

# TECHNOLOGY TEARDOWN DRONE / UAV



Component	Variants	Suppliers	Suggested Products	Development Kits
<b>SENSE</b>				
<b>Sensors</b>	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
<b>COMPUTE</b>				
<b>MCU (8/32 bit)</b>	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)
<b>WIRELESS CONNECTIVITY</b>				
<b>GNSS</b>	GPS, GLONASS, Galileo or Beidou	TELIT, Antenova, Taiyo Yuden, MediaTek	SL869 (Telit, GNSS), SE873 (Telit, GNSS)	SL869-EVK, SE873-GNSS-EVK
<b>Wi-Fi</b>	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
<b>Bluetooth</b>	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)
<b>Cellular</b>	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)
<b>Ultra Wideband</b>	802.15.4	DecaWave	DW1000 (Chipset), DW1000M (Module)	EVK1000, TREK1000
<b>Proprietary Technology</b>	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)
<b>Antenna</b>	Internal (PCB, Flex, SMD), External antenna,	EAD, Antenova, Hirshman solutions	FWTR35292-SM-KR (EAD, Cellular Antenna) A10204-01 (Antenova, GNSS Antenna)	A10204-01 -U2
<b>Combo Modules</b>	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
<b>ADDITIONAL COMPONENTS</b>				
<b>Video Encoder</b>	Video compression for streaming via WiFi/Cellular	Averlogic	AL582	AL582C-CMOS-DMB-A2 (CMOS-to-HDMI Wi-Fi HD AV Streaming Development Kit)
<b>Camera Interface</b>	Lattice image sensor bridge/ISP engine (FPGA based)	Lattice	LIF-MD6000	LIF-MD6000 Master Link Board
<b>Motion Microsystem (SoC)</b>	MCU + Gate Driver	Trinamic	TMCC160 (Trinamic), TMC 6130 (Gate drivers)	TMCC160 - EVAL - KIT, TMC6130 - EVAL - KIT
<b>Motion Controller</b>	BLDC Motion controller	Trinamic	TMC4670 (Trinamic)	TMC4670 - EVAL - KIT
<b>Analog</b>	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)