

**Audio Ringing Codec Filter featuring Enhanced Speakerphone PSB 2161/2163**

*The PSB 2163 ARCOFI-SP provides the subscriber with an DSP-based audio, ringing, codec, filter-processor solution for a digital telephone. It fulfills all the necessary requirements for the completion of a low-cost digital telephone featuring digital speakerphone and controlled loudhearing.(PSB 2161 loudhearing only)*

**1. Potential Application**

Voice Terminals and Voice/Data Terminals  
 Telephones with PC Interface  
 Voice Featured PC Cards  
 Video Conference Terminals  
 Fax Machines and a/b Terminal Adapter

Customers

Telephone Manufacturers (digital and analog)  
 Digital Terminal Manufacturers  
 Video Conferencing Systems Manufacturers

**2. Features:**

- Programmable Analog Front End (AFE), enables direct connection of microphones, earpiece and loudspeaker;
- 42+3dB transmit amplification on chip, allows the direct connection of the speakerphone microphone without external OpAmp
- Digital signal processing performs all CODEC functions;  
 Fully compatible to the G.714/CCITT and NET33/ETSI specifications;
- PCM G.711/CCITT A-Law/ $\mu$ -Law and 16-bit linear data;
- IOM-2TE, IOM-2 (4MHz) and SCI/SDI serial data interfaces;
- Enhanced digital speakerphone support without any external devices:  
 "Stronger-Wins" Algorithm enables mode switching by just speaking louder (PSB 2163 only);  
 Controlled monitoring (loudhearing) without any external devices;  
 Automatic Gain Control (AGC) in transmit and receive direction;
- 200 mW (square) / 100 mW (sine wave) loudspeaker driver capability;
- Flexible DTMF, tone and ringing generator;
- Low power consumption (standby <1mW);

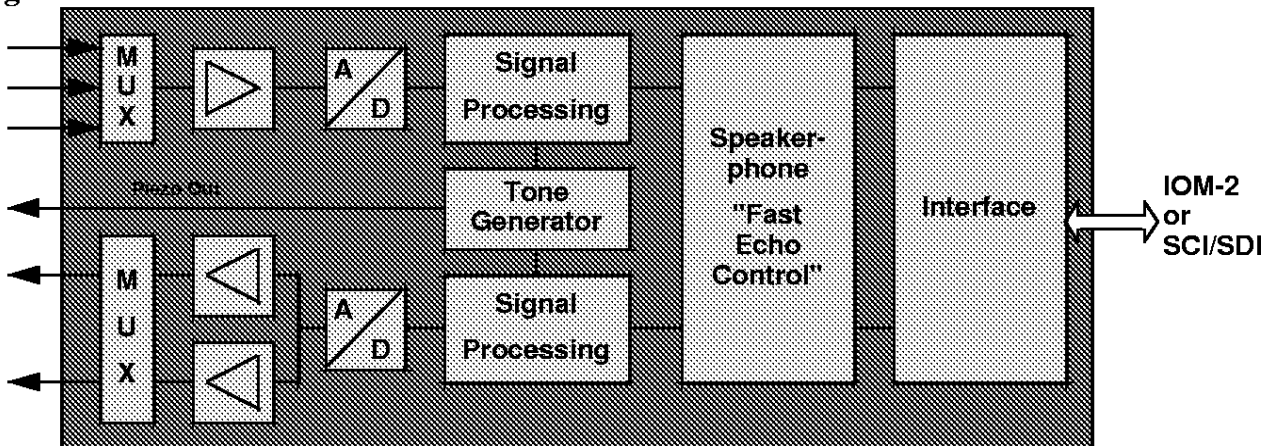
**3. Packing**

Type	Ordering Code	Package
PSB 2161 T V1.1	Q67101-H6763	P-DSO-28
PSB 2163 P V3.1	Q67100-H6768	P-DIP-28
PSB 2163 N V3.1	Q67100-H6757	P-LCC-28
PSB 2163 T V3.1	Q67100-H6684	P-DSO-28

**4. Product Status**

Product	Step	Status	Changes
PSB 2163 P	V3.1	Prod., Delivery Release	
PSB 2163 N	V3.1	Prod., Delivery Release	
PSB 2161/2163 T	V1.1/V3.1	Prod., Delivery Release	

**5. Diagram**



**6. Documentation** (Please contact our sales office for details)

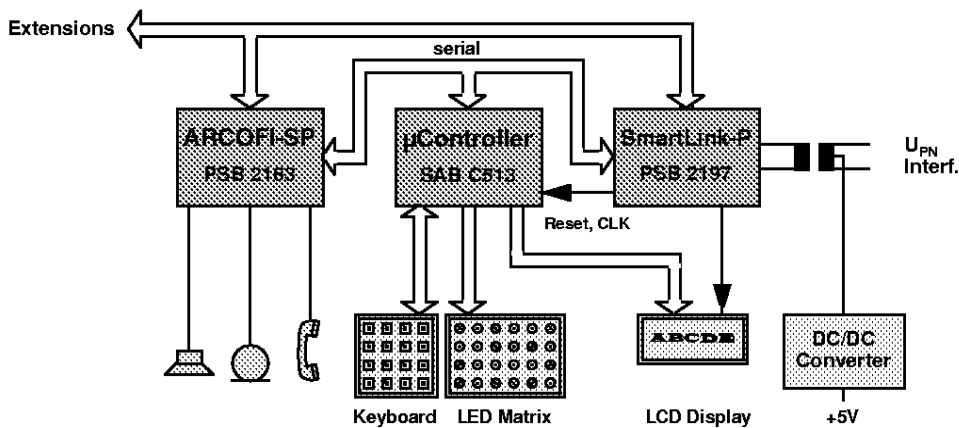
	<u>Date of issue/version</u>	<u>Type of material</u>
Data Sheet ARCOFI-BA	8/95	Copy
Errata Sheet (ARCOFI BA) V1.1	6/96	Copy
Errata Sheet (ARCOFI-BA/SP)	2/97	Copy
Delta Sheet ARCOFI-SP V3.1	7/96	Copy
Errata Sheet V2.1+V3.1 (ARCOFI SP)	7/96	Copy
App. Notes:		
Analog Line Interface with ARCOFI-BA	6/96	Copy
Using the ARCOFI-BA with a SLIC	3/95	Copy
Improving low Frequency Response	8/96	Copy
Designing with the ARCOFI PSB2161, PSB 2163	4/97	Copy
Using the Automatic Gain Control	9/95	Copy
User's Manual	6/95	Book

**7. Development and support tools**

	<u>Availability</u>	<u>Ordering number</u>
ARCOS-SP Demo-Software	available	on request
SIPO2163 ARCOS-SP PLUS Software Tool	available	Q67100-H6600
SIPB5132-SP ARCOFI-SP Telephone module	available	Q67100-H6299
SIPB5133-SP ARCOFI-SP Evaluation module	available	Q67100-H6253
SIPB5133-LH Loudhearing board to SIPB5133-SP	available	together w. Q67100-H6253
SIPB5311 PCM4 Adapter	available	Q67100-H6126
SIPB8051 ISDN Telephone Development Board	available	Q67100-H6321

**8. Applications**

- PBX Phone



- ISDN Phone with Full Duplex Echo Cancellation

