
    - - *1080p25/30, 720p25/30/50/60, 960p25/30/50/60 and 480i60, 576i50*
  - ✓ Superior Cable Equalizer for Long-Reach Analog HD Application
  - ✓ Differential Analog Input or Two Single-ended Analog Input with MUX Switch
  - ✓ BT1120/BT656 Parallel Output
    - - Multi-Channel Time-Multiplexed Video Output with Dual Edge of Clock
  - ✓ MIPI-CSI2 2/4 Data Lane Configuration
    - - 2 Data Lanes for 4 x 720p@25/30, 2 x 720p@50/60, 2 x 1080p@25/30
    - - 4 Data Lanes for 4 x 720p@50/60, 4 x 1080p@25/30
    - - Multi-Channel Video Output with Virtual CHID and H/V Combined Format
  - ✓ Cascaded Connection for 3ch or 4ch Video Output
- ◆ **Bi-Directional PTZ Communication**
  - ✓ Flexible Protocol
- ◆ **Host Interface**
  - ✓ I2C Serial Interface
- ◆ **Low Power Consumption**
  - ✓ 690/452mW (3.3V/1.8V Parallel Output) / 416mW (MIPI Output) for FHD1080p
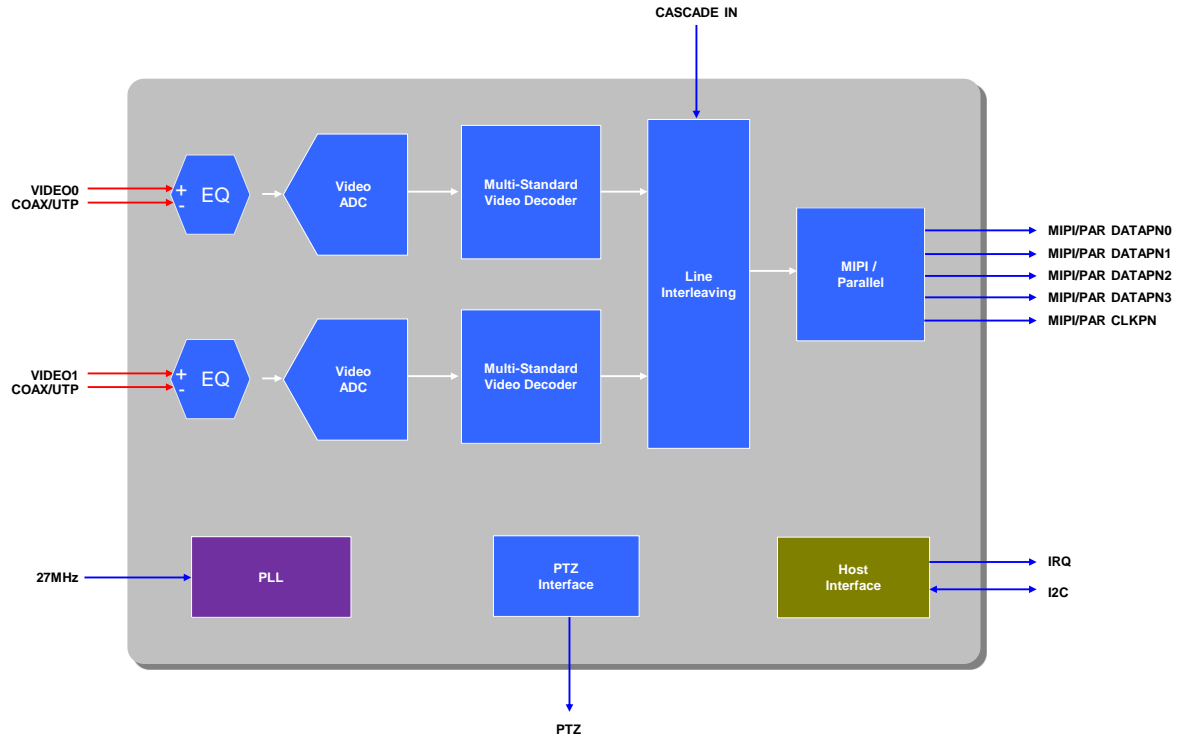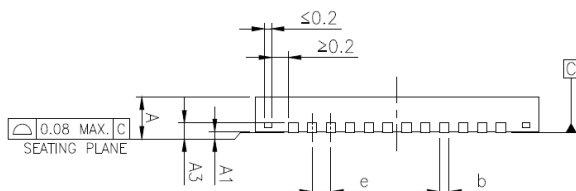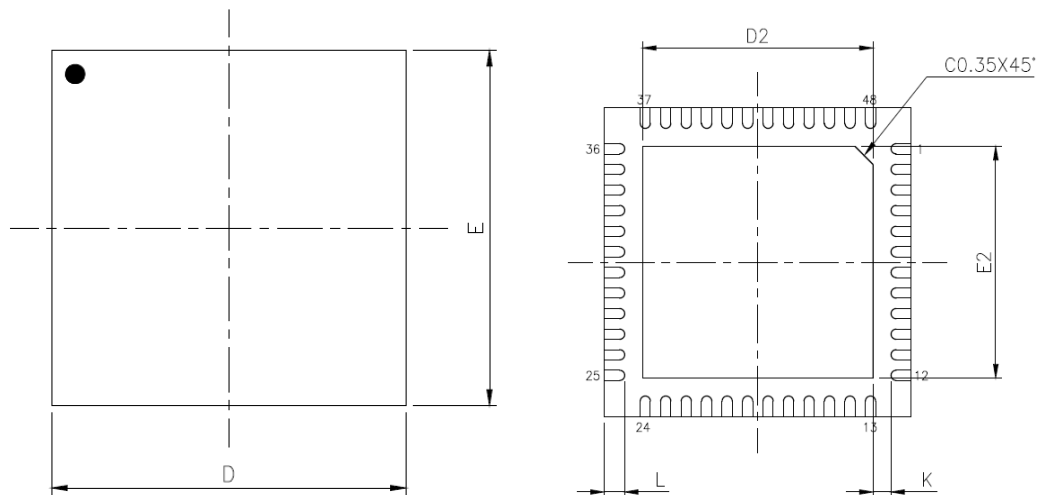- ◆ **Package**
  - ✓ 48 eQFN (6mm x 6mm)

1.3. Block Diagram

Fig 1. Functional Block Diagram

2. Package Specification

2.1. 48Pin eQFN Package Mechanical Drawing

SYMBOL	DIMENSION (mm)		
	MIN.	NOM.	MAX.
A	0.70	0.75	0.80
A1	0.00	0.02	0.05
A3	0.203 REF		
b	0.15	0.20	0.25
D	6.00 BSC		
D2	4.45	4.50	4.55
E	6.00 BSC		
E2	4.45	4.50	4.55
e	0.40 BSC		
K	0.20	-	-
L	0.35	0.40	0.45

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DIMENSION b APPLIES TO METALLIZED TERMINAL AND IS MEASURED BETWEEN 0.15mm AND 0.30mm FROM THE TERMINAL TIP. IF THE TERMINAL HAS THE OPTIONAL RADIUS ON THE OTHER END OF THE TERMINAL, THE DIMENSION b SHOULD NOT BE MEASURED IN THAT RADIUS AREA.
3. BILATERAL COPLANARITY ZONE APPLIES TO THE EXPOSED HEAT SINK SLUG AS WELL AS THE TERMINALS.