

# ADC, RHF, ISOSD, STPM

## Технические характеристики

По вопросам продаж и поддержки обращайтесь:

Алматы (7273)495-231  
Ангарск (3955)60-70-56  
Архангельск (8182)63-90-72  
Астрахань (8512)99-46-04  
Барнаул (3852)73-04-60  
Белгород (4722)40-23-64  
Благовещенск (4162)22-76-07  
Брянск (4832)59-03-52  
Владивосток (423)249-28-31  
Владикавказ (8672)28-90-48  
Владимир (4922)49-43-18  
Волгоград (844)278-03-48  
Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89  
Иваново (4932)77-34-06  
Ижевск (3412)26-03-58  
Иркутск (395)279-98-46  
Казань (843)206-01-48  
Россия +7(495)268-04-70

Калининград (4012)72-03-81  
Калуга (4842)92-23-67  
Кемерово (3842)65-04-62  
Киров (8332)68-02-04  
Коломна (4966)23-41-49  
Кострома (4942)77-07-48  
Краснодар (861)203-40-90  
Красноярск (391)204-63-61  
Курск (4712)77-13-04  
Курган (3522)50-90-47  
Липецк (4742)52-20-81  
Магнитогорск (3519)55-03-13  
Москва (495)268-04-70  
Мурманск (8152)59-64-93  
Набережные Челны (8552)20-53-41  
Нижний Новгород (831)429-08-12  
Новокузнецк (3843)20-46-81  
Ноябрьск (3496)41-32-12  
Новосибирск (383)227-86-73  
Киргизия +996(312)-96-26-47

Омск (3812)21-46-40  
Орел (4862)44-53-42  
Оренбург (3532)37-68-04  
Пенза (8412)22-31-16  
Петрозаводск (8142)55-98-37  
Псков (8112)59-10-37  
Пермь (342)205-81-47  
Ростов-на-Дону (863)308-18-15  
Рязань (4912)46-61-64  
Самара (846)206-03-16  
Саранск (8342)22-96-24  
Санкт-Петербург (812)309-46-40  
Саратов (845)249-38-78  
Севастополь (8692)22-31-93  
Симферополь (3652)67-13-56  
Смоленск (4812)29-41-54  
Сочи (862)225-72-31  
Ставрополь (8652)20-65-13  
Сургут (3462)77-98-35  
Казахстан +7(7172)727-132

