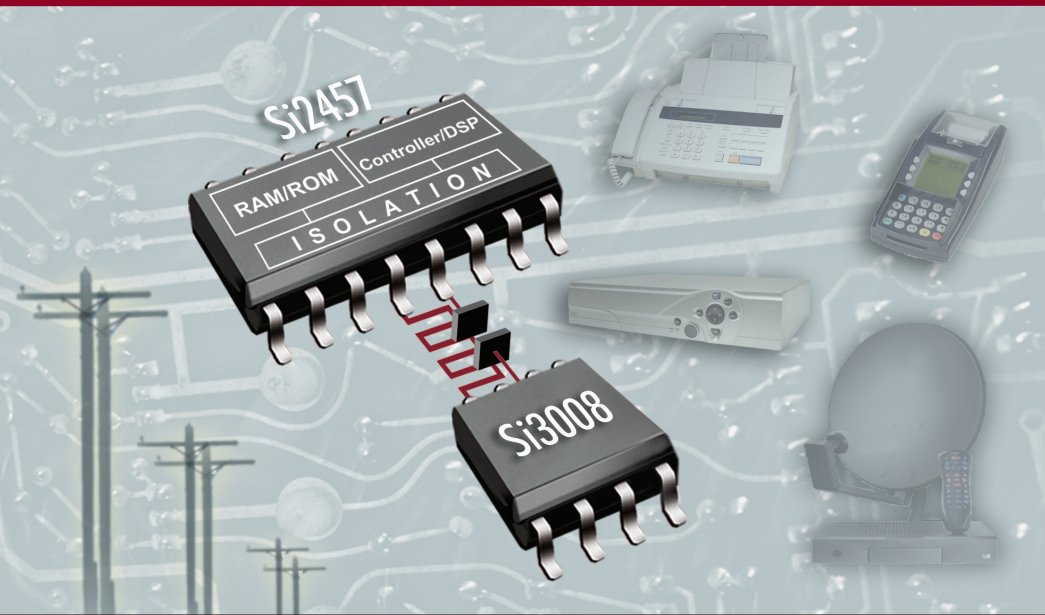


# ISOmodem® Solutions

EMBEDDED MODEMS AND FAX MODEMS  
WITH AN INTEGRATED GLOBAL DAA



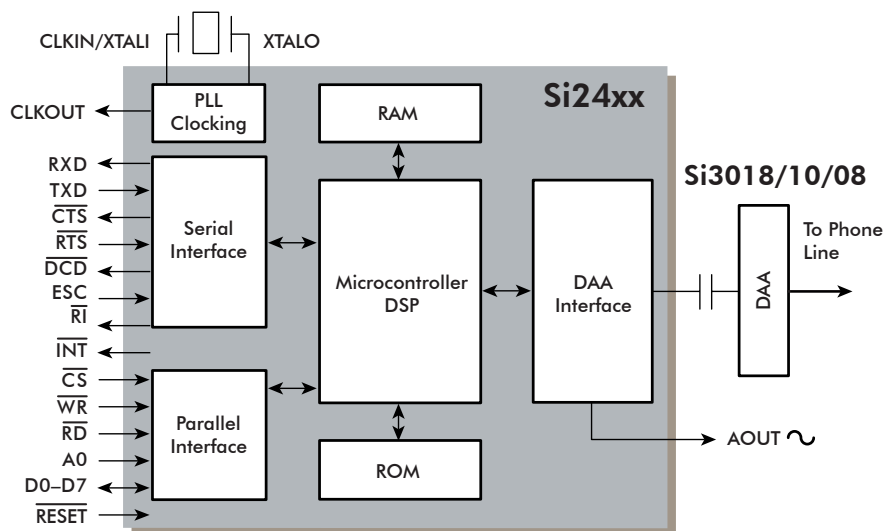
## DESCRIPTION

The ISOmodem family of products are complete modems ranging in speed from 2400 bps to 56,000 bps. Offered as a chipset with a 16-pin high-speed global line side (LS) device, 16-pin low-speed global LS, or an 8-pin FCC+ LS (see back for country list), the ISOmodem utilizes Silicon Laboratories' patented direct access arrangement (DAA) technology to provide a programmable telephone line interface with an unparalleled level of integration. Available in two small packages, these compact solutions eliminate the need for a separate DSP, modem controller, codec, transformer, relay, opto-isolators, clocking crystal and 2–4 wire hybrid. These devices are ideal for embedded modem and fax modem applications due to their flexibility, small footprint and minimal external components.

