

# FDA series

## Automotive fully-digital audio amplifiers



ST has launched a complete family of PWM digital-input power amplifiers to offer new ways of thinking about audio power amplification in automotive applications.

ST's environment-friendly approach translates into class D efficiency, start-stop compliancy and a new feedback concept that significantly reduces the cost and size of external components and grants outstanding EMI performances. Cool, very powerful and with very low radiated emissions, the FDA series are the perfect amplifiers for new generation head units and boosters.

### KEY FEATURES

- Class D efficiency
- I<sup>2</sup>S or TDM digital input
- Very high output power capability
- Integrated D/A converter
- Automotive-grade EMI/EMC performances
- Low-pass output filter included in the feedback loop
- 6 V operation
- I<sup>2</sup>C diagnostics
- Full fault protection
- Integrated step-up driver (FDA4100LV and FDA2100LV)

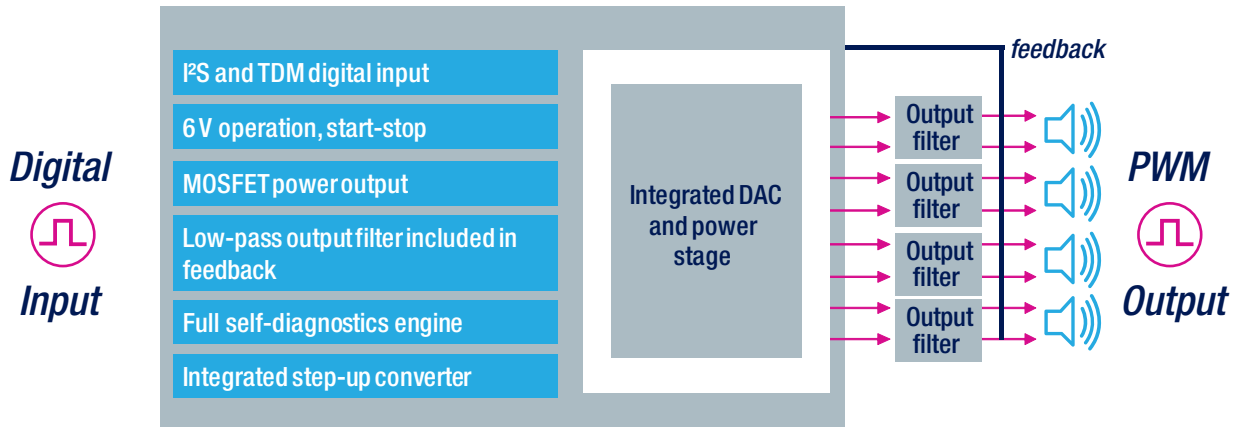
### KEY BENEFITS

- High noise-injection immunity (for example, to GSM) thanks to the digital input
- No need for digital-to-analog converter and input filters
- Very low power dissipation
- No need for external solutions to play music during cranks with start-stop engines
- The innovative feedback loop avoids the use of complicated external networks to reduce radiated emissions and allows the use of a very low cost and small size output filter

### TARGETED APPLICATIONS

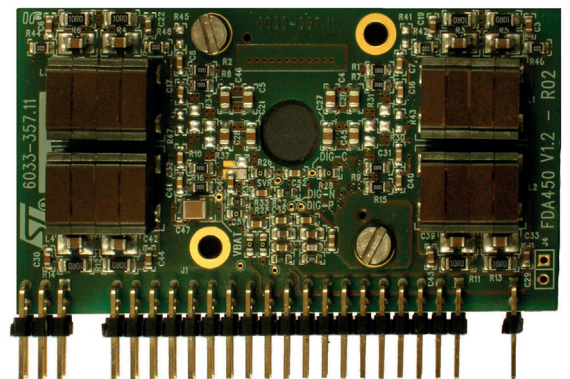
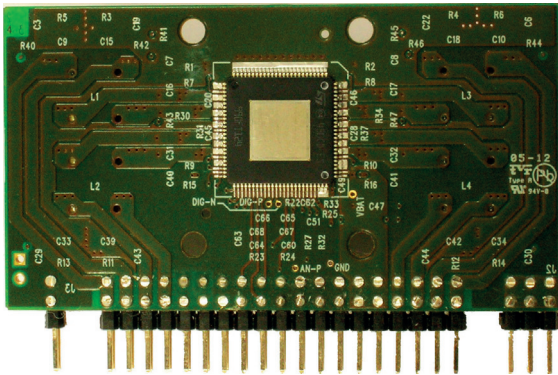
- Head units
- Boosters
- Infotainment systems

## BLOCK DIAGRAM



## TECHNICAL MATERIAL

Datasheets, demonstration boards, support documentation and software are available on request. For further information please contact ST sales offices at [www.st.com/salesoffices](http://www.st.com/salesoffices)



## DEVICE SUMMARY

Part number	Maximum output power	Description
FDA4100LV	4 x 135 W or 2 x 270 W	PWM digital-input power amplifier with built-in diagnostics and step-up driver
FDA450LV	4 x 50 W	PWM digital-input power amplifier with built-in diagnostics features
FDA2100LV	2 x 180W or 1 x 300W	PWM digital-input power amplifier with built-in diagnostics and step-up driver

\* ST is completing the class D digital-input portfolio with an upcoming 2-channel power amplifier



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