

# TLG1120 Ultra-Low Power NTSC/PAL/SECAM Mobile TV Receiver

## PRODUCT BRIEF



### TLG1120 OVERVIEW

Telegent's TLG1120 is the industry's first single-chip CMOS NTSC/PAL/SECAM television receiver enabling worldwide free-to-air TV and FM broadcast reception for mobile products. With analog television transmissions reaching more than 5 billion consumers worldwide, the TLG1120 lets manufacturers immediately add access to live, familiar programming using existing broadcast infrastructure that has been built over 60 years.

The TLG1120, packaged in an 7 x 7 mm QFN, enables manufacturers to add analog TV and FM to portable consumer devices by utilizing a proven architecture integrating the RF tuner, demodulator, decoder, audio/video processing, scaler, and FM tuner in less than 2.0 cm<sup>2</sup> of board space. Delivering high performance and video sensitivity, the TLG1120 offers excellent reception and picture quality. For consumers on the move, such as when commuting, the TLG1120 delivers robust performance up to 430 km/h by implementing dynamic compensation for multi-path fading and Doppler shift. Simultaneously, the TLG1120 achieves ultra-low power consumption finally making analog TV truly mobile.

The high integration and simplified bill of materials make the TLG1120 easy to design-in and manufacture. An industry standard camera hardware interface coupled with a bundled software API with universal platform compatibility ensures that global free-to-air TV reception can be easily added with minimal resource, time, and expense.

The TLG1120 leverages Telegent's SureTrak architecture, which is production proven across multiple platforms and applications and delivers a validated consumer pricing premium to products shipping worldwide.

### TLG1120 BLOCK DIAGRAM



### FEATURES

#### Small 7 x 7 mm package

#### Worldwide Free-to-Air Broadcast Reception

- NTSC/PAL/SECAM support (48–800 MHz)
- FM radio support (76–108 MHz)

#### Highly-Integrated Single-chip TV Receiver

- RF tuner
- Demodulator
- Decoder
- DSP and audio/video processing
- Scaler
- FM stereo radio

#### High Performance for Mobile Environments

- High video sensitivity
- Mobility support to 430 km/h
- Dynamic multi-path fading and Doppler compensation
- Large screen support

#### Ultra-Low Power Consumption

- 2.8 V RF supply; 1.2 V digital supply
- 1.8 V to 2.8 V IO operation

#### Universal Interface and Software

- CCIR / ITU-601 compliant 8-bit parallel video output
- RGB, YCbCr, and YUV output formats
- I<sup>2</sup>S and analog audio output
- I<sup>2</sup>C compliant 2-wire control port
- RF antenna and coaxial cable input support
- Closed captioning support
- Bundled software API compatible with leading basebands, application processors, and multimedia processors
- Platform processor and OS independent

### APPLICATIONS

- Mobile handsets
- Portable media players and accessories
- Portable navigation devices
- Laptops
- In-car and portable entertainment systems
- External PC adapters
- Flat panel displays

### ACTUAL SIZE



TOP VIEW



SIDE VIEW

**TV on Every Screen**

[WWW.TELEGENT.COM](http://WWW.TELEGENT.COM)



TELEGENT SYSTEMS

# TLG1120 Ultra-Low Power NTSC/PAL/SECAM Mobile TV Receiver

## World's First Single-Chip NTSC/PAL/SECAM Mobile TV Receiver

**TLG1120**



Actual Size

### Small Footprint

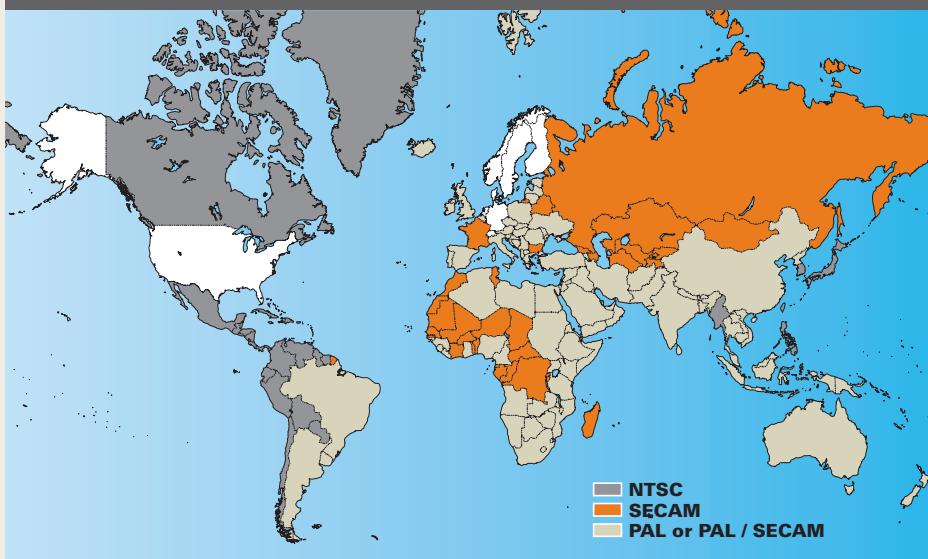
7 x 7 mm QFN package, integrating:

- RF tuner
- Demodulator
- NTSC/PAL/SECAM decoder
- DSP & audio/video processing
- Scaler
- FM stereo radio

### HIGH PERFORMANCE, ULTRA-LOW POWER

Telegent Systems' SureTrak™ is an innovative patented architecture and collection of advanced algorithms that yield performance enhancements in reception sensitivity, quality, and power consumption. Designed to overcome the real world impairments caused by motion, high speed, and variable signal strength, SureTrak enhances and optimizes reception, providing error correction and error concealment while achieving ultra-low power consumption. SureTrak's tuning optimization combined with multi-path and Doppler compensation algorithms result in exceptional picture quality and stability and delivers robust performance in excess of 430 km/h.

### TLG1120 GLOBAL COVERAGE



### TLG1120 in Action

Deployed implementations of Telegent's technology are available worldwide. Common usage cases reported by consumers include:

- While commuting
- At work or university
- At and around home
- While in line or queue
- While waiting for others
- At bar or pub

### EASY TO DESIGN AND MANUFACTURE, LOW SOLUTION COST

The TLG1120 is a completely integrated single-chip CMOS NTSC/PAL/SECAM TV receiver that can be implemented into consumer devices using the industry standard camera interface and a bundled software API. The TLG1120 dramatically reduces the BOM, component count, and PCB footprint, providing mobile device manufacturers with a low solution cost and fast time to market.

### COMPLETE SYSTEM SOLUTION

Evaluation and design is easy with a complete system reference design including schematics, layout files, and software. The hardware data interface uses a standard video-aware bus and supports multiple input and output formats. Bundled ANSI source code is platform processor and OS independent. Telegent also provides turn-key and on-site system support.



**TELEGENT SYSTEMS**

**Telegent Systems US Headquarters**

470 Potrero Ave.

Sunnyvale, CA 94085

phone: (408) 523-2800

email: [info@telegent.com](mailto:info@telegent.com)

web: [www.telegent.com](http://www.telegent.com)