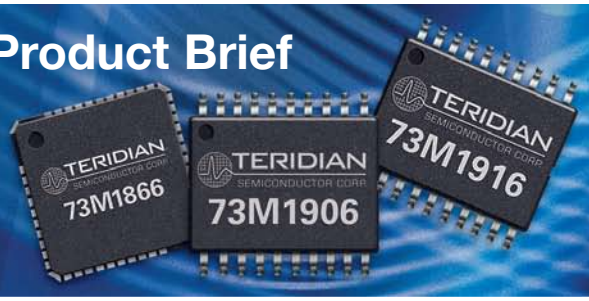
TERIDIAN SEMICONDUCTOR CORP.

73M1x66B Product Brief

Foreign Exchange Office (FXO) Device Family



Description

The Teridian 73M1x66B device family is an integrated solution that uses a unique data access arrangement (DAA) function designed exclusively for Foreign Exchange Office (FXO) of Voice-over-IP (VoIP) and PCM systems. The devices provide most of the circuitry to connect PCM formatted voice channels to a PSTN via a two wire twisted pair interface. The 73M1x66B connects through simple standard interfaces. A PCM Highway interface provides the data path and device control is provided by an SPI. These interfaces allow the 73M1x66B to be easily connected and controlled with other similar devices to the PCM highway and SPI such as POTS Codecs, ISDN Codecs, T1/E1 framers, etc.

Suitable applications for the 73M1x66B include VoIP equipment that have a need to provide connectivity to the PSTN for purposes of guaranteeing emergency service calling, redundancy for supplementary connectivity for voice and maintenance services.

The FXO device family consists of the 73M1966B which is a two chip set consisting of a PSTN line side device and a host/digital side device. The 73M1866B is a single package solution of the 73M1966B chipset, providing a small form factor with the necessary isolation requirements.

KEY FEATURES:	BENEFITS:
Full FXO for VOIP and PCM applications	› Integrated functionality supporting the requirements of connecting VOIP appliances to the PSTN › Robust performance and compliant with G.711, G.703 and ANSI T1.403
Single Package FXO (73M1866B)	› Small form factor, provides up to 4.5 kV isolation
Two Chip Set FXO (73M1966B)	› Allows support for over 4.5kV isolation (recommended for 6kV applications)
Integrated support for programmable DAA with a single BOM for worldwide homologation	› Global DAA compliance with FCC, TBR-21, JATE and other PTT standards with one BOM › Large choice of PSTN line termination and impedance matching circuits to meet global needs › Programmable PSTN line current control to match different country homologation requirements
Low bill of materials cost and area footprint	› Better than 2.0 in^2 (10.2 cm^2) board area › Available in 5x5mm 32-Pin QFN or 20 Pin TSSOP (73M1966B) or 8x8mm 42-pin QFN (73M1866B) packages › 3.0V – 3.6V operating voltage › Native T1/E1 support - No need for extra circuitry to generate clocks
Teridians's MicroDAA™ architecture › Uses low cost pulse transformer	› Offers best in class EMI and noise performance › Improves loop length performance by providing power to line side device over the isolation barrier.

The 73M1x66B is based on patented technology, that sets new standards in reliability and cost. A small pulse transformer forms a digital isolation barrier, transferring both power and data to the PSTN line side components. This results in reliable performance in presence of EMI and a tolerance to line voltage variations by providing power to the line side across the barrier thus enhancing overall performance.

73M1x66B sets new standards in FXO performance

Teridian Semiconductor Corporation is a Silicon DAA technology pioneer and patent holder with a long history of development and innovation including the capacitive isolation barrier technology licensed to 3rd parties and has been globally deployed in low speed and high speed analog modems.