## BENEFITS

- Smallest, most compact modem solution
- Lowest external component count
- Reduces development time and resources

## ISOmodem BLOCK DIAGRAM



## FEATURES

- Data modem formats
  - 56,000 bps: V.90
  - 33,600 bps: V.34
  - 14,400 bps: V.32bis
  - 9600 bps: V.32
  - 2400 bps: V.22bis
  - 1200 bps: V.22, V.23, Bell 212A
  - 300 bps: V.21, Bell 103
- Fax modem formats
  - 33,600 bps: V.34 half-duplex
  - 14,400 bps: V.17
  - 9600 bps: V.29
  - 4800 bps: V.27ter
  - 300 bps: V.21 channel 2
- Integrated DAA
  - Over 6000 V isolation
  - Global country support (Si3018/10 LS)
  - FCC, JATE, China and 47 other countries (Si3008 LS)
  - On and off hook line voltage monitoring
  - Parallel handset (intrusion) detection
- V.22 and V.29 fast connect
- V.42 and MNP 2–4 error correction
- V.42bis and MNP5 data compression
- AT command set
- 27 MHz clock input support
- Type I and Type II Caller ID
- Serial UART or parallel interface
- Field upgradable
- <85 mW power consumption
- Lead-free, RoHS compliant packages

## APPLICATIONS

- Set-top boxes
- Multi functional printers
- Electronic point-of-sale
- Remote monitoring
- Data/video telephones
- Fax machines

## SOLUTION GUIDE

**SINGLE DESIGN  
SUPPORTS ALL COUNTRIES  
AND ALL SPEEDS**



**INTEGRATED. PROVEN.  
SMALLEST FOOTPRINT.**

## Highest Level of Integration

By integrating the DSP, modem controller, RAM and ROM on-chip, the ISModem significantly reduces software development time and resources needed to provide a full-featured modem.

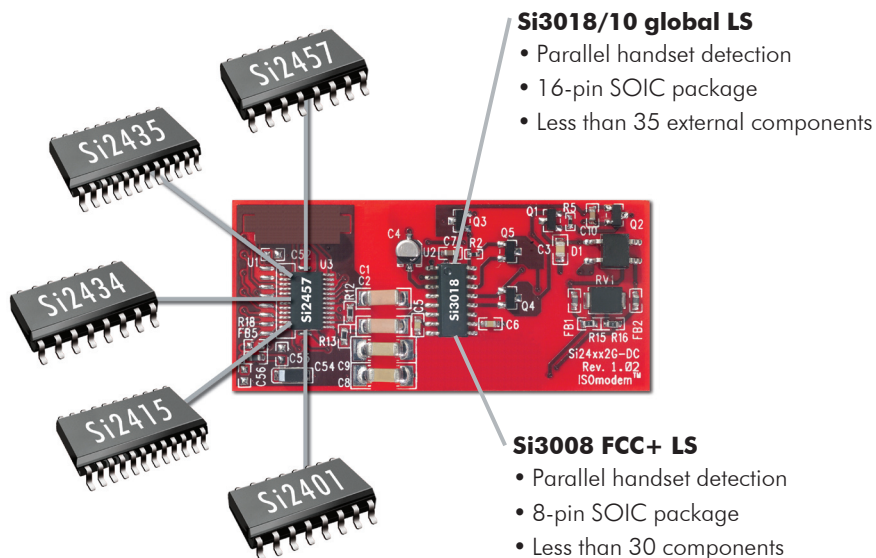
## Smallest Footprint

Dramatically reducing the bill-of-materials to less than 30 external components, the ISModem is the smallest complete modem solution on the market. This compact design eases layout, procurement and compliance testing while the smaller footprint allows for more functions on a given PCB.

