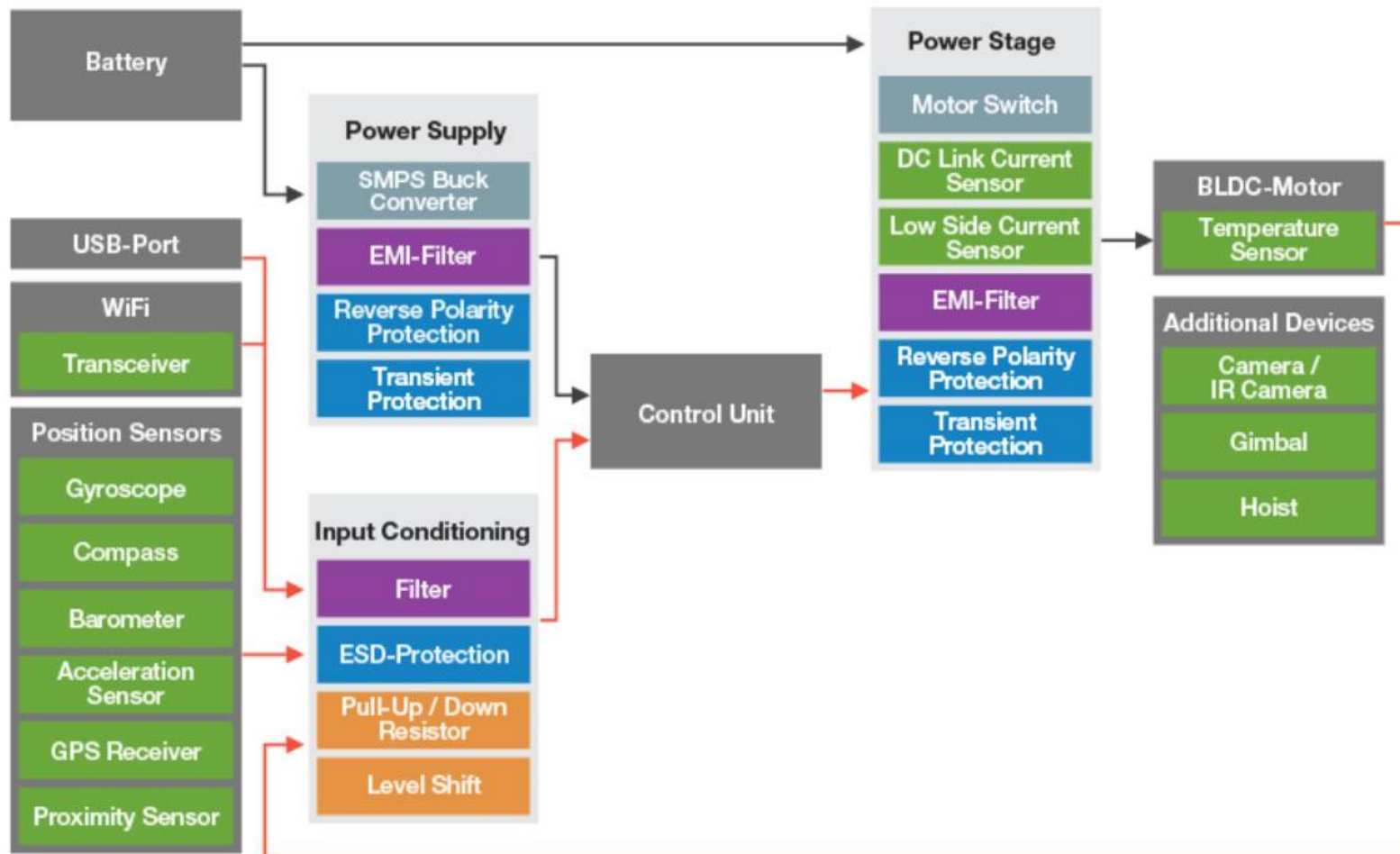


# Unmanned Aerial Vehicle - Block Diagram

## UNMANNED AERIAL VEHICLE - *NEW*



# Unmanned Aerial Vehicle - Parts

## WIFI - TRANSCEIVER

### RF CAPACITOR

Product Name	Status	Description	Features	Package	Q-Level
VJ...W1BC High Q Dielectric		Multilayer Ceramic Chip Capacitor for High Q Commodity Applications	C = 0.5 pF ... 3300 pF	SMD	

