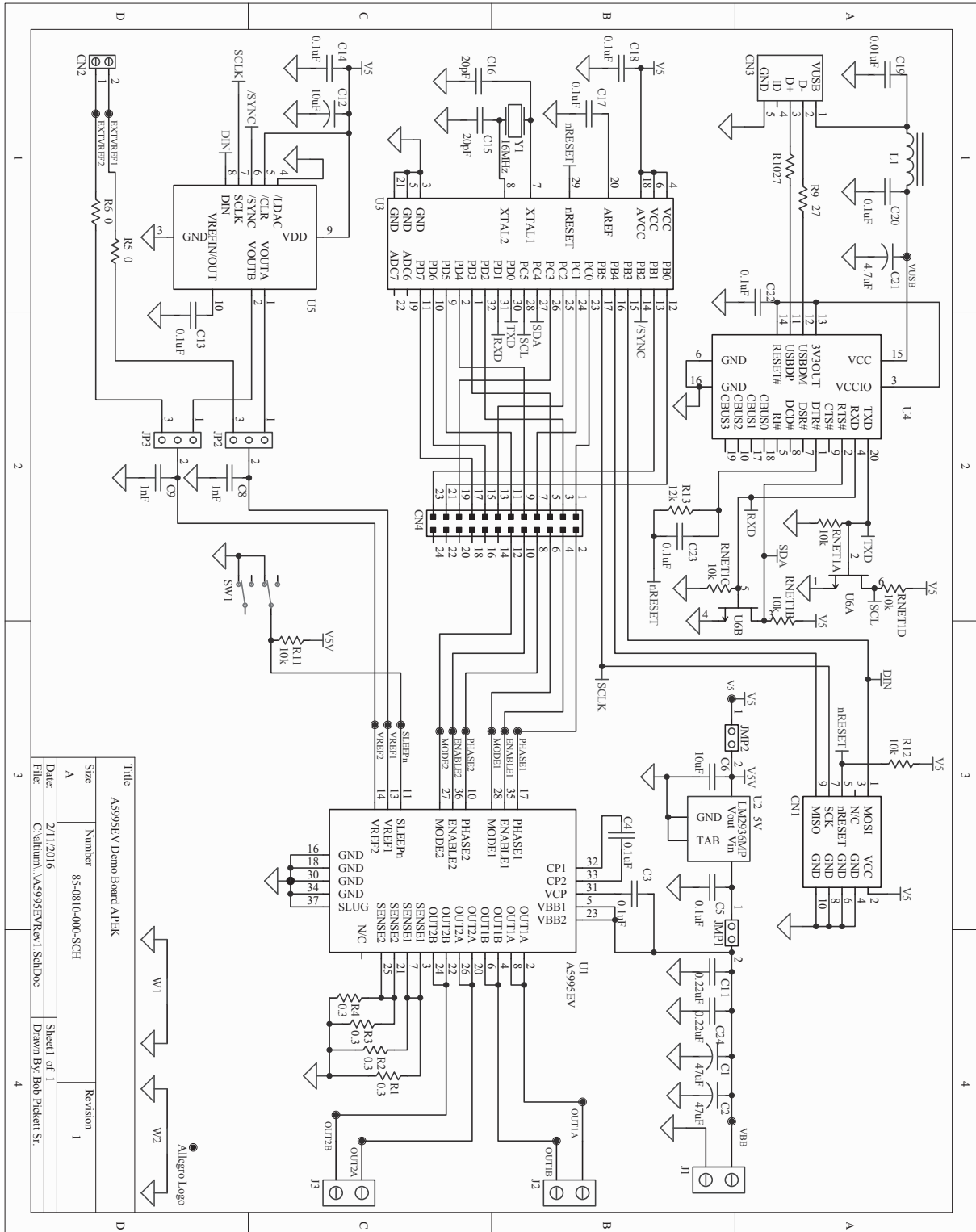