## Proven, Robust Solution

Leveraging Silicon Laboratories' proven DAA technology, the ISModem offers robust operation, excellent surge immunity and reliable worldwide performance.

## Compact Design with Fewest External Components



## Global Line Side Compliance

**Si3018/10 Global Line Side:** Supports all countries

**Si3008 FCC+ Line Side:** Supports the following countries:

Argentina, Armenia, Bahamas, Bangladesh, Belarus, Bermuda, Brazil, Brunei, Canada, Caribbean, Chile, China, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Georgia, Guam, Hong Kong, India, Indonesia, Japan, Kazakhstan, Kuwait, Kyrgyzstan, Macao, Mexico, Moldova, New Zealand, Paraguay, Peru, Puerto Rico, Russia, Saudi Arabia, Singapore, South Korea, Sri Lanka, Taiwan, Thailand, Tunisia, UAE, Ukraine, Uruguay, Uzbekistan, USA, Venezuela, Vietnam, Yemen

Part Number	Max Data Rate (bps)	Data Support	Fax Support	Line-Side Device Options	Digital Interface	BOM Components	Package
Si2401	2400	✓	—	Si3010/Si3008	UART	32/25	16-pin SOIC + 8 or 16-pin SOIC
Si2404	2400	✓	—	Si3010/Si3008	UART or parallel	32/25	16-pin SOIC + 8 or 16-pin SOIC
Si2415	14400	✓	—	Si3018/Si3008	UART or parallel	32/25	16-pin SOIC + 8 or 16-pin SOIC
Si2417	14400	—	✓	Si3018	UART or parallel	32	24-pin TSSOP + 16-pin SOIC
Si2434	33600	✓	—	Si3018/Si3008	UART or parallel	32/25	16-pin SOIC + 8 or 16-pin SOIC
Si2435	33600	—	✓	Si3018	UART or parallel	32	24-pin TSSOP + 16-pin SOIC
Si2457	56000	✓	—	Si3018/Si3008	UART or parallel	32/25	16-pin SOIC + 8 or 16-pin SOIC

## CONTACT INFORMATION



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Dec 09, Rev D

## ORDERING INFORMATION

### Modem

Si2401-FS  
Si2401FS10-EVB, Si2401FS08-EVB  
Si2404-C-FT, Si2404-C-FS  
Si2404FS10-EVB, Si2404FS08-EVB  
Si2415-C-FT, Si2415-C-FS  
Si2415FS18-EVB, Si2415FS08-EVB  
Si2417-B-FT, Si2417-C-FT  
Si2434-C-FT, Si2434-C-FS  
Si2434FS18-EVB, Si2434FS08-EVB  
Si2435-B-FT, Si2435-C-FT  
Si2457-C-FT, Si2457-C-FS  
Si2457FS18-URT, Si2457FS08-URT

### Line-Side DAA

Si3010-F-FS, Si3008-B-FS  
Si3010-F-FS, Si3008-B-FS  
Si3018-F-FS, Si3008-B-FS  
Si3018-F-FS  
Si3018-F-FS, Si3008-B-FS  
Si3018-F-FS  
Si3018-F-FS, Si3008-B-FS

### Description

V.22bis Modem, 0 to 70 °C  
Si2401 Evaluation Board  
V.22bis Modem, 0 to 70 °C  
Si2404 Evaluation Board  
V.32bis Modem, 0 to 70 °C  
Si2415 Evaluation Board  
V.17 Fax Modem, 0 to 70 °C  
V.34 Fax Modem, 0 to 70 °C  
Si2434 Evaluation Board  
V.34 Modem, 0 to 70 °C  
V.90 Modem, 0 to 70 °C  
Si2457 Evaluation Board

Note: Industrial temperature devices available (-40 to 70 °C)