



DOMAIN TECHNOLOGIES INC.

Users Guide Version 1.0

DT56720EB

Dual Core DSP Evaluation Board



Domain Technologies, incorporated in 1991, offers over 10 years of experience in the field of emulation and debug tools for a wide variety of industry standard and proprietary 8, 16, 24, and 32-bit microcontroller, RISC, and DSP architectures.

Our products are a vital part of your company's DSP development infrastructure! We are committed to improving the efficiency of embedded software development for our customers. Providing emulators and evaluation boards as well as boundary scanning and debugging software, our products promote cost reduction through time-to-market savings. Utilize our comprehensive debugging tools in conjunction with our boards for scalable and flexible testing of single DSPs, multiple DSPs, local access to multiple devices, and remote access to multiple devices.

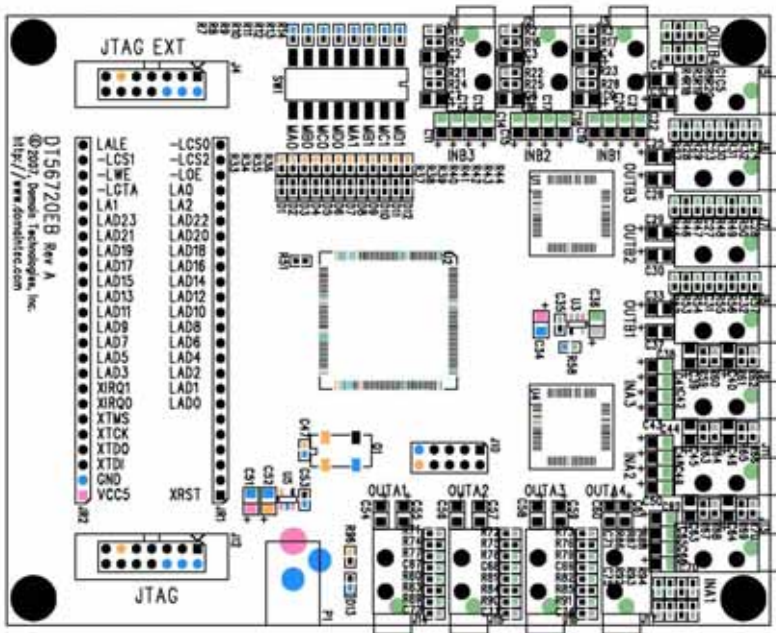
BoxView is a registered trademark of Domain Technologies, Inc. All other brand and product names maybe trademarks of their respective companies.

Copyright ©2007 by Domain Technologies, Inc. All rights reserved.

© Domain Technologies Inc.
811 East Plano Pkwy • Suite 115
Phone 972.578.1121 • Fax 972.578.1086
<http://www.domaintec.com>
email: support@domaintec.com

Table of Contents

- 1 INTRODUCTION 4
 - 1.1 Package Contents 4
 - 1.2 Features 4
 - 1.3 Related Components 5
- 2 INSTALLATION 5
- 3 DT56720EB BOARD FUNCTIONALITY 5
- APPENDIX A: SCHEMATICS 6



1 Introduction

Enhance your product development and testing using the DT56720EB dual core DSP evaluation board. The evaluation board provides access to the DSP cores through a JTAG emulator. The DT56720EB can also provide real time access to the DSP through the USB adapter mapped into the DSP external memory.

1.1 Package Contents

The DT56720EB board ships with the following:

- USB Cable
- Installation CD with Users Guide

1.2 Features

The DT56720EB has the following features:

- Dual DSP56720 Cores
- 2 Cs42448 Codecs
- 14- 3 mm Stereo Jacks

- 12 LEDs
- 8 DSP Boot Strap Mode Dip Switches
- External JTAG Connector
- External SPDIF Interface Header

Sampling Rate:

- 192 kHz - 8 kHz
- Up to 24 Bit Samples

1.3 Related Components

Use Domain Technologies BoxView IDE in conjunction with the DT56720EB's JTAG interface for programming and debugging your projects. For more information contact Domain Technologies or review www.domaintec.com.

