











Comment	Description	Designator	Footprint	LibRef	Quantity
	M12 connect with 4	ADC1, ADC2, ADC3, ADC4, ADC5, ADC6,			
M12 connector	pin, current 4A per terminal	ADC7, ADC8, DAC1, DAC2, DAC3, DAC4	GX12_PCB_Mount	M12_connector	1:
Сар	Capacitor	C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C17, C18, C19, C20, C21, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C35, C36, C46, C46, C46, C46, C46, C46, C46, C4	CAPC1608X90N	Сар	6
Сар	Capacitor	C15, C16, C42, C44, C45, C46, C47, C49, C50, C51, C53, C54, C59, C72	CAPC2012X135N	Сар	14
Header, 2x3-pin	Header, 2x3-pin	CAN2	HDR2X3_2.54MMP_R	Header_2x3P	
diode	40V 2A	D1	DIODE_3216_70N	SD1206S040S2R0	
LED_Green_GullWing	LED Gull-wing SMD High-intensity Green 450mcd 574nm	D2, D3, D4	LED-0805-A	LED_Green_GullWing	;
SS24	2.0A SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER	D5	DO-214AA	SS24	
MFU0805FF00500P10 0	fuse 32V 0.5A	F1, F2, F3	RESC2012X70N	FUSE_32V_500MA_08 05	;
ST-Link	ST-Link header with silkscreen	Н1	ST-Link	ST-Link	
Micro-Fit	Micro fit series from	H2	430450212	Molex_430450212	
	MOLEX. 2P. 8.6A 15uH inductor with 2A				
15uH inductor	saturation current. Dimension is 5.5 * 5.2 * 3 mm^3	L1	INDC_5.5x5.3x3	INDC_MPX1D0530L15 0	
DR331-105BE	Common mode choke 1mH 0.5A	L2, L3	DR331-105BE	DR331-105BE	:
inductor	IHLP SMD 4040 Ferritebead 1.5A. max	L6	INDM3225X240N	INDC INC_BLM18SP601SN1	
BLM18SP601SN1D	600ohm resistance	L7, L9, L10	INDC1608N	D D	;
Res1	Resistor	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42, R43, R44, R45,	RESC1608X55N	Res1	44
Res1	Resistor	R46, R47, R48 R20, R21	RESC2012X70N	Res1	
resistor network		RN1	RESCAXS50P160X320X 70-8N	RES_NET	
SW_THT_PB_4.3mm	Switch, tact, 4.3mm	RST, RST1	TACT_SWT-SMD-4.4	SW_THT_PB_4.3mm	
	stem		_		
STM32F405RE	STM32F405RE 64 pin package, Cortex M4	U1	LQFP64	STM32F405RE	
	package, Cortex M4 core with up to operational amplifier	U2, U5, U14, U15,	LQFP64 SOT23-5	STM32F405RE OPA196	
OPA196	package, Cortex M4 core with up to		SOT23-5		
OPA196 3.3V CAN bus	package, Cortex M4 core with up to operational amplifier 36V input 3.3V CAN bus transceiver up to 1Mbps	U2, U5, U14, U15,			
OPA196 3.3V CAN bus transceiver	package, Cortex M4 core with up to operational amplifier 36V input 3.3V CAN bus transceiver up to 1Mbps 4.5-28V input 2A output step down, EMI Friendly Synchronous Step Down Converter	U2, U5, U14, U15, U16, U17, U18, U19	SOT23-5 SOIC127P600X175-	OPA196	
OPA196 3.3V CAN bus transceiver	package, Cortex M4 core with up to operational amplifier 36V input 3.3V CAN bus transceiver up to 1Mbps 4.5-28V input 2A output step down, EMI Friendly Synchronous Step Down Converter ADC 8 channel,	U2, U5, U14, U15, U16, U17, U18, U19	SOT23-5 SOIC127P600X175- BAN	OPA196 SN65HVD234-Q1	
OPA196 3.3V CAN bus transceiver TPS54202 ADS8688	package, Cortex M4 core with up to operational amplifier 36V Input 38V Input 38V CAN Dus Iransceiver up to 11Mbgs 445-28V Input 2A output step down, EMI Friendly Synchronous Step Down Conwetter ADC 8 channel, 500KSPS	U2, U5, U14, U15, U16, U17, U18, U19 U3	SOT23-5 SOIC127P600X175- BAN SOT23-6	OPA196 SN65HVD234-Q1 TPS54202	
