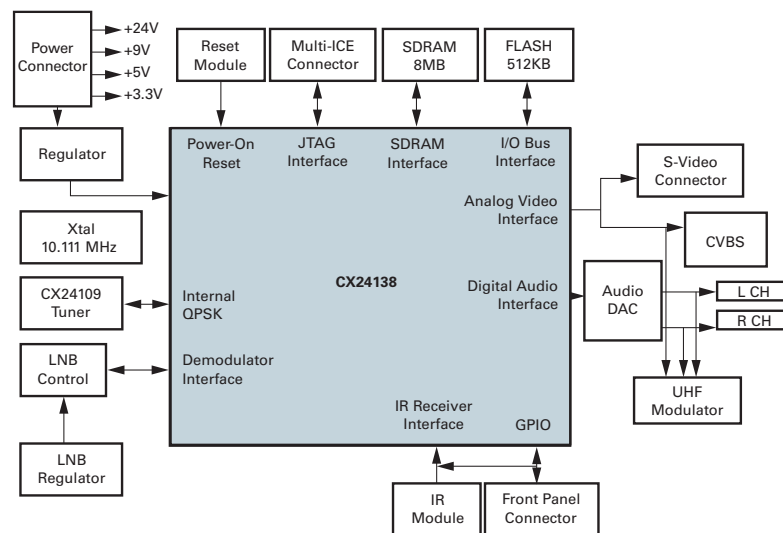






## Features and Benefits

- High-performance SoC with integrated QPSK demodulator
- Direct down-conversion technology and integrated-noise amplifier/local oscillator (LNA/LO)
- Very low power consumption
- Complete system clock from a single crystal – no external circuit or VCXO module required
- Direct connect to infrared (IR) module
- System control of front panel by software
- CX24138 drives standard 75 W load directly
- Supports software download via over-the-air (OTA) broadcast or RS-232 port
- Multi In-Circuit Emulation (ICE) debug environment



**CX24138 Block Diagram**

## User Interface

- Satellite antennae input port
- RCA for composite video baseband signal (CVBS) video and audio line receiver (L/R)
- S-Video port
- Dolby® Digital passthrough on S/PDIF
- RS-232 serial port
- Audio/video (A/V) connector for RF modulator
- Power adapter connector
- Front panel connector with IR signal receiver
- I2C-compatible expansion connector
- JTAG debug connector

## Characteristics

Main processor	CX24138 with 100 MHz ARM920T core
Main memory	8 MB SDRAM
Program memory	512 KB Flash
Video decode	MPEG-2 MP@ML, MPEG-1 Layer 1 and 2
Tuner	CX24109, zero-IF architecture
Video format	PAL/NTSC/SECAM
TS Demux data rate	72.5 Mbps maximum
Audio decode	MPEG-2 MUSICAM
Audio mode	Mono, double channel, stereo
Audio sample rate	Supports 16, 22.05, 24, 32, 44.1, 48 kHz
Graphic accelerate	Two-dimensional (2D) hardware graphic accelerator, optimized memory bandwidth
On-Screen Display (OSD)	8 bpp color mode, flicker filtering and hardware cursor

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