



## NXP's DVB-T / H channel decoder TDA10048HN

# Breakthrough in integration and power reduction

NXP Semiconductors, the world leading company for COFDM demodulators, introduces its latest generation, the TDA10048HN. Combined with NXP Silicon Tuners TDA8275A or TDA18271/ TDA18211, it provides a breakthrough in integration, and power reduction. Demonstrating NXP's continuing leadership in digital broadcast reception, it brings advanced features that both facilitate its integration into final products, and increase the end-user satisfaction.

### Key applications

- ▶ Set-top boxes for digital terrestrial television
- ▶ Integrated digital televisions
- ▶ PC applications such as add-on cards or peripherals, or on-main-board TV receivers
- ▶ Recording devices with DVB-T front-end, such as personal video recorders (PVRs), or DVD recorders
- ▶ Battery-powered portable devices such as Personal Digital Assistants (PDAs), or Personal Media Players (PMPs)

### Key features

- ▶ Receiver functions
  - 2K and 8K DVB-T demodulator, fully ETSI 300-744-compliant
  - 4K DVB-H demodulator, ETS 300-744 annex F-compliant (without MPE-FEC)

- ▶ Easy to design-in and use
  - Maximized tuner compatibility
  - High integration with NXP silicon tuners
  - Flexible clock reference options
  - Reference designs and software drivers package available
  - 48-pin HVQFN package, 7x7mm wide, compatible with low-cost PCB class 4
- ▶ High performance for end-user satisfaction
  - Ultra fast scanning and TV channel-zapping facilities
  - Consolidated 'Pulse Killer' algorithm for impulsive noise reduction
  - Dedicated filters for reliable reception in presence of inter-symbol interference (ISI), adjacent channel interference (ACI), and co-channel interference (CCI)
  - Exceeds latest Nordig Unified and D-Book specifications
  - Low power consumption (160 mW) for eco-friendly or battery-powered designs

The TDA10048HN is a single-chip channel receiver for Coded Orthogonal Frequency Division Multiplex (COFDM) modulated signals. It performs all channel decoding functions, from IF (first or second IF) input to MPEG transport stream output.

The IC applies the most advanced filtering techniques and dynamic echo cancellation systems to ensure high-quality reception under the most demanding conditions, such as indoor reception or single frequency networks (SFNs). It surpasses the strictest performance specifications, including the latest Nordig Unified. Finally, it integrates the latest 'Pulse Killer' algorithm, which reduces the disturbing effects caused by impulsive noise interference from vehicles, personal computers, phones and other electrical appliances.

Together with NXP silicon tuners, the TDA10048HN has been optimized to provide the lowest Bill of Materials and highest integration level. In this system solution, it operates without any RF or SAW filtering, and does not require any dedicated crystal oscillator. NXP can provide complete system solutions for most of the key applications listed, providing its customers with the fastest time-to-market.