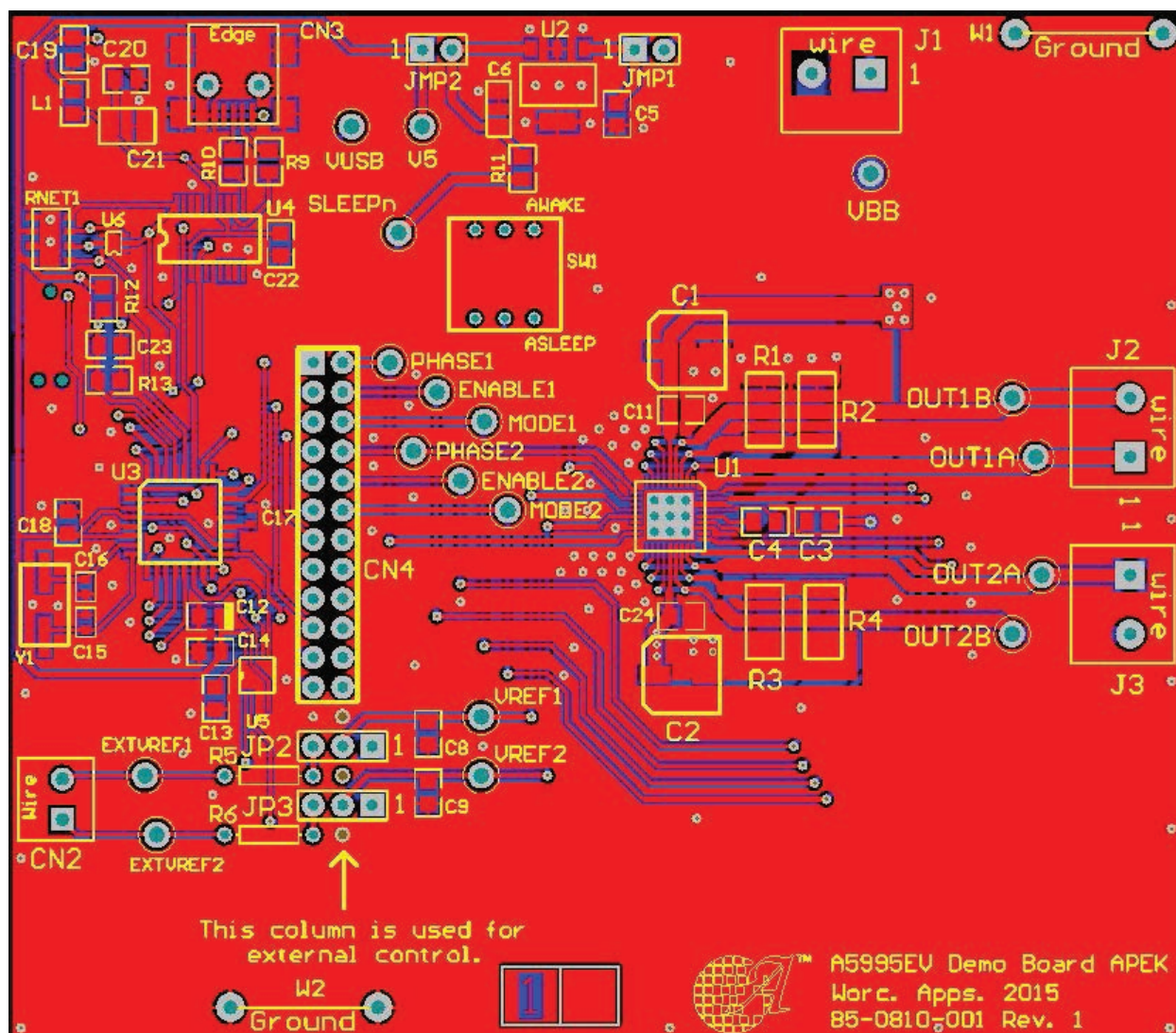