2 Installation

Included with the DT56720EB is a USB cable and installation CD. Verify they have been delivered with the module.

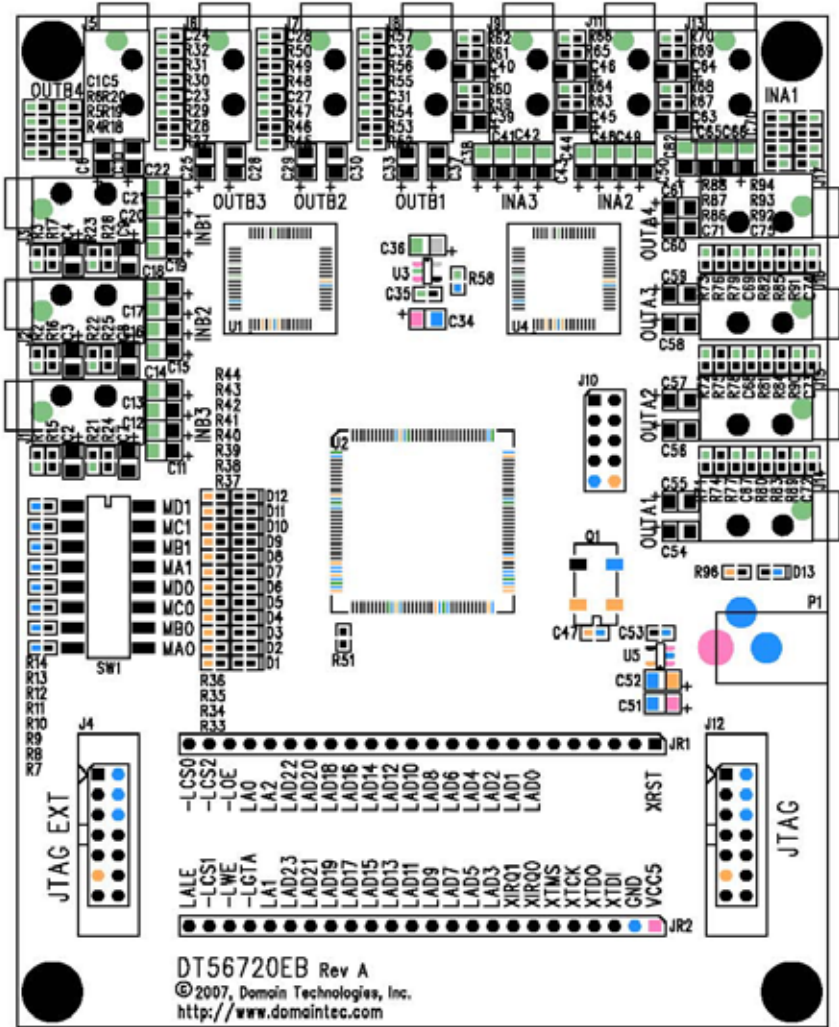
Insert the installation CD into your CD ROM drive. If auto detect is enabled in your system environment setup, then the installation program will automatically launch. Otherwise, double-click the *DT56720EBinstall.exe* file located on the CD drive from within Windows Explorer. Follow the steps through the program to perform the installation of the DT56720EB supporting software.

3 DT56720EB Board Functionality

The DT56720EB features a dual core DSP56720 with a total of 12 input channels and 16 output channels; 6 input and 8 output for each core. The board contains two Cirrus Logic Cs42448 CODECs, each with six 24-bit A/D and eight 24-bit D/A Converters. In addition, there is an optional local bus interface for real time access. There are 14- 3 mm stereo jacks, 12 LEDs, 8 dip switches for DSP bootstrap modes, and a header for the external SPDIF interface

Appendix A: Schematics

DT56720EB:



