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Ü	Processor	Razorbill R4D2+ V2 U or UL	4U Rack-Mounted System with 2 Input Channels, 1 Software-Defined Output Channel; Available with Integrated Limiter	ASY00220-02	\$178,000
9	Processor	Razorbill R4D2+ V2 RFSW-Ext Ref	4U Rack-Mounted System with 2 Input Channels, 1 Software-Defined Output Channel, Rugged Chassis and Integrated RF Switch	ASY00435-01	\$195,000
9	Processor	Razorbill R4D2+ V2 RFSW- Int Ref	4U Rack-Mounted System with 2 Input Channels, 1 Software-Defined Output Channel, Rugged Chassis and Integrated RF Switch	ASY00435-02	\$195,000
10	Processor	Razorbill R5D2 X10	5U Rack-Mounted System with 2 Input Channels	ASY00271-01	\$123,000
10	Processor	Razorbill R5D2+ V2 X10 Drive Sleds	5U Rack-Mounted System with Drive Sleds; 2 Input Channels and 1 Software-Defined Output Channel	ASY00543-01	\$181,000
10	Processor	Razorbill R5D2+ V2 X10 Drive Packs	5U Rack-Mounted System with Drive Packs; 2 Input Channels and 1 Software-Defined Output Channel	ASY00544-01	\$181,000
11	Processor	Razorbill R5D4 X10	5U Rack-Mounted System with 4 Input Channels	ASY00229-01	\$181,000
11	Processor	Razorbill R5D4X10-IF	5U Rack-Mounted System with 2 Input Channels and Integrated IF Switch	ASY00229-02	\$188,000
15	Processor	Kite K9D2S-AC	Ruggedized Portable System with 2 Input Channels and Integrated RF Switch; AC Power	ASY00175-01	\$137,000
15	Processor	Kite K9D2S-DC	Ruggedized Portable System with 2 Input Channels and Integrated RF Switch; DC Power	ASY00176-01	\$137,000
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17	Processor	Firefly™ RM-7	Complete Rack-Mounted 7 Channel COMINT Sensor; Two Configurations	7000-0316 7000-0321	\$160,000 \$165,000
18 C	ounter s-UAS	Sentry	115 VAC/60 Hz Outdoor-Rated Passive Sensor with 4 Input Channels	ASY00272-01	\$165,000
18 C	ounter s-UAS	Sentry	230 VAC/50 Hz Outdoor-Rated Passive Sensor with 4 Input Channels	ASY00273-01	\$165,000
19 C	ounter s-UAS	Sentry	115 VAC/60 Hz Outdoor-Rated Active Sensor with 4 Input Channels and 2 Software-Defined Output Channels	ASY00261-01	\$252,000
19 C	ounter s-UAS	Sentry	230 VAC/50 Hz Outdoor-Rated Active Sensor with 4 Input Channels and 2 Software-Defined Output Channels	ASY00262-01	\$252,000
20 C	ounter s-UAS	Sentry	115 VAC/60 Hz Outdoor-Rated Radio Frequency Amplification System	ASY00274-01	\$108,000
20 C	ounter s-UAS	Sentry	230 VAC/50 Hz Outdoor-Rated Radio Frequency Amplification System	ASY00275-01	\$108,000

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22	Counter s-UAS	Sentry	MIMO Wi-Fi RF Conditioning Unit	ASY00201-01	\$26,000
23	Counter s-UAS	Sentry	Passive Antenna Subsystem	ASY00222-02	\$14,400
24	Counter s-UAS	Sentry	Active Antenna Subsystem	ASY00223-01	\$23,300
25	Counter s-UAS	Sentry	24 GHz Microwave Link Subsystem	ASY00221-01	\$9,300
26	Counter s-UAS	Sentry	115 VAC Rugged Central Server Subsystem	ASY00224-01	\$26,000
26	Counter s-UAS	Sentry	220 VAC Rugged Central Server Subsystem	ASY00301-01	\$26,000
27	Counter s-UAS	Sentry	Operator Workstation	ASY00225-01	\$6,100
28	Counter s-UAS	Sentry	Complete 4+1 System	ASY00241-02 ASY00241-03	\$1,700,000
29	Counter s-UAS	Mobile Sentry	Mobile Sentry Processor Subsystem	ASY00565-01	\$223,000
30	Counter s-UAS	Mobile Sentry	Mobile Sentry Antenna Interface Unit	ASY00566-01	\$93,000
31	Counter s-UAS	Mobile Sentry	Mobile Sentry Interconnect Cable Assembly	ASY00419-nn	Call for Pricing
32	Amplifier	MTA-100	2U Rack-Mounted Amplifier Assembly; RF Coverage 20 MHz – 1 GHz	ASY00150-01, -02	\$34,000
33	Amplifier	MTA-610	3U Rack-Mounted Amplifier System; RF Coverage 20 MHz-6 GHz (4 Output Port / Keylock Switch Options)	ASY00186-01, -02,-03,-04	\$84,000
34	Receiver	Universal Receiver Chassis	Rack-Mounted Receiver Assembly with Eight 6 GHz RF Input Channels	ASY00145-01	\$179,000
34	Receiver	Universal Receiver Chassis	Rack-Mounted Receiver Assembly with Four 18 GHz RF Input Channels	ASY00145-02	\$230,000
34	Receiver	Universal Receiver Chassis	Rack-Mounted Receiver Assembly with Four 6 GHz and Two 18 GHz RF Input Channels	ASY00145-03	\$203,000
35	Receiver/ Transmitter	Yellowstone Radio Family	Ruggedized, Rack-Mountable, Modular, General- Purpose Receiver/Transmitter Family	ASY00478-01	Call for Pricing