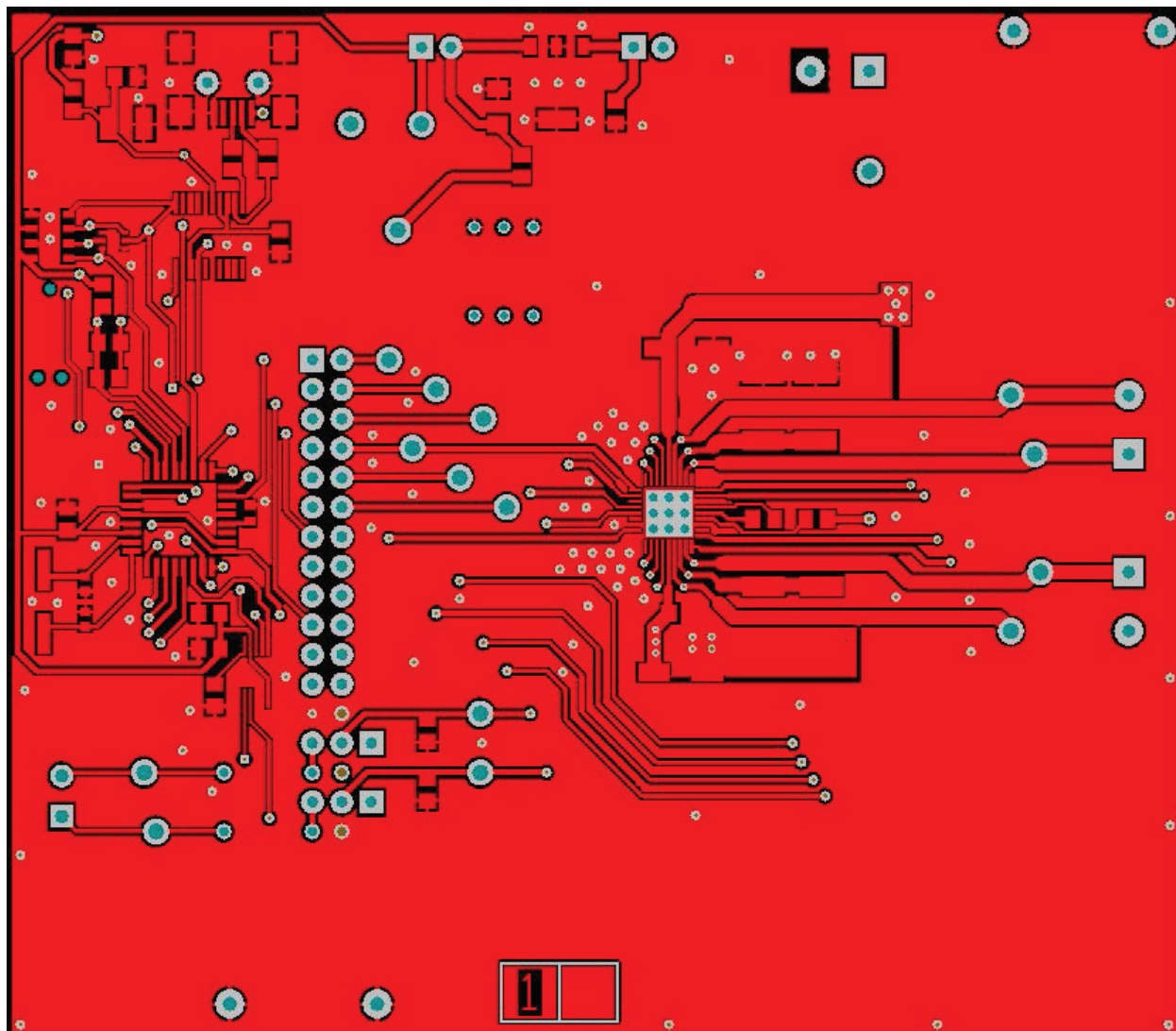
Demo Board Schematic/Layout

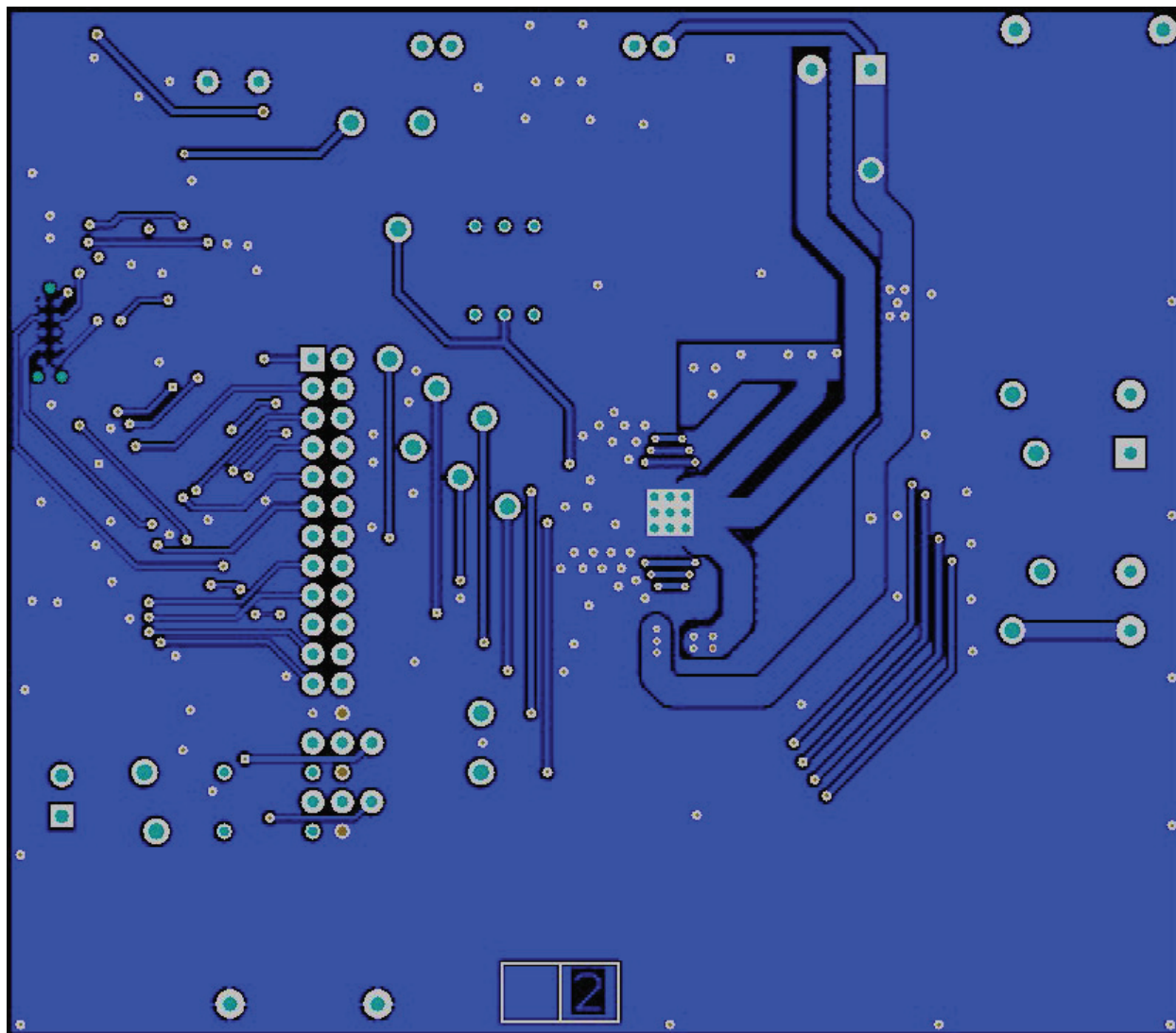
SCHEMATIC



LAYOUT



LAYOUT

LAYOUT

BILL OF MATERIALS

APEK,BOARD,DEMO,A5995EV

85-0810-000-BOM
All Devices MUST be ROHS Compliant
Page 1 of 1
Bill of Materials

Rev. 2
6/2/2016

Item	Quantity	Designator	value	Description	PartType	Footprint
1	2	C1, C2	47uF	50V Capacitor	Chemi-Con EMZA500ADA470MF80G; Digikey 565-2568-1-ND	UCC F61 Cap
2	3	C3, C4, C5	0.1uF	50V Capacitor	TDK C2012X7R1H104K085AA; Digikey 445-7534-1-ND	0805
3	1	C6	10uF	10V Capacitor	Taiyo Yuden LMK316BJ106KL-T; Digikey 587-1342-1-ND	1206
4	2	C8, C9	1nF	50V Capacitor	Panasonic ECJ-2VB1H102K; Digikey PCC102BNCT-ND	0805
5	2	C11, C24	0.22uF	50V Capacitor	Murata GCM21BR71H224KA37L; Digikey 490-4970-1-ND	0805
6	1	C12	10uF	10V Capacitor	Abracon ATCC-211P-010-106M-T; Digikey ATCC-211P-010-106M-TCT-ND	Polarized0805Cap
7	6	C13, C14, C18, C20, C22, C23	0.1uF	16V Capacitor	Murata GRM219R71C104KA01D; Digikey 490-1683-1-ND	0805
8	2	C15, C16	20pF	50V Capacitor	TDK C1608C0G1H200J; Digikey 445-5052-1-ND	0603
9	1	C17	0.1uF	50V Capacitor	TDK C1608X7R1H104K080AA; Digikey 445-1314-1-ND	CAPC1608L
10	1	C19	0.01uF	50V Capacitor	Murata GRM216R71H103KA01D; Digikey 490-1664-1-ND	0805
