

Si3048 Chip Set

ENHANCED GLOBAL MC'97 SILICON DAA



PRODUCT DESCRIPTION

The Si3048 is an integrated silicon Direct Access Arrangement (DAA) with an AC-Link system interface that offers global compliance through a programmable telephone line interface. The chipset is fully programmable for AC and DC termination, ringer impedance, and ringer threshold. The chipset also supports billing tone detection, polarity reversal, and pulse dialing, enabling it to meet the most stringent global PTT requirements. The Si3048 offers a number of new features including ring validation, caller ID decode and storage, AC-Link auto-configuration EEPROM interface, integrated speaker driver, and automatic on-hook system lockup protection.

Like all Silicon Labs ISOcap™ DAA products, the Si3048 offers the highest level of integration by replacing the codec, isolation transformer, relays, opto-isolators, 2- to 4-wire hybrid, and DC holding circuit with two 16-pin SOIC packages. The pin compatible Si3048 is backwards compatible with the Si3038 global MC'97 silicon DAA. The Si3046 chipset supports the same new features as the Si3048 and is available for FCC/JATE only designs.

Silicon DAA Feature Comparison (AC-Link)

Feature	Si3048	Si3046	Si3038	Si3036
Region	Global	FCC/JATE	Global	FCC/JATE
Ring Validation	■	■		
Caller ID Support	Decode & Store	Decode & Store	Pass-thru	Pass-thru
Speaker Driver	Internal	Internal	External	External
EEPROM Interface	■	■		
AC-Link Auto-configuration	■	■		
Lockup Protection	■	■		

FEATURES

- Interface compliant with Intel AC'97 2.1 specification
- Compatible with AMR, MDC, CNR, ACR, and Mini PCI specifications
- Globally compliant with FCC, CTR21, NET4, JATE, and country-specific PTT specifications
- Integrated ring detection with wake-up on ring
- Ring validation
- Caller ID decode and storage (US & UK formats)
- AC-Link auto-configuration for primary or secondary codec
- EEPROM interface for plug-and-play
- Automatic system lockup protection
- Integrated speaker driver
- On-hook line monitoring
- Line current sensing
- 84 dB dynamic range
- Greater than 3000 V isolation
- Low power modes and cold/warm reset
- 3.3 V or 5.0 V analog/digital power supply
- Low profile, 16-pin SOIC packages

APPLICATIONS

- V.90 software modems
- Audio Modem Riser (AMR)
- Mobile Daughter Cards (MDC)
- Communication and Networking Riser (CNR)
- Advanced Communications Riser (ACR)
- Modem on Motherboard (MoM)
- Mini PCI cards

PRODUCT BRIEF

SILICON LABS IS THE MARKET LEADER FOR SILICON DAAS. OUR DESIGNS OFFER THE BROADEST FEATURE SET IN THE INDUSTRY AND ENSURE GLOBAL COMPLIANCE WITH A SINGLE BOARD DESIGN.



ENHANCED FEATURES

- Ring validation - qualifies ring frequency and cadence to prevent invalid wake-on-ring events.
- Caller ID decode & storage - saves the CID string for later recall when the system awakes from power-down state.
- AC-Link auto-configuration - switches SDATA_IN signal to allow single riser card primary/secondary operation regardless of system configuration.
- EEPROM interface - adds Plug-and-Play (PnP) functionality to AMR cards and MDCs.
- Lockup protection - prevents a system crash from leaving the phone line in an off-hook state that inhibits incoming/outgoing calls.
- Integrated speaker driver - reduces board space and cost of a modem call progress circuit.

