

## Product Overview

### NCN8025: Smart Card Interface

For complete documentation, see the data sheet.

The NCN8025/NCN8025A is a compact and cost effective single smart card interface. It is dedicated for 1.8 V / 3.0 V / 5.0 V smart card reader/writer applications. The card VCC supply is provided by a built in very low dropout and low noise LDO. The device is fully compatible with the ISO 7816-3, EMV 4.3, UICC and related standards including NDS and other STB standards (Nagravision, Irdeto...). It satisfies the requirements specifying conditional access into Set Top Boxes (STB) or Conditional Access Modules (CAM and CAS). This smart card interface IC is available in a QFN-24 package (NCN8025A) providing all of the industry standard features usually required for STB smart card interface. It is also offered in a very compact package profile, QFN-16 (NCN8025), satisfying the requirements of cost efficiency and space saving requested by CAM and SIM applications. For details regarding device implementation refer to the application note AND8003 available under request (please contact local sales office or representative).

### Features

- Fully compatible with ISO-7816-3, EMV4.3, UICC and related standards including NDS and other STB standards (Nagravision, Irdeto ...)
- 3 Bidirectional Buffered I/O Level Shifters (C4, C7 and C8)(QFN-24)- 1 Bidirectional I/O Level Shifter (C7)for the QFN-16 compact version
- 1.8V, 3.0V or 5.0V +/- 5% Regulated Card Power Supply such as ICC ≤ 70 mA
- Regulator Power Supply: VDDP = 2.7V to 5.5V (@1.8V), 3.0V to 5.5V (@3.0V) & 4.85V to 5.5V (@5.0V)
- Independent Power Supply on Controller Interface: VDD = 2.7V to 5.5V
- Handle Class A, B & C smart cards
- Short Circuit Protection on all Card Pins
- Support up to 27 MHz input clock with internal division ratio 1/1, 1/2, 1/4, 1/8 through CLKDIV1 & CLKDIV2
- ESD Protection on Card Pins up to +8kV (Human Body Model)
- Activation/Deactivation Sequence (ISO7816 Sequencer)

For more features, see the data sheet

### Applications

- Pay TV, Set-Top-Box, Decoder with Conditional Access and Pay-per-View
- Conditional Access Module (CAM)
- Conditional Access System (CAS)
- SIM card interface applications (UICC / USIM)
- Transaction Terminals

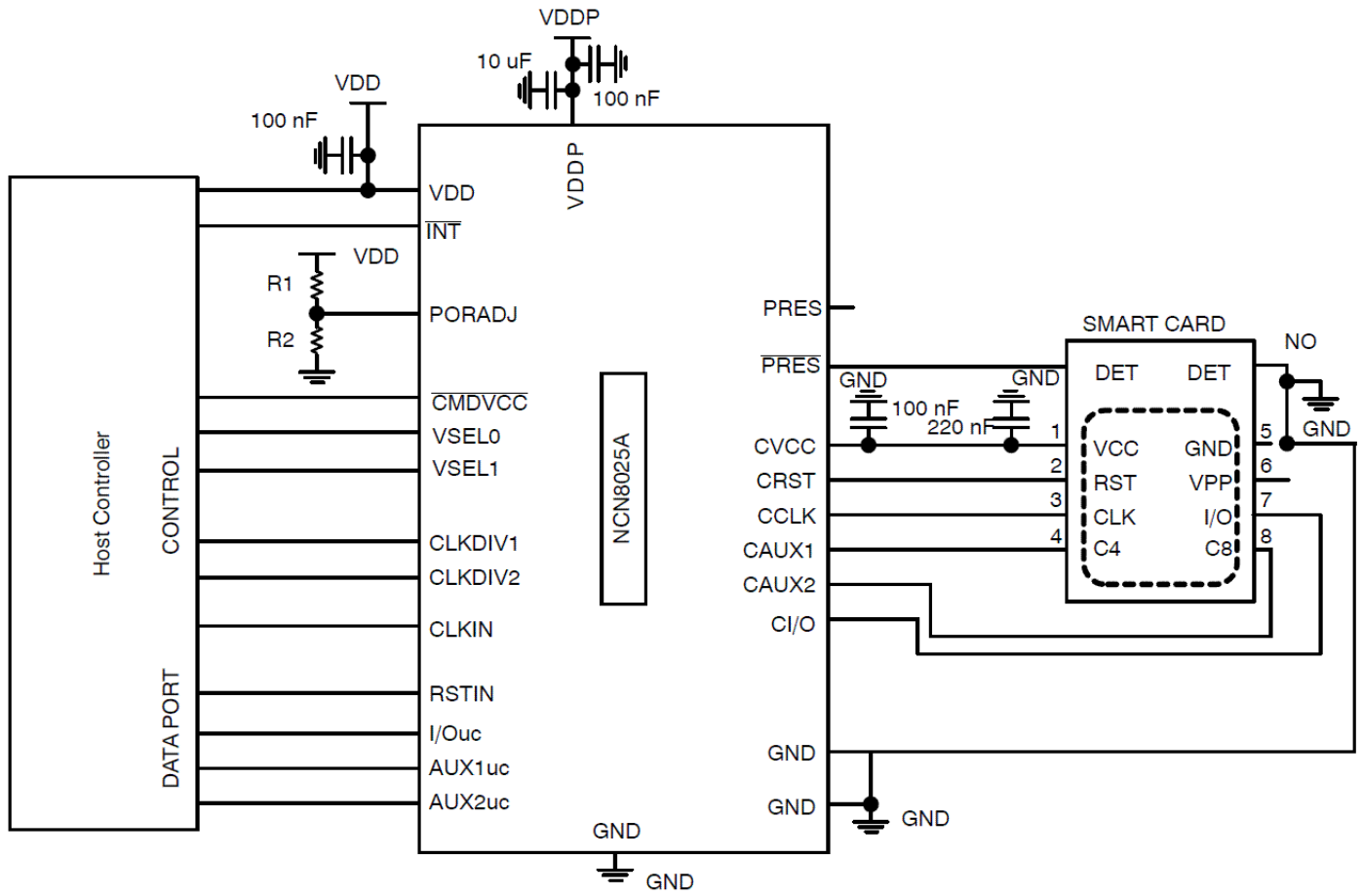
### End Products

- Pay TV / Set Top Box

### Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	V <sub>CC</sub> Min (V)	V <sub>CC</sub> Max (V)	I <sub>T</sub> Typ (mA)	I <sub>I(standby)</sub> Max (µA)	f <sub>clock</sub> Max (MHz)	Package Type
NCN8025AMNTXG	0.2667	Pb-free Halide free	Active	2.7	5.5	4	61	27	QFN-24
NCN8025MTTBG	0.4533	Pb-free Halide free	Active	2.7	5.5	4	61	27	QFN-16

# Application Diagram



For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com).

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