

# Sound Terminal™ for diffused infrared in home systems

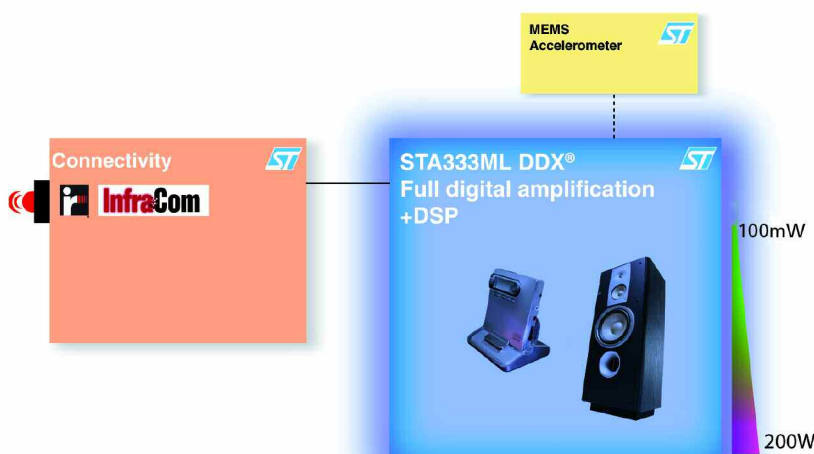
Embedding 2.0 microless class D digital power stage with digital audio processing



## STA333ML: full digital amplification experience without external micro

In collaboration with Infra-com, the world leader in audio diffused infrared solutions, **STMicroelectronics** has developed a turnkey module for high quality wireless transmission. This module provides a fully-integrated, non-line-of-sight infrared solution with an embedded *Sound Terminal* microless class D digital amplifier. This makes it the ideal solution for TV and home system applications.

The STA333ML is a single-chip *Sound Terminal* embedding digital audio and a high efficiency, fully-digital, class D power amplifier. The STA333ML is capable of operating without the aid of an external microcontroller. The microless feature allows use in low-cost applications such as cradles, digital speakers and audio terminals.



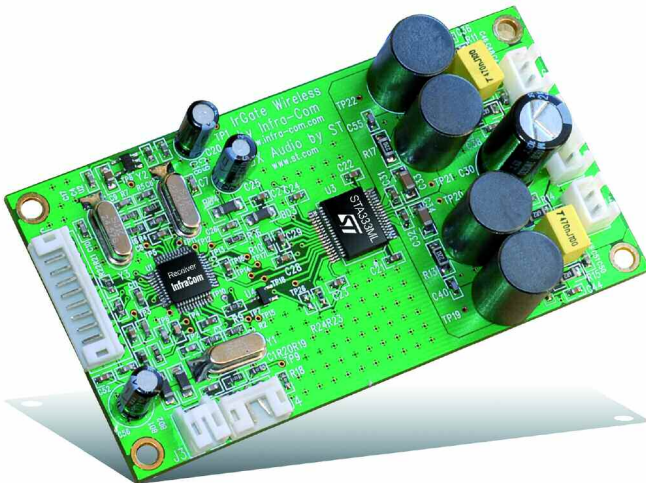
## Features

- Wide supply voltage range (5 to 18V)
- Very high efficiency (up to 90%)
- DDX® ternary modulation power stage
- 2 channels of 24-bit DDX
- 2Ch I<sup>2</sup>S input data interface
- 96dB SNR and dynamic range
- 32kHz or 48kHz input sample rate
- Fade in/out feature
- Thermal overload and short circuit protection embedded
- Automatic zero-detect/invalid input mute
- Selectable clock input ratio (256/384Fs)
- Selectable 0 or 24dB gain preset
- Max power correction for better full power THD
- 96kHz internal processing sample rate, 24-bit precision
- Fault recovery circuitry embedded
- 2 x 20W @ 18V, 8Ω
- PSSO36 slug down package

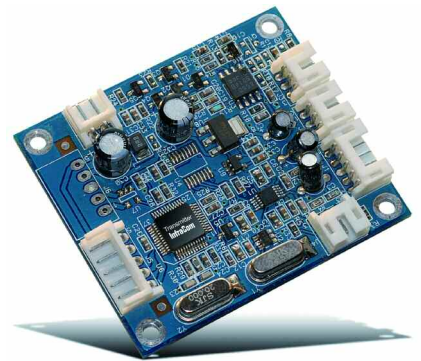
## Reference design

STMicroelectronics has developed an infrared wireless transmission reference design board called “VIOLIN”, based on STA333ML *Sound Terminal*. The “VIOLIN” solution provides 2 x 20W high audio quality.

The “Drum” reference design board is also available. This reference design is based on the STA326, a digital class D amplifier capable of delivering 2 x 60W @ 32V, 8Ω.



*Violin reference design board*



*Transmitter board, from Infracom*



*Drum reference design board*



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