COUNTRIES SUPPORTED*

FCC: Canada, Central America, Taiwan,

United States... a large portion of the world

CTR21: 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 PTT requirements are supported)

CONTACT INFORMATION



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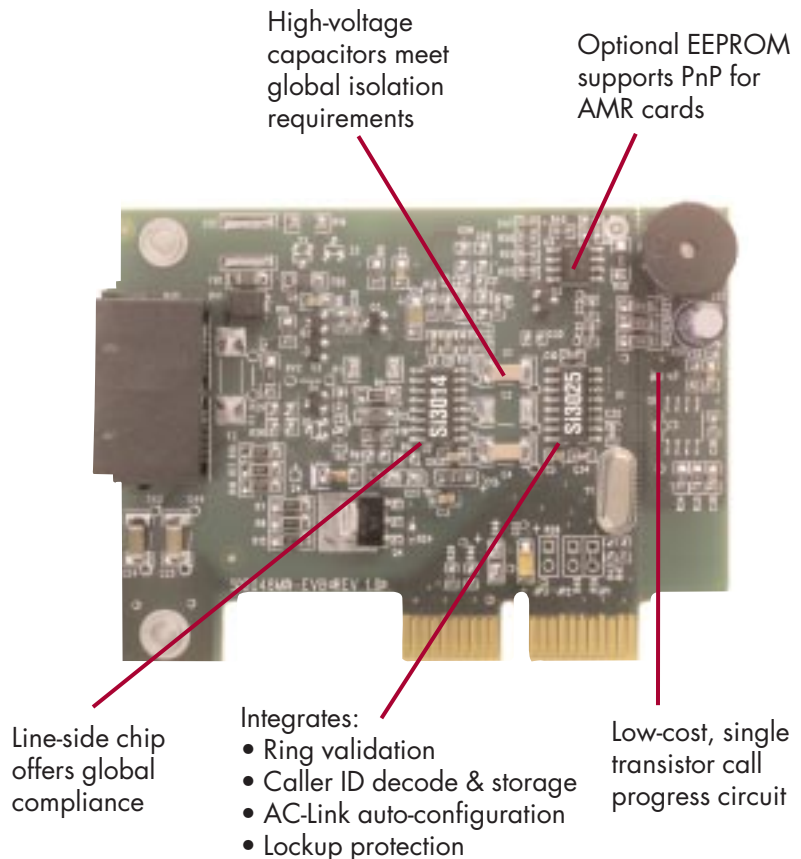
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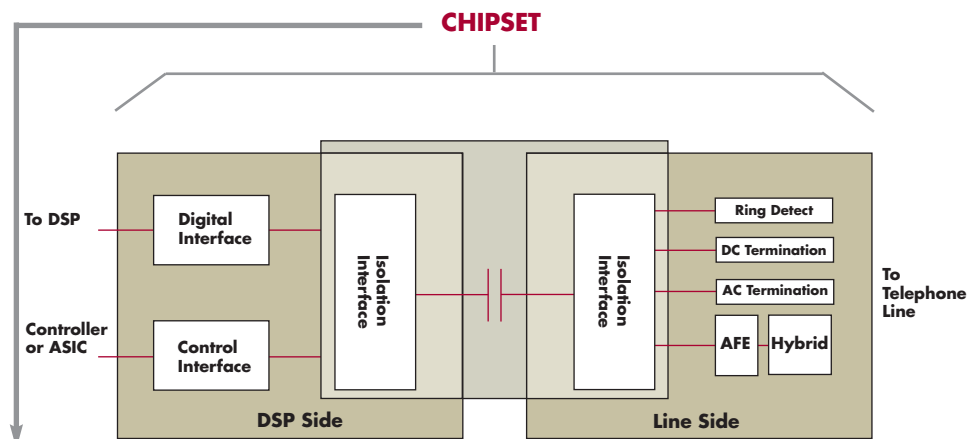
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PB-Si3048;RD-5,000-REV10/00-6

Silicon DAA Feature Set



DIGITAL INTERFACE SILICON DAA CHIPSETS



Si3034	=	Si3021	+	Si3014	DSP/GLOBAL
Si3035	=	Si3021	+	Si3012	DSP/FCC
Si3036	=	Si3024	+	Si3012	AC-LINK/FCC
Si3038	=	Si3024	+	Si3014	AC-LINK/GLOBAL
Si3044	=	Si3021	+	Si3015	DSP/GLOBAL
Si3046	=	Si3025	+	Si3012	AC-LINK/FCC
Si3048	=	Si3025	+	Si3014	AC-LINK/GLOBAL