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38	Simulator	Universal Simulator	Rack-Mounted Simulator Assembly; Simulated Signal Outputs; Frequency Range 10 MHz – 6 GHz	ASY00146-01	\$26,000
39	Simulator	Rattler Simulator	Portable Signal Simulator. Frequency Range 400 MHz – 4.4 GHz	ASY00064-01	\$25,000
39	Simulator	Rattler Simulator	Portable Signal Simulator. Frequency Range 50 MHz – 2.2 GHz	ASY00066-01	\$25,000
40	Simulator	Playback System	Rack-mountable 5U Signal Playback System	ASY00277-01	\$60,000
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43	Antenna	High-Gain Antenna	1.8-meter Parabolic Reflector with Vertically Polarized Feed. Frequency Range 800 MHz – 6 GHz	ASY00326-01	\$201,000
44	Antenna	High-Gain Antenna	1.2-meter Parabolic Reflector with Vertically Polarized Feed. Frequency Range 800 MHz – 6 GHz	ASY00324-01	\$173,000
45	Antenna	High-Gain Antenna with Transmit	1.2-meter Parabolic Primary Reflector with Vertically Polarized Feed; Integrated Secondary Vertically Polarized Log-Periodic Array	ASY00325-01	\$179,000
46	Antenna	Offset Fed Reflector Antenna	Offset Fed Reflector with Vertically Polarized Feed. Frequency Range 800 MHz – 6 GHz	ASY00327-01	\$92,000
47	Antenna	UHF Tightly Coupled Array	Tightly Coupled Array Vertically Polarized UHF Antenna. Frequency Range 200 MHz – 600 MHz	ASY00330-01	\$34,000
48	Antenna	Dual-Pol TCA	Dual-Polarization Tightly Coupled Array UHF Antenna. Frequency Range 200 MHz – 600 MHz	ASY00329-01	\$220,000
49	RF Component	Switch Matrix	Non-Blocking RF Switch Matrix. 8 Input Ports, 4 Output Ports. Frequency Range 50 MHz – 6 GHz	ASY00042-01	\$46,000
50	RF Component	RFCU-LSC	L/S/C Band RF Conditioning Unit with Integrated Noise Source	ASY00036-01	\$26,000
50	RF Component	RFCU-Uv2	UHF RF Conditioning Unit with Integrated Noise Source. 4 Input Ports, 4 Output Ports	ASY00037-01	\$21,000
50	RF Component	RFCU-PCU	RF Conditioning Power Control Unit	ASY00052-02	\$16,000
51	Accessories				

Razorbill Rack-Mounted

Processor Family



Razorbill Processors are our top-of-the-line ruggedized, rack-mountable, general-purpose SIGINT collection platforms. These systems have been developed as a host for X-Midas and other software-defined radio applications running on the Linux operating system and can be ordered with our latest 3rd generation digital tuners. Razorbill processors are specifically designed to tolerate harsh physical and thermal conditions and are available in 4U and 5U configurations. These systems can be configured to incorporate up to 2 dual-channel independent built-in high-performance receivers, each with an instantaneous bandwidth of 30 MHz and frequency ranges up to 6 GHz. Razorbill systems can be configured with up to 9 TB of self-encrypting storage using SAS storage drives or be equipped with solid state storage devices. Razorbill 5U systems contain integrated LTO tape drives, while 4U chassis are configured to connect to external tape drives. Razorbill processors equipped with output options are compatible with MTA class amplifier systems.

