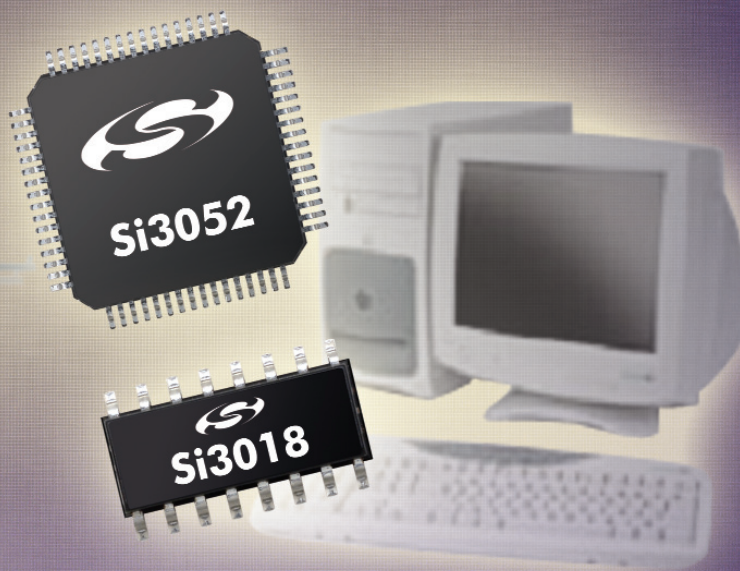


# Si3052 Global PCI DAA Chipset

COMPLETE HARDWARE SOLUTION FOR SOFT MODEMS

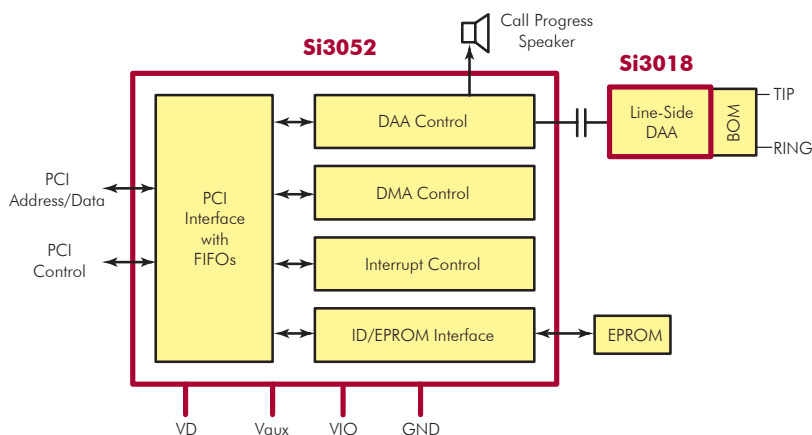


## PRODUCT DESCRIPTION

The Si3052 is an integrated silicon direct access arrangement (DAA) with a peripheral component interface (PCI) that offers global compliance through a programmable telephone line interface. The chipset (Si3052 and Si3018) is fully programmable for AC and DC termination, ringer impedance and ringer threshold, and it supports billing tone detection, polarity reversal and pulse dialing, enabling it to meet the most stringent global PTT requirements. The Si3052 offers a number of enhanced features including ring validation, integrated call progress speaker driver, low-cost 32.768 kHz clock crystal, internal PnP IDs, and system lock-up protection. The Si3052 contains a 32-bit, 33 MHz, PCI 2.3 compliant interface and supports PCI Power Management Interface (PPMI) 1.1 with wake-on-ring.

Like other Silicon Labs' ISOcap™ DAA products, the Si3052 offers the highest level of integration by replacing the codec, isolation transformer, relay, opto-isolators, 2-4 wire hybrid and DC holding circuit with one 64-pin TQFP, one 16-pin SOIC and minimal external components.

## Si3052 BLOCK DIAGRAM



## FEATURES

- 32-bit, 33 MHz, PCI 2.3 compliant interface
- PPMI 1.1 and wake-on-ring with PME and Vaux
- DMA bus master controller with 16x8 FIFOs
- Interrupt controller for PCI and DAA events
- Selectable DAA interrupts
- Globally compliant with FCC, TBR21, NET4, JATE and country-specific PTT specifications
- Single, global, low-cost bill-of-materials (BOM)
- Integrated ring validation
- Internal Plug-and-Play IDs or external EPROM
- Integrated call progress speaker driver
- Programmable hybrid filter for increased echo cancellation
- Watchdog timer for system lock-up protection
- Enhanced AC and DC termination control
- Line current sensing
- 84 dB dynamic range codec
- Greater than 5000 V isolation with standard capacitors
- 3.3 V core and 3.3 or 5.0 VIO power supply
- 64-pin TQFP and 16-pin SOIC packages
- Register set based on Si3034 chipset

## APPLICATIONS

- V.92 Software Modems
- PCI Cards
- Mini PCI Cards

## PRODUCT BRIEF

**PROVEN, ROBUST SOLUTIONS THAT  
ENSURE GLOBAL COMPLIANCE  
WITH A SINGLE BOARD DESIGN**



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## UNPARALLELED INTEGRATION AND GLOBAL COMPLIANCE

With its low-cost BOM, the Si3052 chipset dramatically reduces the number of components and cost required to achieve global compliance. The Si3052 achieves a 75% reduction in board space, requires 50% fewer components and saves 60% of the BOM cost as compared to discrete DAA solutions. As with previous Silicon Labs DAAs, the Si3052 chipset is globally compliant allowing one solution to ship worldwide, simplifying modem designs and reducing manufacturing costs.

