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Super I/O with LPC Interface with FIR and Consumer IR Support

PRODUCT FEATURES

Data Brief

- 3.3 Volt Operation (5V tolerant)
- GPIOs (1)
- XNOR Chain
- PC99a, PC2001
- 36-pin QFN Lead-free RoHS Compliant Package
- Intelligent Auto Power Management
- Infrared Communications Controllers
 - One IR Port
 - Multi-Protocol Serial Communications Controllers
 - IrDA v1.2 (4Mbps), HPSIR, ASKIR, Consumer IR Support
 - Multiple Base I/O Address options, 15 IRQ Options and 3 DMA Options
 - Two Pin Serial Port (UART) Support
- Multi-Mode Parallel Port with ChiProtect™
 - Standard Mode IBM PC/XT®, PC/AT®, and PS/2™ Compatible Bidirectional Parallel Port
 - Enhanced Parallel Port (EPP) Compatible - EPP 1.7 and EPP 1.9 (IEEE 1284 Compliant)
 - IEEE 1284 Compliant Enhanced Capabilities Port (ECP)
 - ChiProtect Circuitry for Protection Against Damage Due to Printer Power-On
 - 192 Base I/O Address, 15 IRQ and 3 DMA Options
- LPC Bus Host Interface
 - Multiplexed Command, Address and Data Bus
 - 8-Bit I/O Transfers
 - 8-Bit DMA Transfers
 - 16-Bit Address Qualification
 - Serial IRQ Interface Compatible with Serialized IRQ Support for PCI Systems
 - PCI CLKRUN# Support

ORDER NUMBER: SIO1036-ZG FOR 36 PIN, QFN LEAD-FREE ROHS COMPLIANT PACKAGE



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General Description

The SMSC SIO1036 is a 3.3V PC 99, PC2001 compliant Super I/O Controller. The SIO1036 implements the LPC interface, a pin reduced ISA interface which provides the same or better performance as the ISA/X-bus with a substantial savings in pins used. The part also includes 1 GPIO pin.

The SIO1036 incorporates a Multi-Mode parallel port with ChiProtect™ circuitry plus EPP and ECP support. The parallel port is compatible with IBM PC/AT architectures, as well as IEEE 1284 EPP and ECP. The parallel port ChiProtect™ circuitry prevents damage caused by an attached powered printer when the SIO1036 is not powered.

The SIO1036 offers a full 16-bit internally decoded address bus, a Serial IRQ interface with PCI CLKRUN# support, relocatable configuration ports, and three DMA channel options.

There is a dedicated Serial Infrared interface UART, which complies with IrDA v1.2 (Fast IR), HPSIR, and ASKIR formats (used by Sharp and other PDAs), as well as Consumer IR. This can also be used as a 2 pin UART.

The SIO1036 features Software Configurable Logic (SCL) for ease of use. SCL allows programmable system configuration of key functions such as the parallel port and UART.

The SIO1036 supports the ISA Plug-and-Play Standard register set (Version 1.0a) and provides the recommended functionality to support Windows operating systems, PC99, and PC2001. The I/O Address, DMA Channel, and Hardware IRQ of each device in the SIO1036 may be reprogrammed through the internal configuration registers. There are multiple I/O address location options, a Serialized IRQ interface, and three DMA channels.