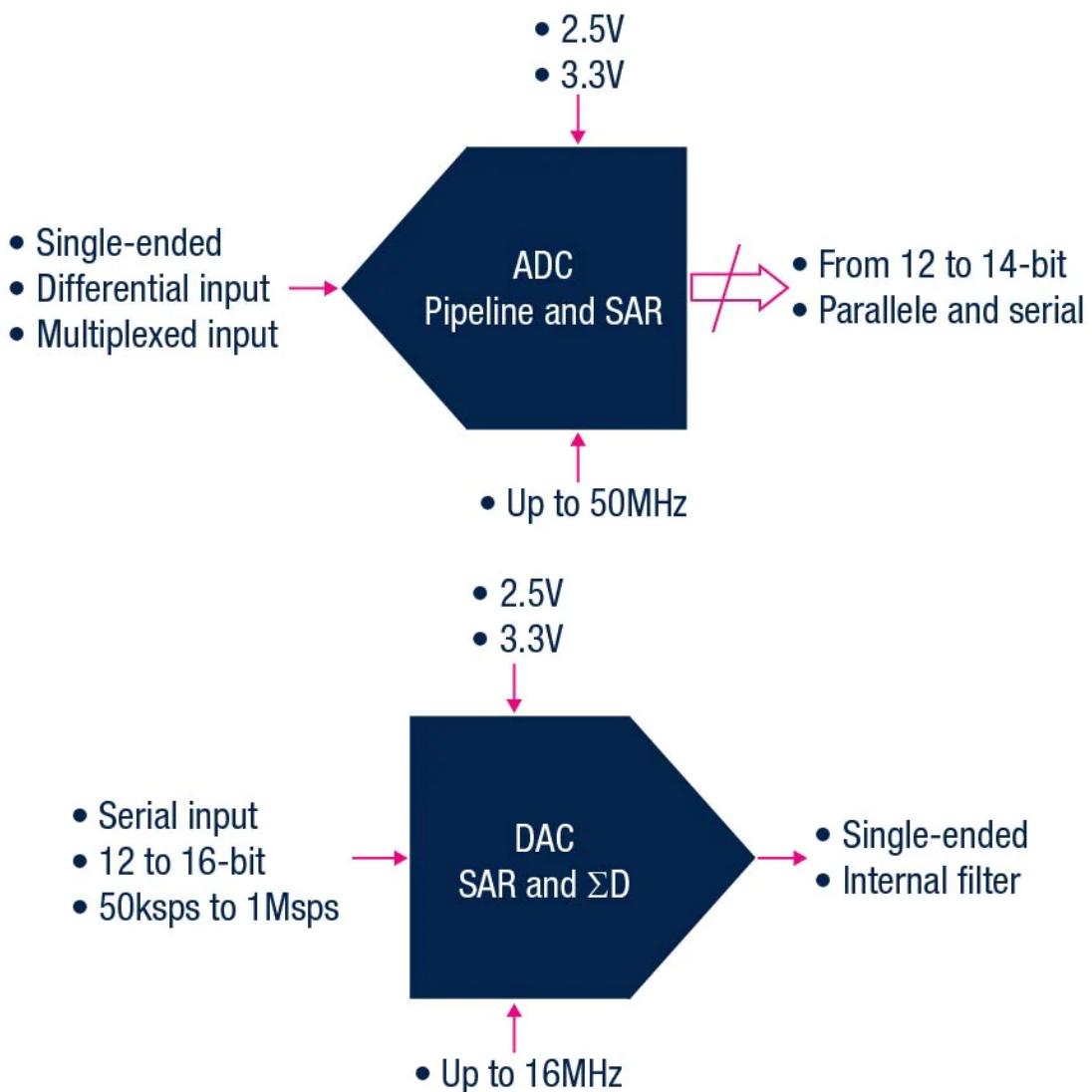
Сыктывкар (8212)25-95-17  
Тамбов (4752)50-40-97  
Тверь (4822)63-31-35  
Тольятти (8482)63-91-07  
Томск (3822)98-41-53  
Тула (4872)33-79-87  
Тюмень (3452)66-21-18  
Ульяновск (8422)24-23-59  
Улан-Удэ (3012)59-97-51  
Уфа (347)229-48-12  
Хабаровск (4212)92-98-04  
Чебоксары (8352)28-53-07  
Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Чита (3022)38-34-83  
Якутск (4112)23-90-97  
Ярославль (4852)69-52-93

## Data Converters

### Overview

ST's high performance analog-to-digital converters combine high-speed with ultra-low power dissipation.

The ADC technology in 0.25 µm CMOS provides a very efficient speed-to-power ratio and results in a highly cost-effective integration for the application.



## **A/D - D/A converters**

### **Overview**

ST's high performance converters combine high-speed with ultra-low power consumption by using 0.25µm and 130nm high-end proven technology in high volume.

Designed using ST's radiation-hardening architecture and layout rules, ST's ADC and DAC meet the most stringent radiation immunity standards and qualification criteria to fit with applications in Satellites.

**Data Converters/A/D - D/A converters**

Part Number	General Description	Package	Resolution (b) nom	Signal to noise ratio (dB) typ	Supply Voltage (V) min	Supply Voltage (V) max	Marketing Restriction	PNL
ADC120	8-Channel, 50ksps to 1Msps, 12-Bit A/D Converter	TSSOP-16L	12	60	2.7	3.6	Public	71
ADC1283	8-Channel, 50ksps to 200ksps, 12-Bit A/D Converter	TSSOP-16L	12	73	2.7	5.5	Public	71
RHF1201	Rad-hard 12-bit 50 Msps A/D converter	CSO-48,Flat-48	12	60	2.3	3.3	Public	71
RHF1401	Rad-hard 14-bit 20 Msps A/D converter	CSO-48	14	70	2.3	2.7	Public	71
RHFAD128	Rad-Hard 8-channel 12-bit A/D converter	Flat-16,die	12	-	2.7	3.6	Public	71
RHRDAC121	Rad-Hard, 12-Bit D/A Converter	Flat-10	12	-	2.3	3.6	Public	71
RHRDAC1612	Rad-Hard High Resolution DAC	Flat-24N	24	-	3	3.6	Public	71

