# XR5P900 Product Brief

HDCVI Encoder

## Description

The XR5P900 is a single chip solution for converting high-definition (HD) digital video to an analog signal compliant with the High Definition Composite Video Interface (HDCVI) standard. HDCVI transmission from the XR5900 delivers high-def video on coaxial cable over 500 meters without the latency typically associated IP surveillance cameras. Moreover, HDCVI's unique analog modulation scheme minimizes crosstalk and interference. Security professionals can now affordably upgrade to vibrant HD video and leverage their existing infrastructure without compromise.

Featuring a 16-bit digital input supporting both ITU-R BT.1120 and ITU-R BT.656 standards, the XR5900 is designed for high-definition video surveillance at 1080p and 720p but can also accommodate standard-definition (SD) image sensors. The XR5P900 modulates digital 4:2:2 YCbCr video to analog HDCVI or CVBS output. HDCVI supports video output of 1080p up to 30 f/s or 720p up to 60 f/s. CVBS allows for traditional NTSC-M and PAL-B output.

Additional features include an I2S interface that provides for audio to be multiplexed with the video, RS485 protocol enabling two-way control communication, and a 400 kHz I2C interface for CPU or MCU interconnect. The XR5P900 delivers a complete solution for the OEM video surveillance design engineer.

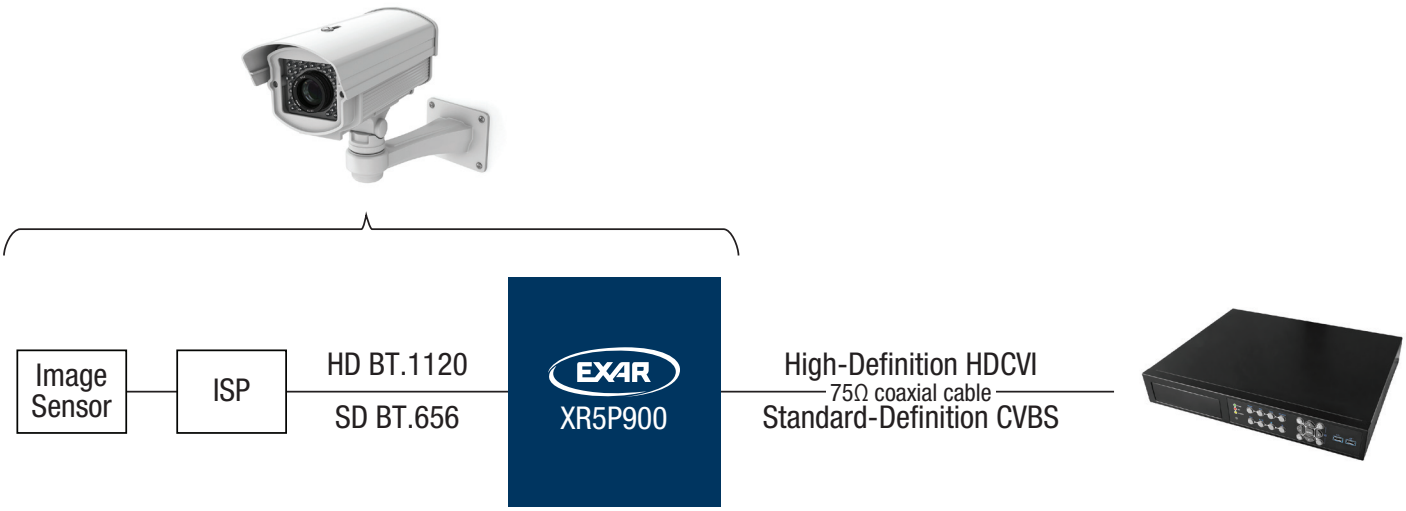
**FEATURES**
- High Definition (HD) video
- 16-bit ITU-R BT.1120 input
- 1080p30 or 720p60 HDCVI output
- Standard Definition (SD) video
- 8-bit ITU-R BT.656 SD input
- PAL/NTSC output
- I²S audio interface
- I²C slave interface

**BENEFITS**
- HD video with existing infrastructure
- HD video transmission over 500-m
- Video, audio and control over coax
- Latency, crosstalk, and interference mitigated
- Simple system design

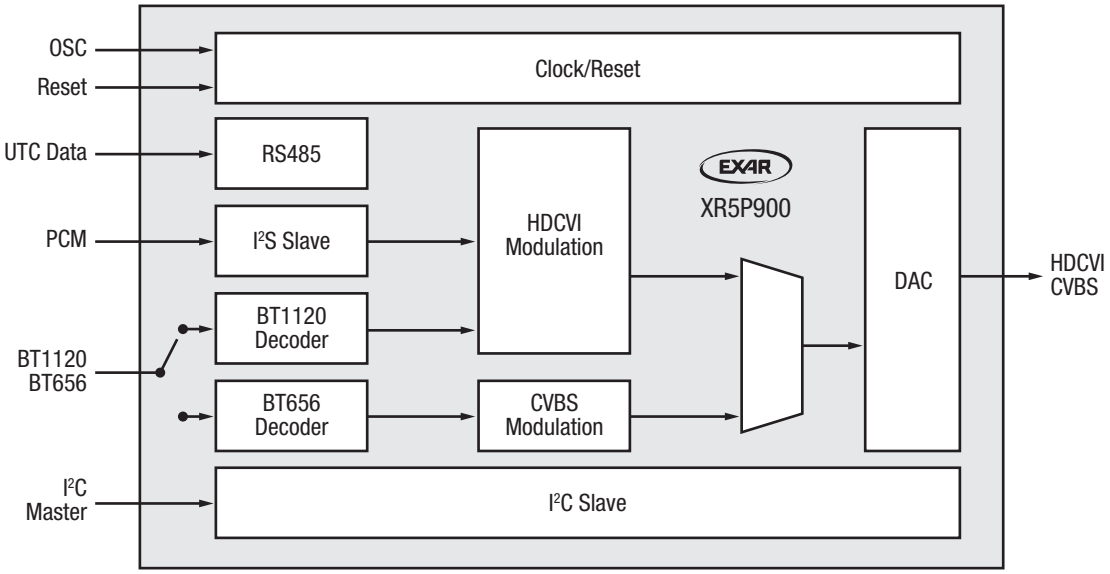
**APPLICATIONS**
- Affordable high-definition video surveillance
- Upgrade PAL/NTSC installations to HD video

**SPECIFICATIONS**
- Package: 68-pin QFN (8mm x 8mm)
- Operating Voltage: 1.2/3.3V
- Power: 380mW
- Operating Temp: 0°C to 100°C
- Storage Temp: -55°C to 155°C

## Typical Application



## Functional Block Diagram




## Ordering Information[1]

| Part Number | Operating Temperature Range | Lead-Free | Package | Packaging Method |
|---|---|---|---|---|
| XR5P900-F | 0°C to 70°C | Yes[2] | 8mm x 8mm QFN-68 | Tray |

**NOTE:**
1. Refer to www.exar.com/XR5P900 for most up-to-date Ordering Information.
2. Visit www.exar.com for additional information on Environmental Rating.

Please contact videotechsupport@exar.com to request a complete datasheet.

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