HCKT_0	89	HCKT	SD05/SD10	85	SD10_0
SKRT_0	91	SKRT	SD04/SD11	86	SD11_0
FST_0	90	FST	SD03/SD12	87	SD12_0
FSR_0	92	HCKR	SD02/SD13	88	SD05_1
FSR_0	93	SKCR	SD05_1/SD10_1	88	SD04_1
FSR_0	94	FSR	SD03_1/SD12_1	89	SD03_1
HCKT_3	134	HCKT_3	SD02_1/SD13_1	100	SD02_1
SKRT_3	136	SKRT_3	SD05_2/SD10_2	122	SD10_2
FST_3	135	FST_3	SD04_2/SD11_2	123	SD11_2
FST_3	137	HCKR_3	SD03_2/SD12_2	124	SD12_2
SKCR_3	138	SKCR_3	SD02_2/SD13_2	125	SD05_3
FSR_3	139	FSR_3	SD05_3/SD10_3	118	SD04_3
SPDIFIN	83	SPDIFIN1	SD04_3/SD11_3	119	SD04_3
SPDIFOUT	84	SPDIFOUT1	SD03_3/SD12_3	120	SD04_3
		SPDIFOUT2	SD02_3/SD13_3	121	SD02_3

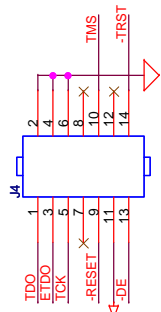
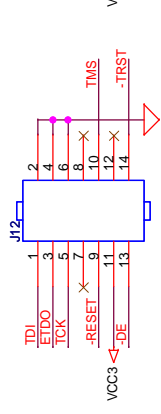
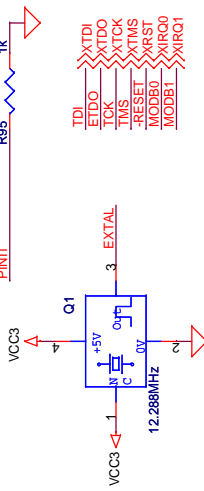
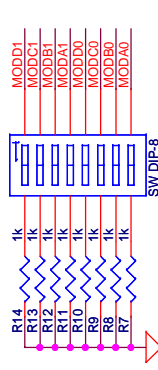
HCKT_0	10	MCLK	
SKCR_0	9	ADC_SCLK	
FSR_0	5	ADC_LRCK	
SD10_0	13	ADC_SDOU11	
SD11_0	12	ADC_SDOU12	
SD12_0	11	ADC_SDOU13	
SKRT_0	18	DAC_SCLK	
FST_0	19	DAC_LRCK	
SD05_1	17	DAC_SDN1	
SD04_1	16	DAC_SDN2	
SD03_1	15	DAC_SDN3	
SD02_1	14	DAC_SDN4	
AUX_SDN0_0	22	AUX_SDN	
AUX_SCLK_0	21	AUX_SCLK	
AUX_LRCK_0	20	AUX_LRCK	

HCKT_3	10	MCLK	
SKCR_3	9	ADC_SCLK	
FSR_3	5	ADC_LRCK	
SD10_2	13	ADC_SDOU11	
SD11_2	12	ADC_SDOU12	
SD12_2	11	ADC_SDOU13	
SKRT_3	18	DAC_SCLK	
FST_3	19	DAC_LRCK	
SD05_3	17	DAC_SDN1	
SD04_3	16	DAC_SDN2	
SD03_3	15	DAC_SDN3	
SD02_3	14	DAC_SDN4	
AUX_SDN1_1	22	AUX_SDN	
AUX_SCLK_1	21	AUX_SCLK	
AUX_LRCK_1	20	AUX_LRCK	

EXTAL	79	XTAL	SST_HA2_1	112	-CS_1
PINIT	106	PINIT/NMI1	MOSI/CSA	113	CDOUT
-RESET	111	WDT	MOSI/A0	114	CDIN
MODD1	128	RESET	SS/HA2	115	CCLK
MODC1	127	HRE0/PH4	SS/HA2	116	-RST
MODB1	127	MODD1/PG2	SCAN	144	X
MODA1	128	MODC1/NMI_1			
MODB1	128	MODB1/IRQD			
MODD0	140	MODD0/IRQC			
MODC0	140	MODD0/PG1			
MODB0	142	MODC0/FLOCK	TCK		TMS
MODA0	143	MODB0/IRQB	TDI		TDO
		MODA0/IRQA	TDO		