## Isolated ADCs

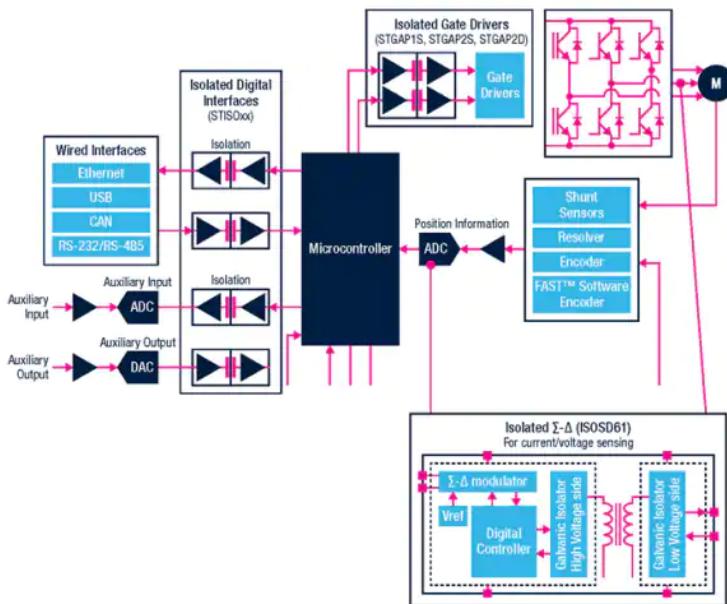
### Overview

Enhance accuracy, reliability and cost-effectiveness with high-performance galvanic isolated ADCs.

Isolated analog-to-digital converters (ADCs) are second-order sigma-delta modulators that convert analog values into a 1-bit stream and are able to withstand high common-mode voltages. Combining a high-frequency external clock input and wide bandwidth, our isolated ADCs provide very high accuracy thanks to the improved signal-to-noise ratio (SNR). The isolation grade and a high level of transient immunity are keys to reliably sensing currents and voltages to ensure the robustness and high performance of many industrial applications.

Available with either a TTL (ISOSD61T) or LVDS (ISOSD61L) input, these 1-bit sigma-delta modulators have an output peripheral separated from the input modulator by a galvanically isolated barrier providing protection up to 6000 V<sub>PEAK</sub>. The ISOSD61 is a 16-bit resolution analog to digital converter with no missing code. Full-featured evaluation boards designed to let you explore all the features of the ISOSD61 isolated analog-to-digital converters (ADC) are also available. The Sigma-Delta ADC family is supported by several reference designs to expedite development phase and time to market.

The family is qualified over a -40 to +125°C extended industrial temperature range and is ideal for current and voltage sensing in industrial motor control, solar inverters, UPS, electric vehicle chargers, factory automation, telecom and server power supplies as they represent the best trade-off between accuracy, reliability, physical size and cost.



Galvanic isolation enabling technology for industrial drive

**Data Converters/Isolated ADCs**

Part Number	General Description	Architecture	Input Channels	Input Voltage (mV) P-P	Interface	Signal to noise ratio (dB) typ	ADC conversion rate (Msps) max	Isolation Voltage (kV) peak	CMTI (kV/μs) min	Operating Temperature (°C) max	Operating Temperature (°C) min	Package
ISOSD61	16-bit isolated Sigma-Delta modulator, single-ended and LVDS interfaces	Sigma Delta modulator	1	320	LVDS/TTL	86	25	6	25	125	-40	SO-16W

## Metering ICs

### Overview

Smart metering Analog Front End (AFE) ICs offer high accuracy when measuring DC and AC energy down to extremely low currents typical of home appliances in standby mode.



