Revised

Please add revised Annex with date + also sign all pages with date.

Sr No	Description/Specifications	A/U	Quantity

1.	**Aizynq AZR Nova Processing Core: Zynq 7000 (dual-core ARM + FPGA) (Custom Build SDR) or Equivalent**
	
	Technical Specifications
	• **Processing Core:** Zynq 7000 (Dual-core ARM Cortex-A9 + FPGA)
	• **RF Front-End: AD9361 transceiver**
	  ○ **Transmit Channels:** 2x
	  ○ **Receive Channels:** 2x
	  ○ **Bandwidth:** Up to 30 MHz per channel
	  ○ **Frequency Range:** 70 MHz – 6 GHz
	  ○ **Minimum Detectable Signal:** -90 dBm
	  ○ **Detection Range:** 1.5 – 2 km
	  ○ **Memory & Storage:** DDR RAM, Flash/eMMC, SD Card
	• **Interfaces:** Gigabit Ethernet
	• **Boot Modes:**
	  ○ JTAG
	  ○ Flash
	  ○ SD Card
	• **GPS Module:** Integrated for time synchronization
	• **Software Support:**
	  ○ Customizable FPGA bitstream
	  ○ Bare-metal SDK code in C
	• **Form Factor:** Compact design
	• **Power Supply:** 5V to 12V DC
	
	For more Information/Source:
	https://www.aizynq.com/
		No.	2

2.	**SIYI ZT30 Optical Pod Gimbal Camera** **Specifications:** • **Thermal Imaging:** 640 x 512 resolution, high-accuracy thermometric capabilities. • **Zoom:** 4K 180X Hybrid Zoom, 30X Optical Zoom. • **Laser Rangefinder:** 1200-meter range, high-accuracy.	No.	1

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- **Camera:** 4K Ultra HD video recording, still photo resolution up to 4K.
- **Modes:** Nose Mode, Upside Down Mode.
- **Compatibility:** Works with ArduPilot & PX4 (Mavlink).
- **Stabilization:** High-accuracy 3-axis (Yaw, Pitch, Roll).
- **Control:** Supports S.Bus, UART, Ethernet UDP/TCP.

Mechanical & Electrical:

- **Voltage:** 11 ~ 25.2 V.
- **Power Consumption:** Average 9 W, Max 20 W.
- **Waterproof Level:** IP4X.
- **Operating Temperature:** -10 ~ 50 °C.
- **Dimensions:** 134.5 x 140 x 201 mm.
- **Weight:** 854 g (with quick-release anti-vibration claw).

Camera Specifications:

- **Zoom Camera:**
  - **Lens:** 30X Optical Zoom (180X Hybrid).
  - **Focal Length:** 4.8 ~ 149mm.
  - **Image Sensor:** 1/2.7 Inch, 8 MP.
  - **Aperture:** F1.3 ~ 4.8.
  - **FOV:** 65.4° Diagonal, 58.1° Horizontal (without zoom).
  - **Video Recording:** 4K (4096×2160) @ 30 fps, 2K (2560×1440) @ 30 fps, 1080p (1920×1080) @ 30 fps.
  - **Still Photos:** 4K (4096×2160).
- **Thermal Imaging Camera:**
  - **Sensor:** Uncooled VOx Microbolometer.
  - **Resolution:** 640 x 512.
  - **Zoom:** 2X Digital.
  - **Temperature Range:** -20 ~ +150°C (High Gain), 0 ~ +550°C (Low Gain).
  - **Accuracy:** ±2°C (-20 ~ +150°C), ±3°C (0 ~ +550°C).
- **Wide Angle Camera:**
  - **Sensor:** 1/2.8 Inch, 4 MP.
  - **FOV:** 93° Diagonal, 84.5° Horizontal.
  - **Resolution:** 2K (2560×1440) @ 30 fps for video, 2K for still photos.

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	• **Laser Rangefinder:**
	  o **Range:** 5 ~ 1200 m.
	  o **Accuracy:** ±1 m (3 ~ 100 m), ±1 + L*0.25% m (100 ~ 600 m).
	  o **Laser Power:** 5 mW.
	  o **Pulse Frequency:** 3 Hz.
	Storage & Formats:
	• **Video Bitrate:** 15 Mbps (H.265 Codec).
	• **File Formats:** FAT32, ExFAT.
	• **Image Format:** JPG.
	• **Video Format:** MP4.
	• **Max Supported MicroSD:** 256GB (MicroSD Class 10).
	Control & Connectivity:
	• **Ethernet:** Video output port.
	• **Control Ports:** S.Bus, UART, Ethernet UDP/TCP.
	Stabilization: High-accuracy 3-axis.		

3.	**AntSDR E200 AD9361 or Equivalent with Antennas**
	
	Specifications:
	RF & Processing
	• **Chipset**: ADI AD9361 (2T2R, 2×2 MIMO)
	• **Frequency Range**: 70 MHz – 6 GHz
	• **RF Bandwidth**: Up to 56 MHz (instantaneous)
	• **ADC**: 12-bit, 61.44 MSPS
	• **DAC**: 12-bit, 61.44 MSPS
	• **RX Noise Figure**: <8 dB
	• **Transmit Power**: Up to 10 dBm (depending on frequency)
	• **Transmission IQ Bandwidth**:
	  o 10 MSPS (for ADI IIO)
	  o 25 MSPS (for UHD)
	Baseband & Processing
	• **FPGA**: Xilinx ZYNQ 7020
	• **Memory**: 512 MB DDR3 RAM + 256 MB QSPI
	Connectivity & Interface
	• **Host Interface**: 1 Gbps Ethernet (RJ45)
	• **Other Interfaces**:
	  o USB Type-C (console & power supply)
	  o SD card slot
	  o GPIO expansion
		No.	2

	• **Synchronization**: External 10 MHz or PPS input
	• **Clock**:
	  ○ VCTCXO (Initial accuracy: 0.5 ppm)
	  ○ Dynamically adjusted via digital PLL (accuracy better than ±5 ppb)
	Physical & Power
	• **Dimensions**: 86.75 mm × 56 mm × 23.4 mm
	• **Power Supply**: USB Type-C
	• **Power Consumption**: 2W – 6W
	• **Weight**: 0.8 kg
	Software & API
	• **Supported APIs**: UHD, ADI IIO (preinstalled), C/C++, Python
	Additional Features
	• **Open Source**: Schematic & firmware available
	• **External Clock Support**: 10 MHz / PPS
	• **GPS**: None
	• **Product Features**: Compact & cost-effective
	Package Includes:
	• 1 × AntSDR E200 SDR
	• 1 × Network Cable
	• 1 × USB Data Cable
	• 1 × 32 GB Memory Card
	• 1 × Card Reader
	2 × Antennas		