The STA559BW is an integrated solution of digital audio processing, digital amplifier controls and power output stage to create a high-power single-chip FFX digital amplifier with high-quality and high-efficiency. Three channels of FFX processing are provided. The FFX processor implements the ternary, binary and binary differential processing capabilities of the full FFX processor.

The STA559BW is part of the Sound Terminal® family that provides full digital audio streaming to the speakers and offers cost effectiveness, low power dissipation and sound enrichment.

The power section consists of four independent half-bridges. These can be configured via digital control to operate in different modes. For example, 2.1 channels can be provided by two half bridges and a single full bridge, supplying up to 2 x 1.4 W + 1 x 6 W of output power or two channels can be provided by two full-bridges, supplying up to 2 x 3 W of output power.

The IC can also be configured as 2.1 channels with 2 x 20 W supplied by the device plus a drive for an external FFX power amplifier, such as STA533WF or STA515W.

Also provided in the STA559BW are a full assortment of digital processing features. This includes up to four programmable biquads (EQ) per channel. Available presets enable a time-to-market advantage by substantially reducing the amount of software development needed for functions such as audio preset volume loudness, preset volume curves and preset EQ settings. There are also new advanced AM radio interference reduction modes.