**Data Converters/Metering Ics**

Part Number	Package	Number of Channels max	Active Power Accuracy spec	Dynamic Range	Bandwidth (kHz) (@ -3dB) spec	Features	Communication interface
STPM32	QFN-24L	2	0.1	5000:1	4	All sensors supported, voltage line frequency, SAG, SWELL, ZC	SPI, UART
STPM33	VFQFPN 32 5x5x1.0 mm	3	0.1	5000:1	4	All sensors supported, voltage line frequency, SAG, SWELL, ZC	SPI, UART
STPM34	VFQFPN 32 5x5x1.0 mm	4	0.1	5000:1	4	All sensors supported, voltage line frequency, SAG, SWELL, ZC	SPI, UART
STPMC1	TSSOP-20	5	0.1	1000:1	0.4	Hall and temperature sensors supported, anti-tamper	SPI
STPMS2	VFQFPN 16 4x4x1.0	2	-	-	4	ASSP, Hall sensors supported, I/V measurement	Serial
STPM01	TSSOP-20	2	0.1	1000:1	0.4	Active, reactive, apparent energies and RMS, OTP, anti-tamper	SPI
STPM10	TSSOP-20	2	0.1	1000:1	0.8	HW registers, Voltage line frequency, anti-tamper	SPI
STPMS1	QFN-16L	2	-	-	2	ASSP, I/V measurement	Serial

**По вопросам продаж и поддержки обращайтесь:**

Алматы (7273)495-231  
Ангарск (3955)60-70-56  
Архангельск (8182)63-90-72  
Астрахань (8512)99-46-04  
Барнаул (3852)73-04-60  
Белгород (4722)40-23-64  
Благовещенск (4162)22-76-07  
Брянск (4832)59-03-52  
Владивосток (423)249-28-31  
Владикавказ (8672)28-90-48  
Владимир (4922)49-43-18  
Волгоград (844)278-03-48  
Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89  
Иваново (4932)77-34-06  
Ижевск (3412)26-03-58  
Иркутск (395)279-98-46  
Казань (843)206-01-48  
Россия +7(495)268-04-70

Калининград (4012)72-03-81  
Калуга (4842)92-23-67  
Кемерово (3842)65-04-62  
Киров (8332)68-02-04  
Коломна (4966)23-41-49  
Кострома (4942)77-07-48  
Краснодар (861)203-40-90  
Красноярск (391)204-63-61  
Курск (4712)77-13-04  
Курган (3522)50-90-47  
Липецк (4742)52-20-81  
Магнитогорск (3519)55-03-13  
Москва (495)268-04-70  
Мурманск (8152)59-64-93  
Набережные Челны (8552)20-53-41  
Нижний Новгород (831)429-08-12  
Новокузнецк (3843)20-46-81  
Ноябрьск (3496)41-32-12  
Новосибирск (383)227-86-73  
Киргизия +996(312)-96-26-47

Омск (3812)21-46-40  
Орел (4862)44-53-42  
Оренбург (3532)37-68-04  
Пенза (8412)22-31-16  
Петрозаводск (8142)55-98-37  
Псков (8112)59-10-37  
Пермь (342)205-81-47  
Ростов-на-Дону (863)308-18-15  
Рязань (4912)46-61-64  
Самара (846)206-03-16  
Саранск (8342)22-96-24  
Санкт-Петербург (812)309-46-40  
Саратов (845)249-38-78  
Севастополь (8692)22-31-93  
Симферополь (3652)67-13-56  
Смоленск (4812)29-41-54  
Сочи (862)225-72-31  
Ставрополь (8652)20-65-13  
Сургут (3462)77-98-35  
Казахстан +7(7172)727-132

Сыктывкар (8212)25-95-17  
Тамбов (4752)50-40-97  
Тверь (4822)63-31-35  
Тольятти (8482)63-91-07  
Томск (3822)98-41-53  
Тула (4872)33-79-87  
Тюмень (3452)66-21-18  
Ульяновск (8422)24-23-59  
Улан-Удэ (3012)59-97-51  
Уфа (347)229-48-12  
Хабаровск (4212)92-98-04  
Чебоксары (8352)28-53-07  
Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Чита (3022)38-34-83  
Якутск (4112)23-90-97  
Ярославль (4852)69-52-93