11	1	C21	4.7uF	16V Capacitor	Taiyo Yuden EMK325B7475KN-T; Digikey 587-1392-1-ND	1210
12	1	CN2		2-Pin 3.5mm spaced connector	On Shore ED555/2DS; Digikey ED1514-ND	2-Pin 3.5mm connector
13	1	CN3		USB Mini B Recepticle	EDAC 690-005-299-043; Digikey 151-1206-1-ND	EDAC 690-005-299-043
14	1	CN4		Cut from 40-Pin Strip	Tyco 9-146257-0; Digikey A34977-40-ND	24-Pin Dual Row 0.1" Connector
15	18	ENABLE1, ENABLE2, EXTREF1, EXTREF2, MODE1, MODE2, OUT1A, OUT1B, OUT2A, OUT2B, PHASE1, PHASE2, SLEEPn, V5, VBB, VREF1, VREF2, VUSB		Large Test Point	Keystone Electronics 5010; Digikey 5010K-ND	PAD 57 125 TP HB
16	4			Bump on Foot	3M SJ-5303 (CLEAR); Digikey SJ5303-7-ND	Bump on Foot
17	3	J1, J2, J3		2-Pin Screw Down Connector	On Shore Technology ED120/2DS; Digikey ED1609-ND	2-pin screw down connector
18	4	JMP1, JMP2, JP2, JP3		Cut pins from 50-pin strip, Cut pins from 50-pin strip.	Samtec TSW-150-07-T-S; Digikey SAM1035-50-ND	2-pos. shunt, 3-pos. shunt
19	1	L1		Ferrite Bead	Laird MI0805K400R-10; Digikey 240-2389-1-ND	0805
20	1			pcb	85-0810-001 Rev. 1	
21	4 Pins	QR5, QR6		Sockets for R5 and R6.	Mill-Max 310-43-164-41-001000; Digikey ED6264-ND	
22	4	R1, R2, R3, R4	0.3	1W Resistor	Yageo RL2512FK-070R3L; Digikey 311-0-3TCT-ND	2512 (6432 Metric)