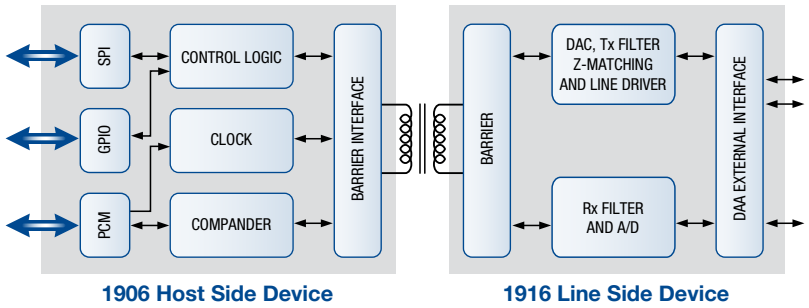
Applications

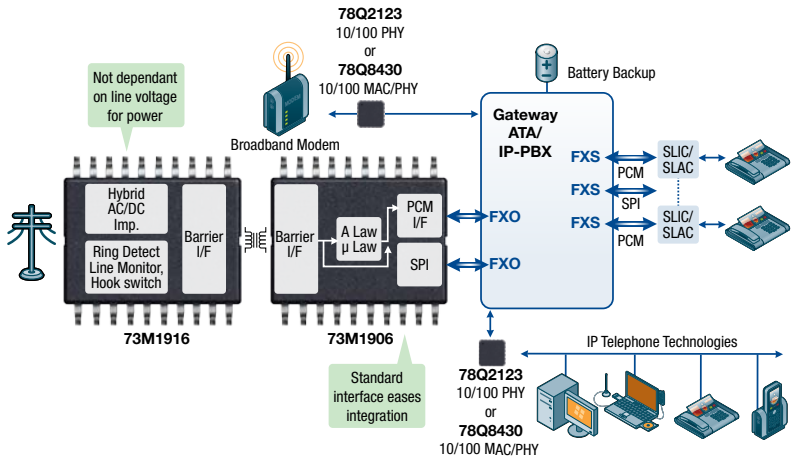
- PSTN lifeline support for VoIP equipment
- Converged media gateways
- Integrated Access Devices
- Small and Medium Enterprise integrated service routers
- Analog Telephone Adapters
- Residential/CPE gateways
- Voice over IP – PBX

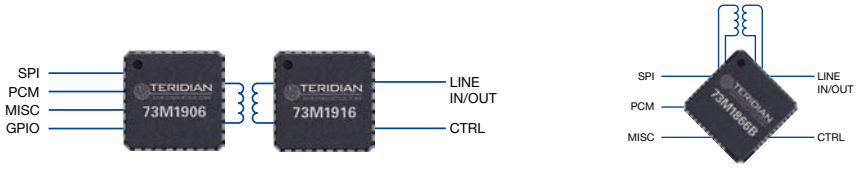
Additional Features

- Line isolation
  - *4.5 kV for 73M1866B*
  - *Better than 5kv for 73M1966B*
- Pulse transformer barrier
  - *Digital transmission of signal and control*
  - *Isolated PSU for line side device*
  - *Differential circuit with best in class EMI and common mode noise performance*
- DAA control and operation
  - *Hook control*
  - *Ring detection*
  - *Call Progress Monitor*
- Auxiliary A/D for line supervisory functions
  - *Support for Line-in-use detection*
  - *Support for Parallel Pick up detection*
  - *Line voltage polarity reversal detection without host intervention*
- Analog to PCM conversion (8/16 bit)
  - *PCM companding (A-law, µ law)*
  - *8kHz and 16kHz 16-bit linear*
  - *Automatic PCM bus clock rate detection - Including 1.544 MHz*
- Host synchronous serial interface support of Master, Slave and Daisy Chain modes
  - *Command broadcast mode*
- Low power modes
  - *Sleep mode*
  - *Power down mode*
  - *Wake-on-Ring*
- GPIO for user programmable I/O ports
  - *On some devices*
- Operating Environment
  - *3.3V supply voltage*
  - *Industrial/commercial temperature grades*
  - *20-pin TSSOP, RoHS package*
  - *32-pin QFN, RoHS*

73M1x66B Block Diagram







Ordering Information

PART DESCRIPTION		ORDERING NUMBER
73M1966B	32pin QFN, Lead Free	**73M1966B-IM/F**
73M1966B	32pin QFN, Lead Free, Tape and Reel	**73M1966B-IMR/F**
73M1966B	20pin TSSOP, Lead Free	**73M1966B-IVT/F**
73M1966B	20pin TSSOP, Lead Free, Tape and Reel	**73M1966B-IVTR/F**
73M1866B	42 pin QFN, Lead Free	**73M1866B-IM/F**
73M1866B	42 pin QFN, Lead Free, Tape and Reel	**73M1866B-IMR/F**

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For more information about Teridian products and the name of a local representative or distributor, visit **www.teridian.com** or call +1 714-508-8800

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