

STRF2163

CONTACTLESS READER CHIP SET

DATA BRIEFING

FUNCTION: ANALOG FRONT END FOR CONTACTLESS SMARTCARD READER

- GENERAL DESCRIPTION
- This is an analog front end dedicated to contactless Smartcards.
- This interface complies with ISO 14443-2 Type
 B: powering, data transfer from reader to card with amplitude modulation, data transfer from card to reader.
- MAIN FEATURES
- Supply voltage: from 5 V to 15 V
- Modulation: 10% ASK
- Data transfer to card: up to 424 KBit/second
- Data transfer to reader: up to 424 KBit/second
- DC subcarrier output level
- Quartz oscillator 13.56 MHz ± 100 ppm

FUNCTION: DECODER AND FRAME FORMATING FOR CONTACTLESS SMARTCARD READERS

- GENERAL DESCRIPTION
- This is an FPGA dedicated to contactless Smartcard. This interface complies with ISO 14443-3 Type B
- MAIN FEATURES
- Supply voltage: 3.3 V
- Programmable data transfer from reader to card
- 106 KBit/second, 212 KBit/second and 424 KBit/ second
- Programmable data transfer from card to reader
- 106 KBit/second, 212 KBit/second and 424 KBit/ second
- 8 bit parallel interface for MCU
- Programmable SCI interface from 4800 to 115 KBit/second

FUNCTION: MCU FOR CONTACTLESS SMARTCARD READER

- GENERAL DESCRIPTION
- the ST92163 is a 8/16 bit MCU
- MAIN FEATURES
- Supply voltage: 5 V
- Internal memory 16 K bytes OTP
- 2 K Bytes of RAM
- 24 MHz CPU frequency
- Full speed USB
- SCI up to 315 KBit
- External memory up to 256 KBytes
- Rich instruction set with 14 addressing modes, versatile development tools, including assembler, linker, C compiler, hardware emulators and real time operating system.

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RS232 Serial Interface 424 KBit/second USB ST92163 128 KBytes BPSK DECODER FRAME **MICRO** PROCESSING Flash Memory CONTROLLER **User Software** FIFO DIN/DOUT(7:0) 256 Bytes **ANALOG** FRONT END CRC 128 KBytes ASK CODER FLOW DATA CONTROL Flash Memory Library **FPGA** SCP 159a/PRZ

Figure 1 Contactless Reader Architecture