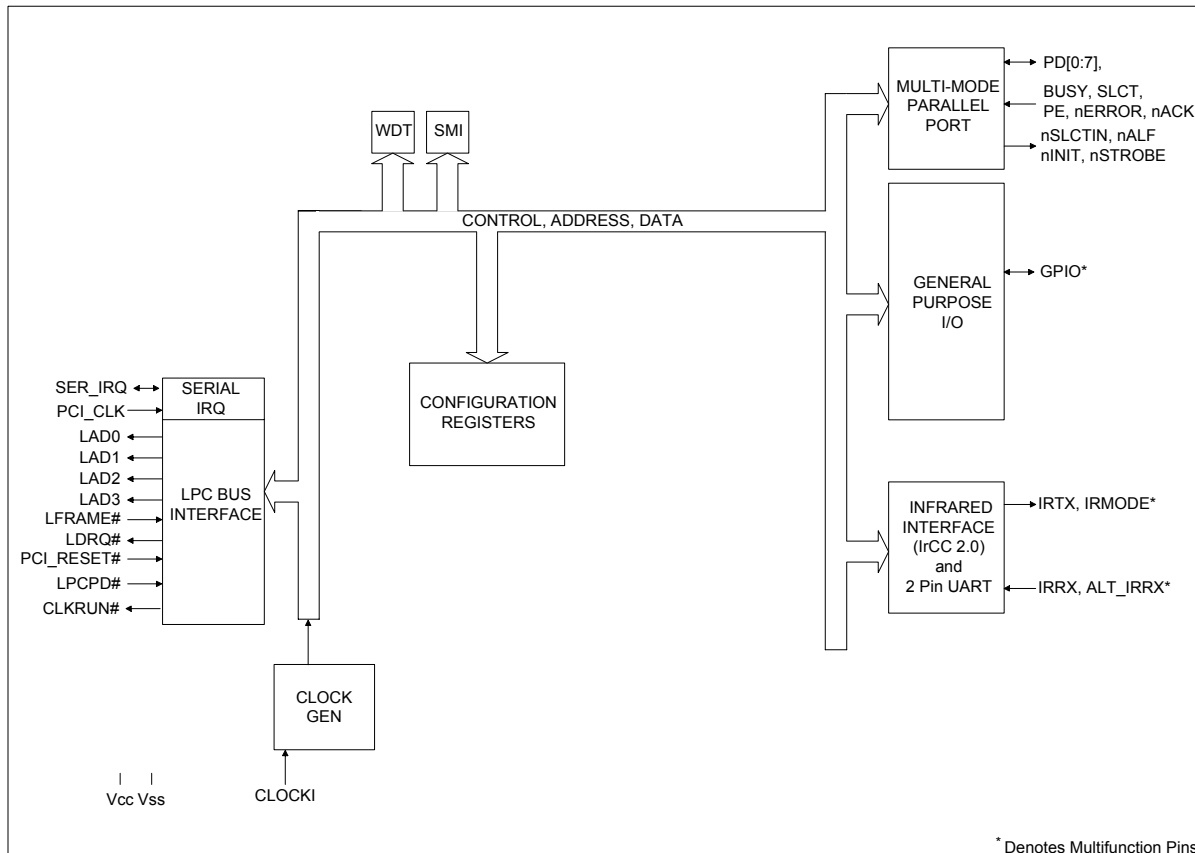
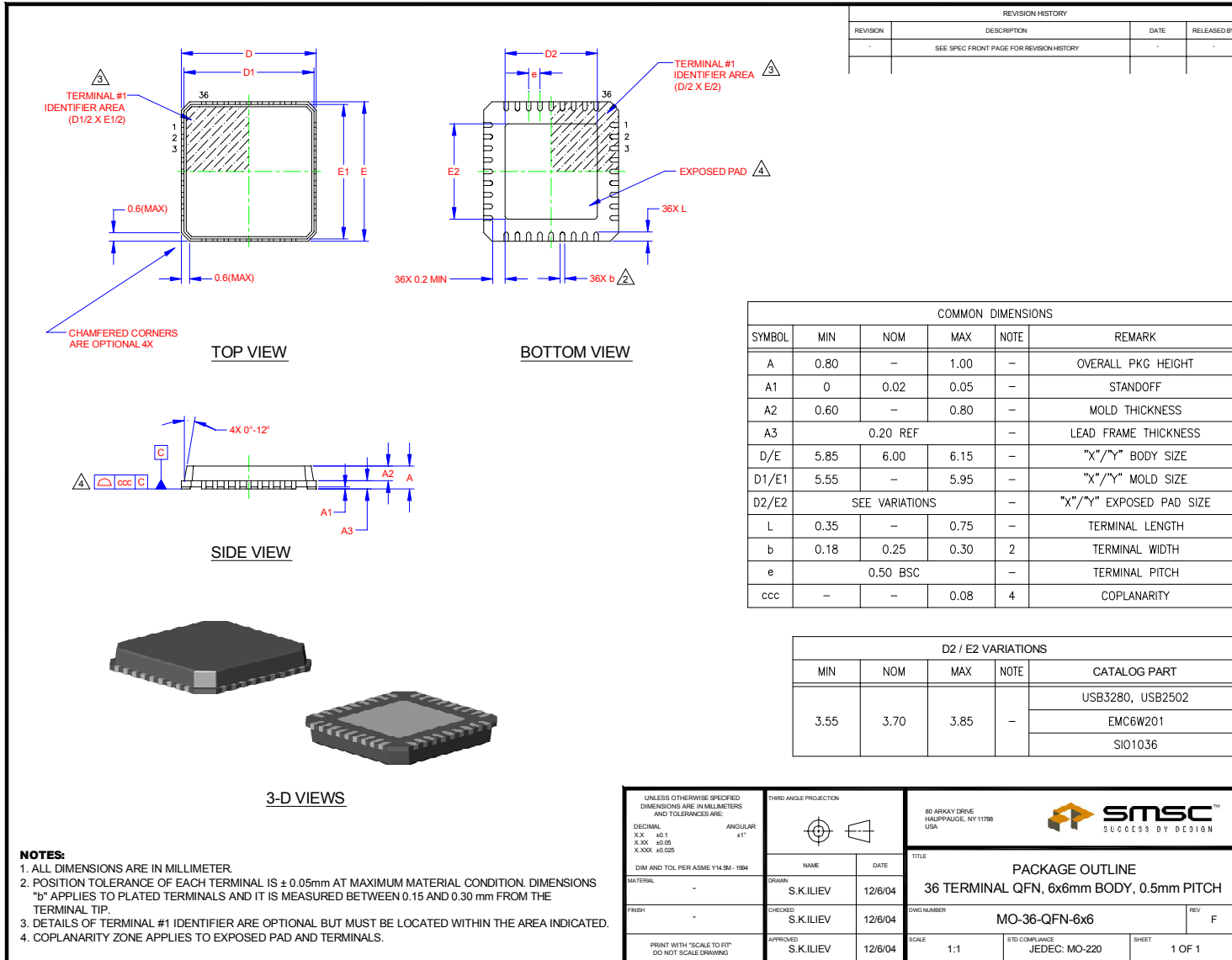