MODA0	61	INT	
-RST	3	RST	
CCLK	63	SCLK/CCLK	
CDOUT	64	SDA/CDOUT	
CDIN	2	AD1/CDIN	
-CS_0	1	AD0/CS	

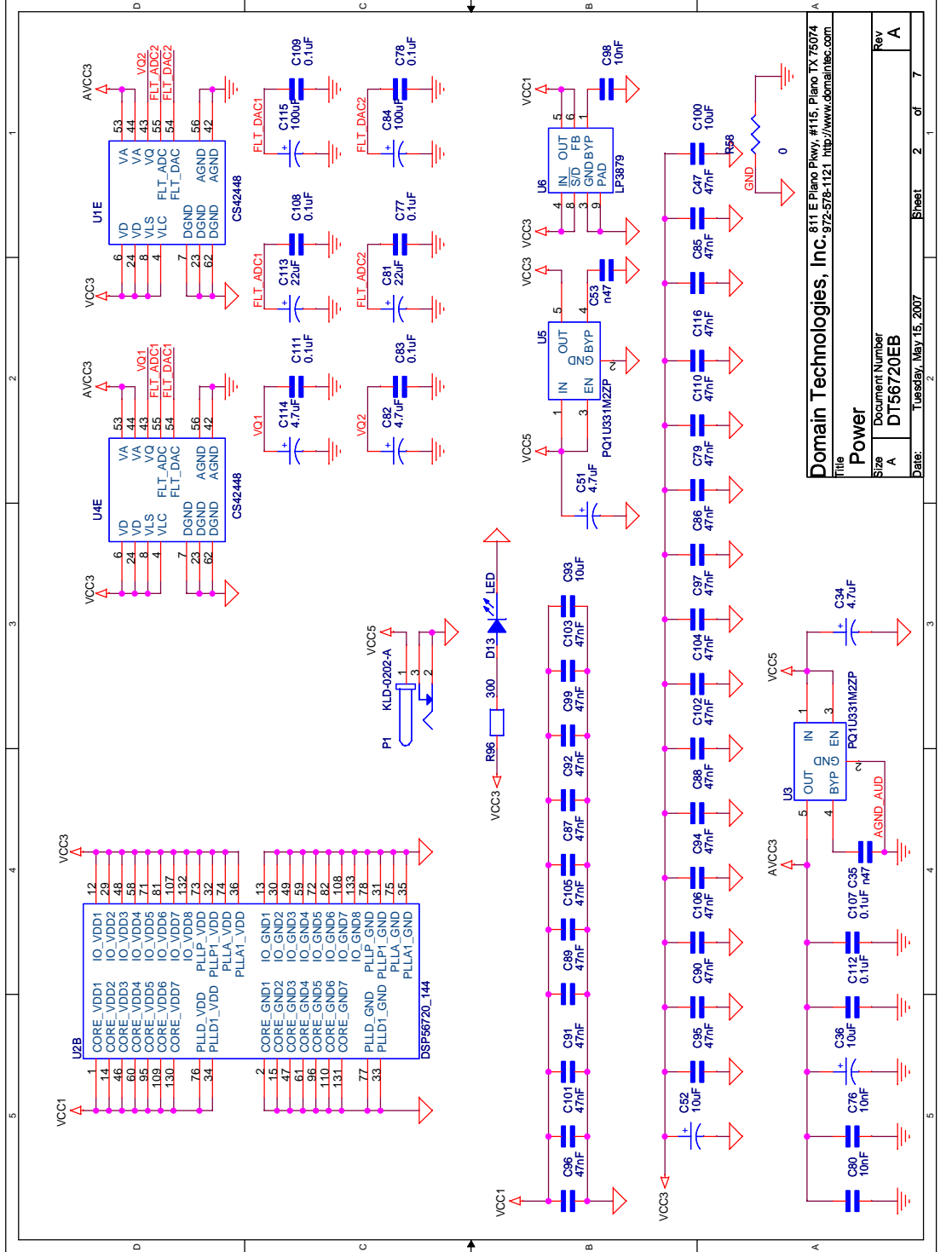
MODA1	61	INT	
-RST	3	RST	
CCLK	63	SCLK/CCLK	
CDOUT	64	SDA/CDOUT	
CDIN	2	AD1/CDIN	
-CS_1	1	AD0/CS	



