

TECHNOLOGY TEARDOWN DRONE / UAV



Component	Variants	Suppliers	Suggested Products	Development Kits
SENSE				
Sensors	Optical Sensors, Humidity Sensors, Temperature Sensors, Biometric Sensors, Capacitive Touch Sensors, Hall sensors	Silicon Labs, Micronas	Si7023-A20 (Silabs, Relative Humidity and Temperature sensors), HAL37xy (Micronas, Hall sensors) Si 1132-A10-GMR (Silabs, Optical Sensors with UV index)	SENSOR-PUCK, Thunderboard, Hall Sensor-In-A-box Development Kit
COMPUTE				
MCU (8/32 bit)	8-Bit MCU's, 32-Bit MCU's, C8051	Silicon Labs	Sleepy Bee (Silabs, 8 bit MCU), Universal Bee (Silabs, 8 bit MCU), Zero Gecko (Silabs, 32 bit MCU), Pearl, Gecko (Silabs, 32 bit MCU)	SLSTK2011A (8 Bit, Sleepy Bee Starter Kit), SLSTK3401A (32 Bit, Zero Gecko Starter Kit)
WIRELESS CONNECTIVITY				
GNSS	GPS, GLONASS, Galileo or Beidou	TELIT, Antenova, Taiyo Yuden, MediaTek	SL869 (Telit, GNSS), SE873 (Telit, GNSS)	SL869-EVK, SE873-GNSS-EVK
Wi-Fi	802.11a, 802.11b, 802.11g, 802.11n, 802.11ac	Silicon Labs, Digi, MediaTek, Lantronix, Gainpan, RealTek, Redpine Signals, Taiyo Yuden	RTL8195AM (RealTek, IEEE 802.11 b/g/n), WGM110 (Silabs, 802.11b/g/n), ConnectCore for i.MX6UL (Digi, 802.11a/b/g/n and BT 4.0)	Wizard Gecko Wifi Module Wireless Starter Kit
Bluetooth	Bluetooth Low energy, Bluetooth Classic	Silicon Labs, Digi, Nordic Semiconductor, MediaTek, Fujitsu, Taiyo Yuden	Blue Gecko (Silabs, Smart Soc), BT121 (Silabs, Bluetooth Smart Ready Module)	Silabs (Bluegiga DKBT Bluetooth® Smart Ready Development Kit)
Cellular	3G, 4G LTE	Telit, Janus, Multitech, Digi, Nimblerlink	Telit LE910 LTE 3GPP HSPA+ (Telit) , Telit HE910 3G HSPA+ module (Telit)	LTE-IN-A-BOX-ATT (Telit: LTE w/ 3G Fallback), 3G-IN-A-BOX HE910 Dev Kit (Telit:3G Cellular)
Ultra Wideband	802.15.4	DecaWave	DW1000 (Chipset), DW1000M (Module)	EVK1000, TREK1000
Proprietary Technology	2.4Ghz, Sub 1Ghz	Silicon Labs, Digi	EZR32WG (Silabs, 2.4GHz), Si4XXX EZRadio (Silabs, ISM band RX and TX)	SLWSTK6066A (2.4GHz), Si4356 Wireless Development Kit (ISM band)
Antenna	Internal (PCB, Flex, SMD), External antenna,	EAD, Antenova, Hirshman solutions	FWTR35292-SM-KR (EAD, Cellular Antenna) A10204-01 (Antenova, GNSS Antenna)	A10204-01 -U2
Combo Modules	11a/b/g/n + BT3.0, 11ac + BT4.1, BLE/Classic+Wifi (Dual Band) + Zigbee	Taiyo Yuden, Redpine signals, MediaTek	WYSBMVGB (Taiyo-Yuden, 11a/b/g/n + BT3.0, SMD)	WBSBHVGB
ADDITIONAL COMPONENTS				
Video Encoder	Video compression for streaming via WiFi/Cellular	Averlogic	AL582	AL582C-CMOS-DMB-A2 (CMOS-to-HDMI Wi-Fi HD AV Streaming Development Kit)
Camera Interface	Lattice image sensor bridge/ISP engine (FPGA based)	Lattice	LIF-MD6000	LIF-MD6000 Master Link Board
Motion Microsystem (SoC)	MCU + Gate Driver	Trinamic	TMCC160 (Trinamic), TMC 6130 (Gate drivers)	TMCC160 - EVAL - KIT, TMC6130 - EVAL - KIT
Motion Controller	BLDC Motion controller	Trinamic	TMC4670 (Trinamic)	TMC4670 - EVAL - KIT
Analog	Optical Encoder, ADC, Current Sense Amplifiers, Power Management, Operational Amplifiers, Comparators, DC-DC Converters, Low Power Timers, Voltage References	Silicon Labs iC-Haus	iC-LTA (Optical encoder) TS7001 (Silabs, ADC), TS3001 (Silabs, Low power timer)	TS7001 - EVB (ADC), TS3001 - EVB (Low power timer)