OPA196 3.3V CAN bus transceiver TPS54202 ADS8688 LM1117-5.0	package, Cortex M4 core with up to operational amplifier 36V input 133-VICAN bus transceiver up to 11Mbps 4.5-28V input 2A output step down, EMI Friendly Synchronous Step Down Converter ADC & channel, SOUKSPS 1117 LIDO with fixed 5V output, 800mA current 4.500mA current 500tate 24V to 5V	U2, U5, U14, U15, U16, U17, U18, U19 U3	SOT23-5 SOIC127P600X175- BAN SOT23-6	OPA196 SN65HVD234-Q1 TPS54202 ADS8688	
OPA196 3.3V CAN bus transceiver TPS54202 ADS8688 LM1117-5.0 SMU02N-05	package, Cortex M4 core with up to operational amplifier 36V input 33V CAN but transceiver up to 1Mbgs 4.5-28V input 2A output step down, EMI Friendly Synchronous Step Down Converter ADC 8 thannel, 500KSPS 1117 LDO with fixed 5V output, 800mA current	U2, U5, U14, U15, U16, U17, U18, U19 U3 U4 U6	SOT23-5 SOIC127P600X175-BAN SOT23-6 TSSOP38 SOT223	OPA196 SN65HVD234-01 TPS54202 ADS8688 LM117-5.0	
OPA196 3.3V CAN bus transceiver TPS54202 ADS8688 LM1117-5.0 SMU02N-05 TLV62569	package, Cortex M4 core with up to operational amplifier 33 V CAN bus transceiver up to 11Mgs 45-28V input 2A output step down, EMF Friendly Synchronous Step Down Conwerter ADC 8 channel, 500KSPs 1111 ILDO with fixed 5V output, 800mA current isolated 24V to 5V 2-A High Efficiency Synchronous Buck Converter in SOT Package isolator for SP1 3 froward 1 reverse	U2, U5, U14, U15, U16, U17, U18, U19 U3 U4 U6 U7 U8	SOT23-5 SOIC127P600X175- BAN SOT23-6 TSSOP38 SOT223 SMU02N	OPA196 SN65HVD234-Q1 TPSS42Q2 ADS8688 LM1117-5.0 SMUQ2N-Q5	
LM1117-5.0 SMU02N-05 TLV62569 Si8641BB-B-ISR	package, Cortex M4 core with up to operational amplifier 33 V CAN bus transceiver up to 11Mgs 45 28V input 2A output step down, EM Friendly Synchronous Step Down Conwerter ADC 8 channel, 500KSPs 1111 1100 V 1111 1111 1111 1111 1111 11	U2, U5, U14, U15, U16, U17, U18, U19 U3 U4 U6 U7 U8 U9	SOT23-5 SOIC127P600X175- BAN SOT23-6 TSSOP38 SOT223 SMU02N SOT23-5 SOIC127P600X175- 10AN SOIC127P600X175-	OPA196 SN65HVD234-Q1 TPS54202 ADS8688 LM1117-5.0 SMU02N-05 TLV62569 SI8641BB-B-ISR	
OPA196 3.3V CAN bus transceiver TPS54202 ADS8688 LM1117-5.0 SMU02N-05 TLV62569 S18641BB-B-ISR OPA4196	package, Cortex M4 core with up to operational amplifier 36V input 33V Input 33V ICAN bus transceiver up to IMbgs 45-28V input 2A 00-000 transceiver up to IMbgs 45-28V input 2A 00-000 transceiver up MC Transceiver up MC Transceiver	U2, U5, U14, U15, U16, U17, U18, U19 U3 U4 U6 U7 U8 U9 U10, U11	SOT23-5 SOIC127P600X175-BAN SOT23-6 TSSOP38 SOT223 SMU02N SOT23-5 SOIC127P600X175-16AN SOIC127P600X175-14AN	OPA196 SN65HVD234-Q1 TPSS42Q2 ADS8688 LM1117-5.0 SMUQ2N-Q5 TLV62569 SI8641BB-B-ISR OPA4196	
OPA196 3.3V CAN bus transceiver TPS54202 ADS9688 LM1117-5.0 SMU02N-05 TLV62569	package, Cortex M4 core with up to operational amplifier 33 V CAN bus transceiver up to 11Mgs 45 28V input 2A output step down, EM Friendly Synchronous Step Down Conwerter ADC 8 channel, 500KSPs 1111 1100 V 1111 1111 1111 1111 1111 11	U2, U5, U14, U15, U16, U17, U18, U19 U3 U4 U6 U7 U8 U9	SOT23-5 SOIC127P600X175- BAN SOT23-6 TSSOP38 SOT223 SMU02N SOT23-5 SOIC127P600X175- 10AN SOIC127P600X175-	OPA196 SN65HVD234-Q1 TPS54202 ADS8688 LM1117-5.0 SMU02N-05 TLV62569 SI8641BB-B-ISR	