XR17x152 Universal Evaluation Board User's Manual
Rev 1.30

Introduction

Exar is proud to announce our new 2 Port PCI UART. It is the worlds' first PCI two port UART that is PCI Local Bus Compliant Rev 2.2. The XR17x152 is fully feature and 16550 compatible. For a list of features, refer to the data sheet at www.exar.com.

Description

The XR17x152 evaluation board uses the 32-bit PCI bus with multiplexed address and data lines at 33Mhz. On the XR17x152 evaluation board, there are two RS-232 ports and two RS-422/485 ports (OPTIONAL). We have added an EEPROM (93C46) for storage of sub-vendor ID and model number. There is an option to select an external clock or the standard crystal 14.7456Mhz. U3 clock multiplier chip (ST49C101A-XX) is used in FOR FACTORY external clock test (NOT INSTALLED). U3 can be clocked at multiple of 2,3,4,5,6,8,10 and 12, depending on the part selected (ST49C101A-XX). For the multi-purpose input/output pins, there are eight LEDS to display the state of set or reset. On the XR17x152 evaluation board, there are several sets of jumpers. Jumpers and Test Points are described under default setting below.

Note: **The XR17x152 evaluation board will work at 3.3v PCI interface, but does not comply With PCI Local Bus Compliant Rev 2.2.**

Warning: The XR17C152/L152/D152 board evaluation board is a universal PCI plug-in card. However, it should only plug into a 5V slot when used with the XR17C152 device, should be plugged into a 3.3V PCI slot when used with the XR17L152 and XR17D152 into any slot.

Warning: When installing the XR17x152 board, follow ESD Safety Procedures. Ground yourself to prevent damage to the any electronic component.

Default setting for the hardware on the XR17x152

Table 1

JUMPER	FUNCTION
J1-1&2	WIRE
J2-1&2	CHTX0/TX0
J4-1&2	CHRX0/RX0
J5-1&2	CHTX1/TX1
J6-1&2	CHRX0/RX0
J11-2&2	WIRE (+3.3v)
J18-1&2	TX0
J19-1&2	RX0
J23-1&2	TX1
J25-1&2	RX1

Local Loop Testing from Channel to Channel UART Side

Table 2

JUMPER	FUNCTION
J2-1 to J4-1	CHTX0/CHRX0
J5-1 to J6-1	CHTX1/CHRX1

Local Loop Testing EIA Side
Table 3

JUMPER	FUNCTION
J20 IN	EIA_TX0 TO EIA_RX0
J24	EIA_TX1 TO EIA_RX1

Option 1 Setting (RS-422/485 Not Installed)
Table 4

JUMPERS	FUNCTION
J28-1&2	TX0
J33-1&2	RX0
J34-1&2	TX1
J27-1&2	RX1
J32 1&2	RS-422/485 Transmit Channel 0
J32 3&4	RS-422/485 Receive Channel 0
J31 1&2	RS-422/485 Transmit Channel 1
J31 3&4	RS-422/485 Receive Channel 1
J30 1&2	RTS1 FOR RS-485 OPERATION
J30-NOT INSTALLED	RS-422 OPERATION
J36-NOT INSTALLED	RS-422 OPERATION
J29 1&2	RS-422 OPERATION
J36 1&2	RS-422 OPERATION

Option 2 Setting (IR Not Installed)
Table 5

JUMPERS	FUNCTION	STATE
J37-1&2	TX1	
J39-1&2	RX0	
J38 1&2	Mode 0	Zero
J36 2&3	Mode 0	+3.3v
J40 1&2	Mode 1	Zero
J40 2&3	Mode 1	+3.3v
J41 1&2	FIR_SEL	Zero
J41 2&3	FIR_SEL	+3.3v

Jumpers and Test Points
Table 6

JUMPER OR TEST POINTS	FUNCTION
J1-1	(UART Vpad) (FACTORY ONLY) JUMPER
J1-2	(UART Vcore) (FACTORY ONLY) JUMPER
J2	CHTX0/TX0
J3	ENIR
J4	CHRX0/RX0
J5	CHTX1/TX1

J6	CHRX1/RX1
J7	(FACTORY ONLY) (NOT INSTALLED)
J8	(FACTORY ONLY) (NOT INSTALLED)
J9	TMCLK (NOT INSTALLED)
J10	EN485 (NOT INSTALLED) SOFTWARE CONTROLLED THRU GUI
J11	+VCC SELECT FOR EEPROM
J12	(FACTORY ONLY) (NOT INSTALLED)
J13	(FACTORY ONLY) (NOT INSTALLED)
J14	PCI CONNECTOR
J15	POWER SELECT UART (VI/O) (NOT INSTALLED) **TRACE** J15-3&4
J16	(FACTORY ONLY) (NOT INSTALLED)
J17	(FACTORY ONLY) (NOT INSTALLED)
J18	TX0
J19	RX0
J20	EIA LOCAL/LOOP TEST CHANNEL 1
J21	(FACTORY ONLY) (NOT INSTALLED)
J22	(FACTORY ONLY) (NOT INSTALLED)
J23	TX1
J24	EIA LOCAL/LOOP TEST CHANNEL 2
J25	RX1
TP	GND