GPIO Expansion, 23x8 Keyscan Matrix Interface via SMBus or BC-Link Bus

General Description

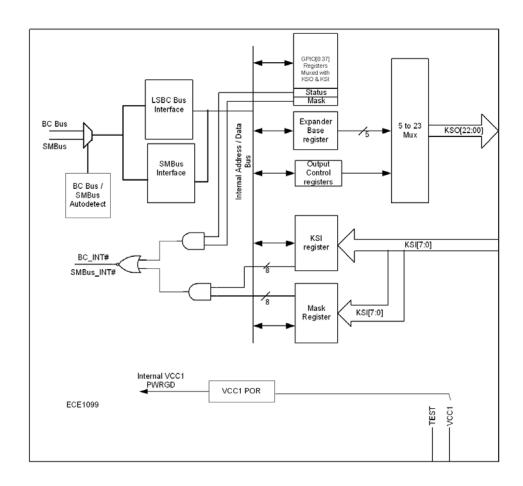
The ECE1099 is a 40-Pin 3.3V Keyboard Scan Expansion or GPIO Expansion device. The device supports a keyboard scan matrix of 23x8. The device is connected to a Master via the BC-LinkTM interface or via the SMBus.

KSI and KSO signals are multiplexed with GPIOs.

Features

- Up to 23x8 Keyboard Scan Matrix
- 32 Multiplexed General Purpose I/O pins
 - All are MCU addressable I/O Pins
- · BC-Link Interconnect Bus
 - Link to embedded controller
- · SMBus Interconnect
 - One of two address selection
- · 3.3V Operation
 - 40-Pin, QFN RoHS Compliant package
 - 0.5mm Pitch
 - 6x6mm Body size

Block Diagram



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PACKAGE OUTLINE

FIGURE 1: PACKAGE OUTLINE: 40-PIN QFN, 6X6 MM BODY (1 OF 2)

	RELEASED BY	S.K.ILIEV	S.K.ILIEV	O.N.ICIEV	S.K.ILIEV	S.K.ILIEV	S.K.ILIEV				IGHT		NESS	DDY SIZE	SIZE) SIZE	ЗТН	Ŧ	RANCE	Н.	EASURED	igs,	at	T J	NGTH,	REV E	SHEET 1 OF 2
	DATE	10/29/04	7/13/05	4/44/06	1/11/06	3/30/08	2/5/09			REMARK	OVERALL PKG HEIGHT	STANDOFF	MOLD CAP THICKNESS	LL PKG B(X/Y MOLD CAP SIZE	X/Y EXPOSED PAD SIZE	TERMINAL LENGTH	TERMINAL WIDTH	PINS CLE	TERMINAL PITCH	ND IT IS M IP. L BUT MU	ge drawir	ecification ging		LEAD LE		동
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FIGURE 2: PACKAGE OUTLINE: 40-PIN QFN, 6X6 MM BODY (2 OF 2)

