

# WANT EASIER CONTROL AND A COST-SAVING SOLUTION FOR YOUR SMARTCARDS?

## GET ST8004 ANALOG INTERFACE CHIP

The ST8004 is a complete low-cost analog interface chip for asynchronous 3V and 5V smartcards, designed for use in set-top boxes and IC card readers for banking and identification.

The ST8004 meets the ISO 7816-3 standard and is compatible with the NDS conditional access system. It performs all supply protection and control functions when placed between a smartcard and a microcontroller. The interface includes a supply supervisor to control transients, enhanced ESD protection on the card side and both thermal and short-circuit protection on all card contacts.

The part has three specific protected half-duplex bi-directional buffered I/O lines. It includes automatic activation and deactivation sequences. It also includes a 26MHz crystal oscillator to allow the interface to generate clocks for the card of up to 20MHz, with synchronous frequency changes.

The ST8004 runs off a 3 or 5V supply and has a step-up converter for  $V_{CC}$  generation. The part also offers under-voltage lockout protection, at 3 or 2.2V.

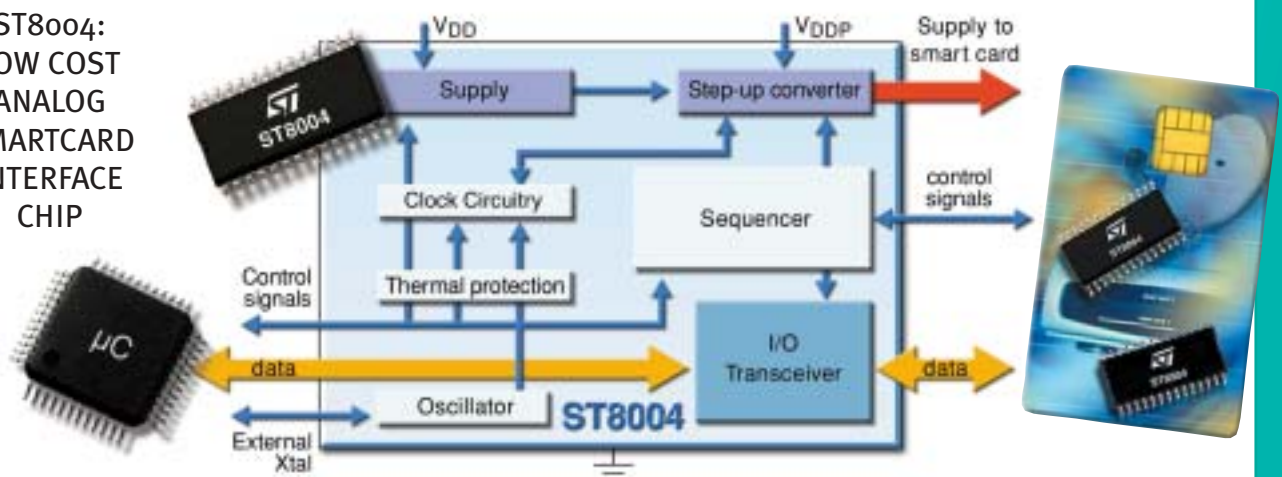
### MAIN FEATURES

- Designed to be compatible with the NDS conditional access system
- 3 or 5V supply for the IC
- Step-up converter for  $V_{CC}$  generation
- 3 specific protected half duplex bi-directional buffered I/O lines
- Automatic activation and deactivation sequences
- Thermal and short-circuit protection on all card contacts
- 26MHz integrated crystal oscillator
- ISO7816-3 compatible
- Enhanced ESD protection on card side
- SO-28 and TSSOP28 packages

### APPLICATIONS

- Smartcard readers for set-top boxes
- IC card readers for banking
- Identification

ST8004:  
LOW COST  
ANALOG  
SMARTCARD  
INTERFACE  
CHIP



Want more information on ST8004? Go to [www.st.com/interface](http://www.st.com/interface)

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