Silicon Laboratories' patented ISOcap technology is the innovation behind the Si3052 chipset. Both modem and control data are transferred across the capacitive isolation barrier in digital format. This approach enables global programmability and improves noise immunity which is critical to global high-speed modem designs.

### Countries Supported

**FCC:** USA and others

**TBR21:** Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom

**JATE:** Japan

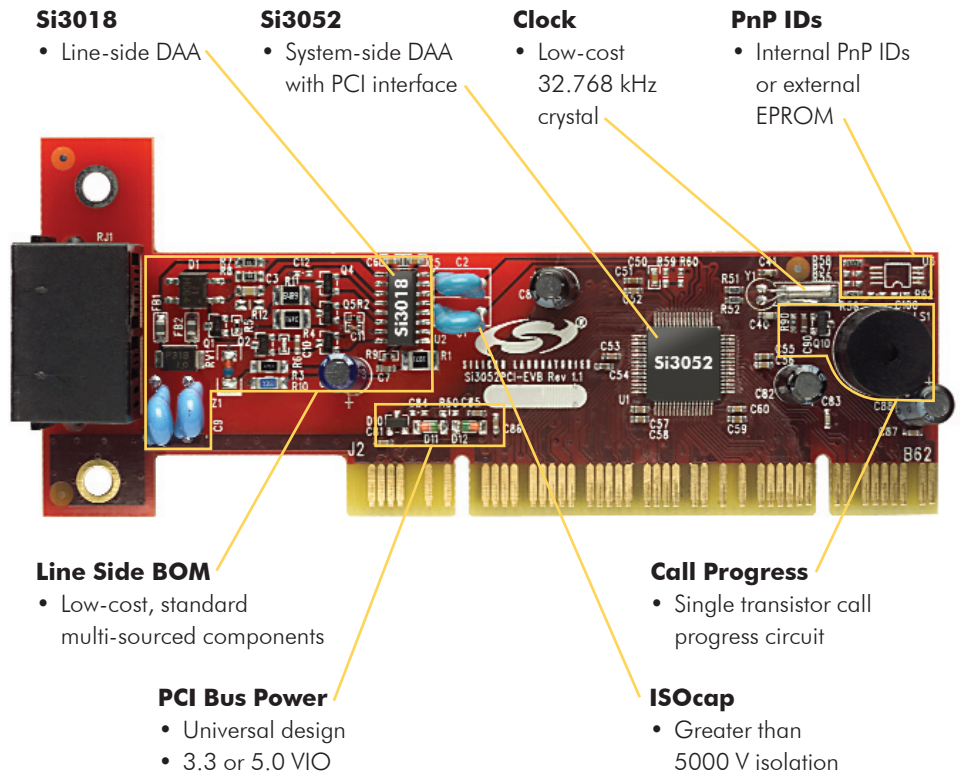
**Additional\*:** Australia, Bulgaria, China, Czech Republic, Hungary, Korea, Malaysia, New Zealand, Philippines, Poland, Singapore, Slovakia, Slovenia, South Africa

\*(Many other country-specific PTTs are supported)

## 60% BOM Cost Savings / 75% Board Space Savings

### Universal PCI Card

Actual Size Shown  
(120 x 50 mm)



### Enhanced Features

- Ring Validation – verifies ring frequency and cadence to prevent invalid wake-on-ring events
- 32.768 kHz Clock – reduces cost of external crystal circuit
- Internal PnP IDs – eliminates cost of external EPROM circuit
- Lock-Up Protection – prevents a system lock-up from leaving the phone line in an off-hook state that inhibits calls
- Integrated Speaker Driver – reduces board space and cost of the call progress circuit

## CONTACT INFORMATION



SILICON LABORATORIES

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## SILICON DAA CHIPSETS

Region	Interface	System-Side		Line-Side	
		Part Number	Package	Part Number	Package
Global	PCI	Si3052-KQ	64-pin TQFP	Si3018-KS	16-pin SOIC
Global	PCI	Si3052-KQ	64-pin TQFP	Si3018-KT	16-pin TSSOP
Global	AC-Link	Si3054-KS	16-pin SOIC	Si3018-KS	16-pin SOIC
Global	AC-Link	Si3054-KT	16-pin TSSOP	Si3018-KT	16-pin TSSOP