Razorbill Options/Configurations

Razorbill R4D2X10 System

Part Number: ASY00542-01

4U Rack-Mounted System with 2 Input Channels

Height: 4U, 7 inches Width: 19 inches Depth: 25.75 inches Weight: 65 lbs

Processor: Dual deca-core Intel Xeon E5-2680-v3 CPUs

Receivers: 1x dual-channel 30 MHz – 6 GHz

30 MHz Max. Bandwidth

Digital Output

Input Channels: 2
Output Channels: None
Storage: 1x 256 GB SSD (OS)

10x 600 GB SAS Drives (6 TB RAID)

Tape Drive: External LTO-5; Can write LTO-4 tapes

Memory: 128 GB DDR4, 2133 MHz Connections: 2x RF Inputs (N/F) 1x 1 PPS (SMA/F)

1x 10 MHz Ref (SMA/F)
1x Spare (SMA/F)
2x USB 2.0 (Type A)

2x Gigabit Ethernet (RJ-45) 1x VGA Output (DE-15)

1x Mouse (USB) 1x Keyboard (USB)

2x SFF-8088 SAS (1 on Front, 1 on Rear)

2x Power (C13) Line Voltage: 100 – 240 VAC Frequency: 47 – 63 Hz

Maximum Continuous Power: 760 Watts
Operating Temperature: 10 °C to 35 °C

(50 °F to 95 °F)

Storage Temperature: -40 °C to 70 °C

(-40 °F to 158 °F)

Operating Relative Humidity: 8% to 90% (non-condensing)

Basic Unit Price: \$124,000

Razorbill R4D2+ V2 U or UL*
Part Number: ASY00220-02

4U Rack-Mounted System with 2 Input Channels and

1 Software-Defined Output Channel

Height: 4U, 7 inches Width: 19 inches Depth: 25.75 inches Weight: 65 lbs

Processor: Dual deca-core Intel Xeon E5-2680-v3 CPUs

Graphics Processor: Quadro P600

Receivers: 1x dual-channel 30 MHz – 6 GHz

30 MHz Max. Bandwidth

Digital Output

Input Channels: 2

Output Channels: 1 (software-defined bit stream and waveform)

Storage: 1x 1TB HDD (OS)

10x 600 GB SAS Drives (6 TB RAID) **Tape Drive:** External LTO-5; Can write LTO-4 tapes

Memory: 128 GB DDR4, 2133 MHz
Connections: 2x RF Inputs (N/F)
1x RF Outputs (SMA/F)

1x 1 PPS (SMA/F) 1x 1 PPS (SMA/F) 1x 10 MHz Ref (SMA/F) 1x Spare (SMA/F) 2x USB 2.0 (Type A)

2x Gigabit Ethernet (RJ-45) 1x VGA Output (DE-15)

1x Mouse (USB)
1x Keyboard (USB)

2x SFF-8088 SAS (1 on Front, 1 on Rear)

 $2x \ \mathsf{Power} \ (\mathsf{C13})$ Line Voltage: $100-240 \ \mathsf{VAC}$

Frequency: 47 - 63 Hz

Maximum Continuous Power: 760 Watts
Operating Temperature: 10 °C to 35 °C

(50 °F to 95 °F)

Storage Temperature: -40 $^{\circ}\text{C}$ to 70 $^{\circ}\text{C}$

(-40 °F to 158 °F)

Operating Relative Humidity: 8% to 90% (non-condensing)

Basic Unit Price: \$178,000

* Available with an integrated limiter.

Razorbill Options/Configurations

Razorbill R4D2+ V2 with RF Switch - Ext Ref

Part Number: ASY00435-01

4U Rack-Mounted System with 2 Input Channels and 1 Software-Defined Output Channel. The system includes an integrated RF Switch. The RF Switch is a 2 input, 2 output non-blocking matrix switch. Additionally, the RF Switch allows the user to transmit and receive on a single RF port.

Height: 4U, 7 inches Width: 19 inches Depth: 25.75 inches Weight: 65 lbs

Processor: Dual deca-core Intel Xeon E5-2680-v2 CPUs

Receivers: 1x dual-channel 30 MHz – 6 GHz 30 MHz Max. Bandwidth

Digital Output

Input Channels: 2

Output Channels: 1 (software-defined bit stream and waveform)

Storage: 2x 256 GB SSD 4x 1 TB SSD

Tape Drive: External LTO-5; Can write LTO-4 tapes

Memory: 64 GB DDR3, 1600 MHz Connections: 2x RF Inputs (N/F) 1x RF Outputs

> 1x 10 MHz Ref (SMA/F) 1x 1 PPS Input (SMA/F) 2x USB 2.0 (Type A)

2x Gigabit Ethernet (RJ-45) 1x VGA Output (DE-15) 1x Mouse (USB)

1x Keyboard (USB)

2x SFF-8088 SAS (1 on Front, 1 on Rear)

2x Power (C13) Line Voltage: 100 – 240 VAC

Frequency: 47 – 63 Hz

Maximum Continuous Power: 760 Watts Operating Temperature: 10 °C to 35 °C

(50 °F to 95 °F)

Storage Temperature: -40 °C to 70 °C

(-40 °F to 158 °F)

Operating Relative Humidity: 8% to 90% (non-condensing)

Basic Unit Price: \$195.000

Razorbill R4D2+ V2 with RF Switch – Internal Ref

Part Number: ASY00435-02

4U Rack-Mounted System with 2 Input Channels and 1 Software-Defined Output Channel. The system includes an integrated RF Switch. The RF Switch is a 2 input, 2 output non-blocking matrix switch. Additionally, the RF Switch allows the user to transmit and

receive on a single RF port.