## POSITION SENSORS - GPS MODUL

### RF CAPACITOR

Product Name	Status	Description	Features	Package	Q-Level
VJ...W1BC High Q Dielectric		Multilayer Ceramic Chip Capacitor for High Q Commodity Applications	C = 0.5 pF ... 3300 pF	SMD 0402 ... 0603	

## POSITION SENSORS - PROXIMITY SENSOR

### IR EMITTER

Product Name	Status	Description	Features	Package	Q-Level
TSAL6200		High Power Infrared Emitting Diode	$\phi = \pm 17^\circ$	leaded	AEC Q101

### IR PROXIMITY SENSOR

Product Name	Status	Description	Features	Package	Q-Level
TSSP6P38		Mid Range Proximity Sensor	Distance up to 2 m Analog Output	SMD	
VCNL4020X01		Fully Integrated Proximity and Ambient Light Sensor	Distance up to 200 mm I <sup>2</sup> C Interface	SMD 0402 ... 0603	

# Unmanned Aerial Vehicle - Parts

## POWER SUPPLY - SMPS BUCK CONVERTER

### ALU ELCAP

Product Name	Status	Description	Features	Package	Q-Level
150CRZ		Aluminium Electrolytic Capacitor SMD Very Low Z	C = 4.7 $\mu$ F ... 10000 $\mu$ F	SMD	AEC Q200
150RMI		Aluminium Electrolytic Capacitor Radial Low Impedance	C = 100 $\mu$ F ... 8200 $\mu$ F	Radial	AEC Q200

### INDUCTOR

Product Name	Status	Description	Features	Package	Q-Level
IHLP-1616BZ-1A		IHLP Inductor High Current Low Profile	L = 0.1 $\mu$ H ... 4.7 $\mu$ H IDC = 12 A ... 1.75 A	SMD 1616	AEC Q200
IHLP-2020BZ-1A		IHLP Inductor High Current Low Profile	L = 0.1 $\mu$ H ... 10 $\mu$ H IDC = 25 A ... 2 A	SMD 2020	AEC Q200

### N-CH. MOSFET

Product Name	Status	Description	Features	Package	Q-Level
SQ3418EV		N-Channel 40V (DS) MOSFET	ID = 8 A RDS(on) = 0.032 $\Omega$	SMD TSOP-6	AEC Q101

### SCHOTTKY DIODE

Product Name	Status	Description	Features	Package	Q-Level
SS3P3L		Schottky Barrier Rectifier High Current Density	VRRM = 30 V IF = 3 A	SMD TO-277A	AEC Q101

### SHUNT RESISTOR

Product Name	Status	Description	Features	Package	Q-Level
WSL		Power Metal Strip® Resistor	R = 0.5 m $\Omega$ ... 0.1 $\Omega$ Tol = 0.5 % ... 1 %	SMD 0603 ... 2816	AEC Q200

# Unmanned Aerial Vehicle - Parts

## POWER SUPPLY - EMI-FILTER

### CERAMIC CAPACITOR

Product Name	Status	Description	Features	Package	Q-Level
VJ...31X		Surface Mount Multilayer Ceramic Chip Capacitor	C = 1 pF ... 1.0 µF	SMD 0402 ... 3640	AEC Q200

## POWER SUPPLY - REVERSE POLARITY PROTECTION

### P-CH. MOSFET

Product Name	Status	Description	Features	Package	Q-Level
SQD50P04-09L		P-Channel 40V (DS) MOSFET	ID = -50 A RDS(on) = 0.0094 Ω	SMD TO-252	AEC Q101
SQJ443EP		P-Channel 40V (DS) MOSFET	ID = -40 A RDS(on) = 0.029 Ω	SMD PowerPAK 1212-8	AEC Q101

## POWER SUPPLY - TRANSIENT PROTECTION

### TVS DIODE

Product Name	Status	Description	Features	Package	Q-Level
SM5A27		Transient Voltage Suppressor	Vbr = 27 V	SMD DO-218AB	AEC Q101

# Unmanned Aerial Vehicle - Parts

## INPUT CONDITIONING - EMI-FILTER

### CERAMIC CAPACITOR

Product Name	Status	Description	Features	Package	Q-Level
VJ...31X		Surface Mount Multilayer Ceramic Chip Capacitor	C = 1 pF ... 1.0 $\mu$ F	SMD 0402 ... 3640	AEC Q200