23	2	R5, R6	0	Resistor Lead (0.38mm-0.64mm)	N/A	AXIAL-0.3
24	2	R9, R10	27	1/8W Resistor	Vishay/Dale CRCW080527R0FKEA; Digikey 541-27.0CCT-ND	0805
25	2	R11, R12	10k	1/8W Resistor	Panasonic ERJ-6GEYJ103V; Digikey P10KACT-ND	0805
26	1	R13	12k	1/8W Resistor	Panasonic ERJ-6ENF1202V; Digikey P12.0KCCT-ND	0805
27	1	RNET1	10k	4 Isolated Resistors	CTS 744C083103JP; Digikey 744C083103JPCT-ND	CTS 744 Series
28	1	SW1		Dual SPDT Switch	Grayhill 76STC02T; Digikey 76STC02T-ND	76STC02T
29	1	U1		Dual Full Bridge Motor Driver	A5995EV	36EV
30	1	U2	5V	Linear Voltage Regulator	National LM2936MP-5.0/NOPB; Digikey LM2936MP-5.0CT-ND	SOT223
31	1	U3		8-Bit Microcontroller	Atmel ATMEGA328P-AUR; Digikey ATMEGA328P-AURCT-ND	32-TQFP (7x7)
32	1	U4		USB to UART IC	FTDI FT231XS-R; Digikey 768-1129-1-ND	SSOP-20
33	1	U5		Dual 12-Bit DAC	Analog Devices AD5623RBRMZ-5; Digikey AD5623RBRMZ-5-ND	10-Pin MSOP no slug
34	1	U6		Dual N-CH Fet's	Rohm UM6K1NTN; Digikey UM6K1NTNCT-ND	SOT-363
35	2	W1, W2		22 Gauge Buss Wire (300mils above pcb)		Scope Ground
36	1	Y1	16MHz	16MHz Crystal Oscillator(20pF Caps)	ECS ECS-160-20-3X-TR; Digikey XC1776CT-ND	ECS CSM-3X

Revision History

Number	Date	Description
–	August 23, 2016	Initial release

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