4	REV	DES	DESCRIPTION	z	DATE	RELEASED BY
	E ADDE	ADDED PAGE 20f2. UPDATED APP NOTES	DATED AF	PP NOTES	5/2/09	S.K.ILIEV
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-	GD/GE	5.00	_	5.10		
	GDs/GEs					
	D2/E2		4.30	+		
- I'B' EOB CENTEB	Stencil:		0.23	+		
(CIL OPENINGS	Pad: γ		0.69	Н		
ENCIL	Stencil:	- Xs	0.62	+		
	D		0.50			
	SMT APPLIC	SATION NOT	ES			
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AND TOLERANGES ARE: DECIMAL XX ±0.1 X.XX ±0.05		see th http://	ne Microc www.mic	chip Packaging Spe crochip.com/packag	ecification jing	at
X,XXX ±0.025 INTERPRET DIM AND TOL PER ASME Y14.5M - 1994	NAME DATE	TITLE 40 PINS	P OFN-4	ACKAGE DATA	, 0 5mm P	HOL
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FINISH	снескер - 2/5/09	DWG NUMBER	40QF	N-4304-6x6B		REV E
PRINT WITH "SCALE TO FIT" DO NOT SCALE DRAWING		SCALE 1:1	STD COMPI	JEDEC: MO-220	<u>8</u>	2 OF 2
STER LANDS OPTION 3 PLUGED THERMAL VIAS) Thermal Vias: 00.30mm, but, conings: 0.38200.82mm MAX) SSA Matthe @ 0.35mm Pluth SSA Matthe @ 0.35mm Pluth SSA Matthe @ 0.35mm MAX) MING - CENTER P.	MIN)	IIN) IIN)	ENCIL IN) IN) IN) IN) IN) IN) IN) I	ENCIL IN) IN) IN) IN) IN) IN) IN) I	IIV) IIV) IIV) IIV) IIV)	ENCIL THE USER MAY MODIFY THE PCB LAND PATTERN DIMENSIONS BASED (PROCESS CAPABILITY. THE LAND PATTERN CORRESPONDING TO THE PACKAGE EXPOSED PA AND WITH DIFFERENT SHAPE THAN THE EXPOSED PA ON THE PACKAGE EXPOSED PA AND WITH DIFFERENT SHAPE THAN THE EXPOSED PA ON THE PACKAGE AREA, AS DEFINED BY THE SOLDER MASK (SMD), OR NON-SOLDER MASK SHOULD BE ST THERMAL & ELECTRICAL PERFORMANCE. 3. MAXIMUM THE RIAL AND ELECTRICAL PERFORMANCE. 3. MAXIMUM THE RIAL AND ELECTRICAL PERFORMANCE. 4. THE VIAS SHOULD BE AT 0.8 to 1.2MM PITCH WITH 0.30 TO 0.40MM DIAMN WALLS. THE RECOMMENDED FIND THE RECOMMENDED FIND THE RECOMMENDED FIND THE RECOMMENDED FIND THE RECOMMENDED STENCIL SPECTRAL SHOULD BE A SAS SHOWN. 3. THE COMMENDED STENCIL AREA & ASPECT RATIOS ARE 0.68 & 1.5 (MIN). 3. RECOMMENDED STENCIL AREA & ASPECT RATIOS ARE 0.68 & 1.5 (MIN). 3. RECOMMENDED STENCIL AREA & ASPECT RATIOS ARE 0.68 & 1.5 (MIN). 3. RECOMMENDED STENCIL AREA & ASPECT RATIOS ARE 0.68 & 1.5 (MIN). 3. RECOMMENDED STENCIL AREA & ASPECT RATIOS ARE 0.68 & 1.5 (MIN). 3. RECOMMENDED STENCIL AREA & ASPECT RATIOS ARE 0.68 & 1.5 (MIN). 3. RECOMMENDED STENCIL AREA & ASPECT RATIOS ARE 0.68 & 1.5 (MIN). 3. RECOMMENDED STENCIL AREA & ASPECT RATIOS ARE 0.68 & 1.5 (MIN). 3. RECOMMENDED STENCIL AREA & ASPECT RATIOS ARE 0.68 & 1.5 (MIN). 3. RECOMMENDED STENCIL AREA & ASPECT RATIOS ARE 0.68 & 1.5 (MIN). 3. RECOMMENDED STENCIL AREA & ASPECT RATIOS ARE 0.68 & 1.5 (MIN). 3. RECOMMENDED STENCIL AREA & ASPECT RATIOS ARE 0.68 & 1.5 (MIN). 3. RECOMMENDED STENCIL AREA ASPECT RATIOS ARE 0.68 & 1.5 (MIN). 3. RECOMMENDED STENCIL AREA ASPECT RATIOS ARE 0.68 & 1.5 (MIN). 4. THE REFLOW PROFILE DEPENDS ON THE EXACT SOLDER PASTE USED SWORTH AND THE ASPECT RATIOS. 4. THE MATERIAL AND THE EXACT SOLDER PASTE USED SWORTH AND THE ASPECT RATIOS. 4. THE MATERIAL AND THE EXACT SOLDER PASTE USED SWORTH AND THE ASPECT RATIOS. 5. ROWN AND THE ASPECT RATIOS ARE 0.68 & 1.5 (MIN). 5. ROWN AND THE ASPECT RATIOS ARE 0.68 & 1.5 (MIN). 5. ROWN AND THE ASPECT RATIOS ARE 0.68 & 1.5 (MIN).

APPENDIX A: PRODUCT BRIEF REVISION HISTORY

TABLE A-1: REVISION HISTORY

Revision	Section/Figure/Entry	Correction
DS00001728A (04-29-14)	REV A replaces previous SMS	C version Rev. 1.6 (02-21-11)

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PART NO. (1)	[X] - XXX (2) - $[X]$ (3)	Examples:
Device	Temperature Package Tape and Reel Range Option	a) ECE1099-FZG = 40-pin QFN, Commercial b) ECE1099X-FZG = 40-pin QFN, Extended
Device:	ECE1099 ⁽¹⁾	Note 1: These products meet the halogen maximum concentration values per IEC61249-2-21.
Temperature Range: Package:	Blank = Commercial 0°C to 70°C X = Extended 0°C to 85°C FZG = 40 pin QFN (2)	Note 2: All package options are RoHS compliant. For RoHS compliance and environmental information, please visit http://www.micro-chip.com/pagehandler/en-us/aboutus/ehs.html
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ECE1099

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