Figure 1 SIO1036 Block Diagram

Package Outline



REVISION HISTORY			
REVISION	DESCRIPTION	DATE	RELEASED BY
-	SEE SPEC FRONT PAGE FOR REVISION HISTORY	-	-

COMMON DIMENSIONS					
SYMBOL	MIN	NOM	MAX	NOTE	REMARK
A	0.80	-	1.00	-	OVERALL PKG HEIGHT
A1	0	0.02	0.05	-	STANDOFF
A2	0.60	-	0.80	-	MOLD THICKNESS
A3	0.20 REF		-	-	LEAD FRAME THICKNESS
D/E	5.85	6.00	6.15	-	"X"/"Y" BODY SIZE
D1/E1	5.55	-	5.95	-	"X"/"Y" MOLD SIZE
D2/E2	SEE VARIATIONS		-	-	"X"/"Y" EXPOSED PAD SIZE
L	0.35	-	0.75	-	TERMINAL LENGTH
b	0.18	0.25	0.30	2	TERMINAL WIDTH
e	0.50 BSC		-	-	TERMINAL PITCH
ccc	-	-	0.08	4	COPLANARITY

D2 / E2 VARIATIONS				
MIN	NOM	MAX	NOTE	CATALOG PART
3.55	3.70	3.85	-	USB3280, USB2502
				EMC6W201
				SI01036

- NOTES:**
- ALL DIMENSIONS ARE IN MILLIMETER.
 - POSITION TOLERANCE OF EACH TERMINAL IS $\pm 0.05\text{mm}$ AT MAXIMUM MATERIAL CONDITION. DIMENSIONS "b" APPLIES TO PLATED TERMINALS AND IT IS MEASURED BETWEEN 0.15 AND 0.30 mm FROM THE TERMINAL TIP.
 - DETAILS OF TERMINAL #1 IDENTIFIER ARE OPTIONAL BUT MUST BE LOCATED WITHIN THE AREA INDICATED.
 - COPLANARITY ZONE APPLIES TO EXPOSED PAD AND TERMINALS.

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS AND TOLERANCES ARE: DECIMAL X.XX ±0.1 X.XX ±0.05 X.XXX ±0.025		THIRD ANGLE PROJECTION		80 ARKAY DRIVE HAUPPAUGE, NY 11788 USA		SMSC SUCCESS BY DESIGN	
DIM AND TOL PER ASME Y14.5M - 1994		MATERIAL		DRAWN		TITLE	
FINISH		CHECKED		NAME		DATE	
PRINT WITH "SCALE TO FIT" DO NOT SCALE DRAWING		APPROVED		S.K.ILIEV		12/6/04	
PACKAGE OUTLINE				36 TERMINAL QFN, 6x6mm BODY, 0.5mm PITCH			
MO-36-QFN-6x6				DWG NUMBER		REV	
SCALE 1:1				STD COMPLIANCE JEDEC: MO-220		SHEET 1 OF 1	