Domain Technologies, Inc. 811 E Plano Pkwy #115, Plano TX 75074
 Title **System, ESAI**
 Size A Document Number **DT56720EB**
 Date: Tuesday, May 15, 2007 Sheet 1 of 7

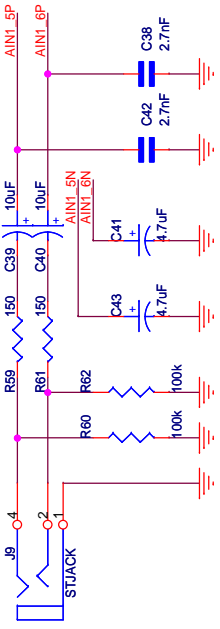
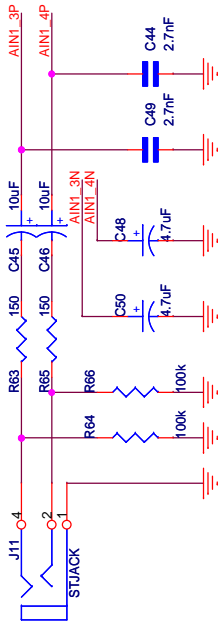
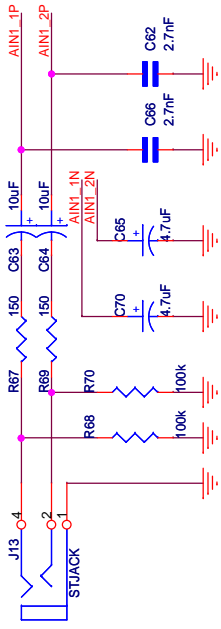
Header 7X2
 1 TDI
 2 ETDO
 3 TCK
 4 -RESET
 5 TMS
 6 -DE
 7 -TRST

Header 5X2
 1 SPDIFIN
 2 AUX_SDN0_1
 3 AUX_SCLK_1
 4 AUX_LRCK_1
 5 SPDIFOUT
 6 AUX_SDN1_1
 7 AUX_SCLK_1
 8 AUX_LRCK_1
 9 VCC3



Domain Technologies, Inc. 811 E Plano Pkwy, #115, Plano TX 75074

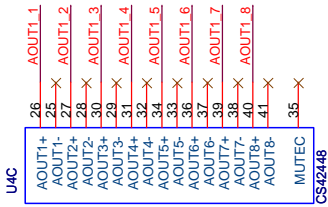
Title	Power		
Size	Document Number	Sheet	2 of 7
Rev	DT56720EB	Date:	Tuesday, May 15, 2007