## INPUT CONDITIONING - ESD PROTECTION

### ESD DIODE

Product Name	Status	Description	Features	Package	Q-Level
GL05T		ESD Protection Diode for High-Speed Data Interfaces	VRWM = 5 V IPPM = 25 A	SMD SOT-23	AEC Q101

## INPUT CONDITIONING - PULL-UP/DOWN RESISTOR

### RESISTOR ARRAY

Product Name	Status	Description	Features	Package	Q-Level
CRA04P		Thick Film Resistor Array	R = 1 $\Omega$ ... 10 M $\Omega$ Tol = 2 % ... 5 %	SMD	AEC Q200

## INPUT CONDITIONING - LEVEL SHIFTING

### MOSFET

Product Name	Status	Description	Features	Package	Q-Level
SQ1470AEH		N-Channel 30V (DS) MOSFET	ID = 1.7 A RDS(on) = 0.095 $\Omega$ @ VGS = 2.5 V	SMD SOT-363	AEC Q101

# Unmanned Aerial Vehicle - Parts

## POWER STAGE - MOTOR SWITCH

### N-CH. MOSFET

Product Name	Status	Description	Features	Package	Q-Level
SQS484EN		N-Channel 40V (DS) MOSFET	ID = 16 A RDS(on) = 0.009 $\Omega$	SMD PowerPAK 1212-8	AEC Q101

## POWER STAGE - DC LINK CURRENT SENSOR

### RESISTOR ARRAY

Product Name	Status	Description	Features	Package	Q-Level
ACAS 0612 AT Precision		Precision Thin Film Chip Resistor Array	R = 47 $\Omega$ ... 150 k $\Omega$ rel. Tol = 0.05 %	SMD 0612	AEC Q200

### SHUNT RESISTOR

Product Name	Status	Description	Features	Package	Q-Level
WSL, Wide Terminal		Power Metal Strip® Resistor Wide Terminal	R = 1 m $\Omega$ ... 6 m $\Omega$ Tol = 0.5 % ... 5 %	SMD 0612 ... 1020	AEC Q200
WSLP		Power Metal Strip® Resistor	R = 0.5 m $\Omega$ ... 0.1 $\Omega$ Tol = 0.5 % ... 1 %	SMD 0603 ... 2512	AEC Q200

## POWER STAGE - LOW SIDE CURRENT SENSOR

### SHUNT RESISTOR

Product Name	Status	Description	Features	Package	Q-Level
WSL, Wide Terminal		Power Metal Strip® Resistor Wide Terminal	R = 1 m $\Omega$ ... 6 m $\Omega$ Tol = 0.5 % ... 5 %	SMD 0612 ... 1020	AEC Q200
WSL...18		Power Metal Strip® Resistor High Power (2 x Standard WSL)	R = 0.5 m $\Omega$ ... 0.1 $\Omega$ Tol = 0.5 % ... 1 %	SMD 0603 ... 2512	AEC Q200

# Unmanned Aerial Vehicle - Parts

## POWER STAGE - EMI-FILTER

### INDUCTOR

Product Name	Status	Description	Features	Package	Q-Level
IHLP-6767DZ-A1		IHLP Inductor High Current Low Profile	L = 0.22 $\mu$ h ... 10 $\mu$ H IDC = 92 A ... 19.5 A	SMD 6767	AEC Q200

## POWER STAGE - REVERSE POLARITY PROTECTION

### P-CH. MOSFET

Product Name	Status	Description	Features	Package	Q-Level
SQD50P04-09L		P-Channel 40V (DS) MOSFET	ID = -50 A RDS(on) = 0.0094 $\Omega$	SMD TO-252	AEC Q101
SQJ443EP		P-Channel 40V (DS) MOSFET	ID = -40 A RDS(on) = 0.029 $\Omega$	SMD PowerPAK 1212-8	AEC Q101

## POWER STAGE - TRANSIENT PROTECTION

### TVS DIODE

Product Name	Status	Description	Features	Package	Q-Level
SM5A27		Transient Voltage Suppressor	Vbr = 27 V	SMD DO-218AB	AEC Q101

## BLDC MOTOR - TEMPERATURE SENSOR

### NTC THERMISTOR

Product Name	Status	Description	Features	Package	Q-Level
NTCS0402E3...T		Glass Protected NTC Thermistor	R = 4.7 k $\Omega$ ... 100 k $\Omega$ B25/85 = 3490 K ... 4075 K	SMD 0402	AEC Q200