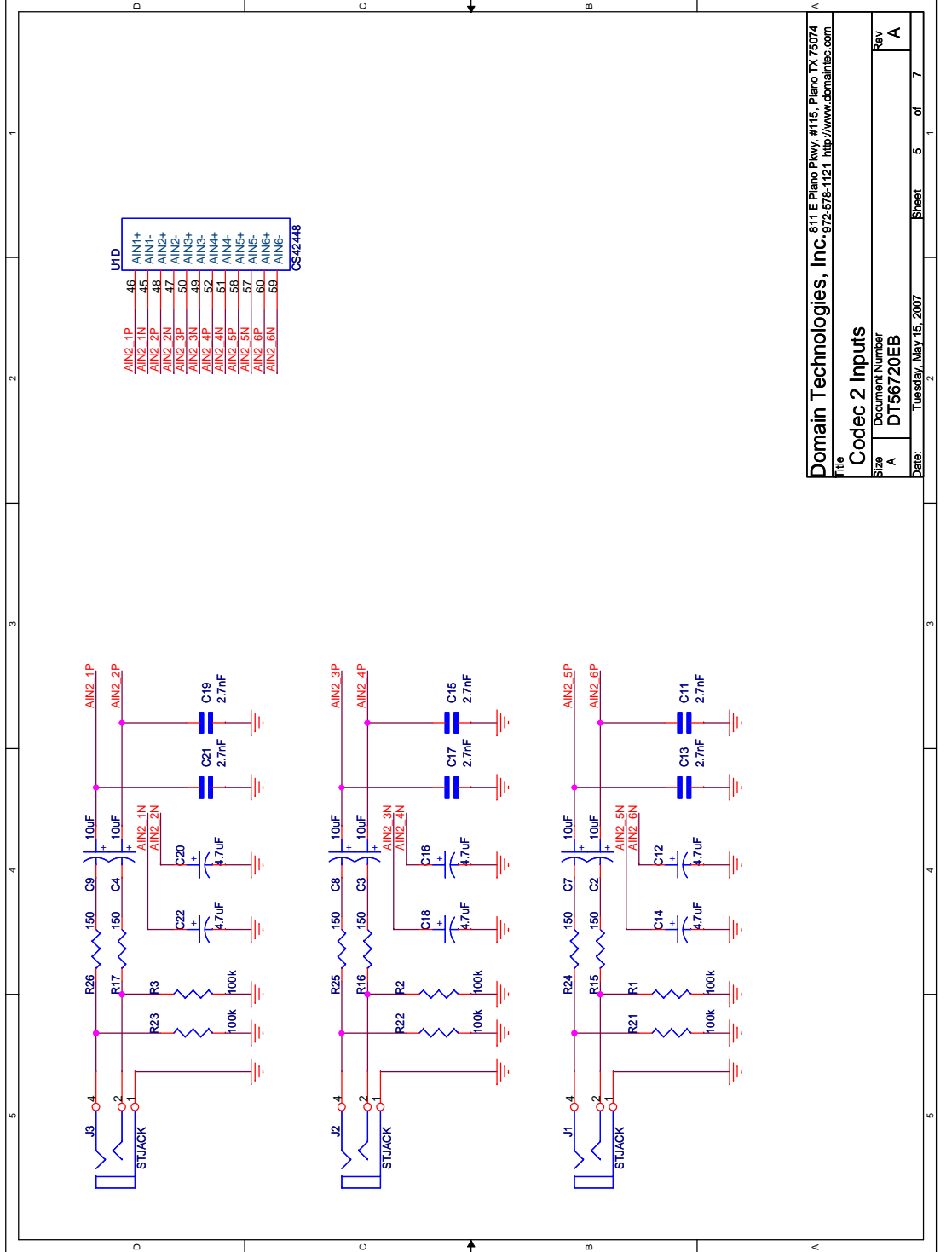


U4D

AIN1_1P	46	AIN1+
AIN1_1N	45	AIN1-
AIN1_2P	48	AIN2+
AIN1_2N	47	AIN2-
AIN1_3P	50	AIN3+
AIN1_3N	49	AIN3-
AIN1_4P	52	AIN4+
AIN1_4N	51	AIN4-
AIN1_5P	59	AIN5+
AIN1_5N	58	AIN5-
AIN1_6P	60	AIN6+
AIN1_6N	59	AIN6-

CS42448





U1D

AIN2_1P	46	AIN1+
AIN2_1N	45	AIN1-
AIN2_2P	48	AIN2+
AIN2_2N	47	AIN2-
AIN2_3P	50	AIN3+
AIN2_3N	49	AIN3-
AIN2_4P	52	AIN4+
AIN2_4N	51	AIN4-
AIN2_5P	58	AIN5+
AIN2_5N	57	AIN5-
AIN2_6N	60	AIN6+
	69	AIN6-

CS42448



© Domain Technologies Inc.
811 East Plano Pkwy • Suite 115
Phone 972.578.1121 • Fax 972.578.1086
<http://www.domaintec.com>
email: support@domaintec.com