Height: 4U, 7 inches Width: 19 inches Depth: 25.75 inches Weight: 65 lbs

Processor: Dual deca-core Intel Xeon E5-2680-v2 CPUs

Receivers: 1x dual-channel 30 MHz – 6 GHz 30 MHz Max. Bandwidth

Digital Output

Input Channels: 2

Output Channels: 1 (software-defined bit stream and waveform)

Storage: 2x 256 GB SSD 4x 1 TB SSD

Tape Drive: External LTO-5; Can write LTO-4 tapes

Memory: 64 GB DDR3, 1600 MHz Connections: 2x RF Inputs (N/F) 1x RF Outputs

> 1x 1 PPS Input (SMA/F) 2x USB 2.0 (Type A) 2x Gigabit Ethernet (RJ-45) 1x VGA Output (DE-15)

1x Mouse (USB) 1x Keyboard (USB)

2x SFF-8088 SAS (1 on Front, 1 on Rear)

 $2x \ Power \ (C13)$ Line Voltage: $100-240 \ VAC$

Frequency: 47 - 63 Hz

Maximum Continuous Power: 760 Watts **Operating Temperature:** 10 °C to 35 °C

(50 °F to 95 °F)

Storage Temperature:-40 $^{\circ}\text{C}$ to 70 $^{\circ}\text{C}$

(-40 °F to 158 °F)

Operating Relative Humidity: 8% to 90% (non-condensing)

Basic Unit Price: \$195,000

Razorbill Options/Configurations

Razorbill R5D2 X10 System
Part Number: ASY00271-01

5U Rack-Mounted Processing System with 2 Input Channels

Height: 5U, 8.75 inches Width: 19 inches Depth: 21.25 inches Weight: 85 lbs

Processor: Dual deca-core Intel Xeon E5-2680-v3 CPUs

Receivers: 1x dual-channel 30 MHz – 6 GHz

30 MHz Max. Bandwidth

Digital Output

Input Channels: 2
Output Channels: None

Storage: 2x 600 GB SAS Drives (OS)

18x 600 GB SAS Drives (10.8 TB RAID)

Storage Options: Full Drive Encryption via SafeStore

supported on all 18 drives

Integrated Tape Drive: Internal LTO-5; Can write LTO-4 tapes

Memory: 128 GB DDR4, 2133 MHz
Connections: 1x RF Inputs (SMA/F)
1x 1 PPS (SMA/F)

1x 10 MHz Ref (SMA/F) 2x Spare (SMA/F) 2x USB 2.0 (Type A)

2x Gigabit Ethernet (RJ-45) 1x VGA Output (DE-15) 1x Mouse (USB)

1x Keyboard (USB) 2x Power (C13)

Line Voltage: 100 – 240 VAC Frequency: 47 – 63 Hz

Maximum Continuous Power: 760 Watts Special Packaging Options: No Logo Operating Temperature: 10 °C to 35 °C (50 °F to 95 °F)

Storage Temperature: -40 °C to 70 °C

(-40 °F to 158 °F)

Operating Relative Humidity: 8% to 90% (non-condensing)

Basic Unit Price: \$123,000

Razorbill R5D2+ V2X10 System*
Part Number: ASY00543-01

5U Rack-Mounted Processing System with 2 Input Channels and

1 Software-Defined Output Channel

Height: 5U, 8.75 inches Width: 19 inches Depth: 21.25 inches Weight: 85 lbs

Processor: Dual deca-core Intel Xeon E5-2680-v3 CPUs

Receivers: 1x dual-channel 30 MHz – 6 GHz 30 MHz Max. Bandwidth

Digital Output

Input Channels: 2

Output Channels: 1 (software-defined bit stream and waveform)

Storage: 1x 256 GB SSD (OS)

8x 600 GB SAS Drives (4.8 TB RAID)

Integrated Tape Drive: Internal LTO-5; Can write LTO-4 tapes

Memory: 128 GB DDR4, 2133 MHz
Connections: 2x RF Inputs (SMA/F)
1x RF Output (SMA/F)
1x 1 PPS (SMA/F)
1x 10 MHz Ref (SMA/F)
1x Spare (SMA/F)

2x Gigabit Ethernet (RJ-45) 1x VGA Output (DE-15) 1x Mouse (USB) 1x Keyboard (USB)

2x Power (C13)

2x USB (Type A)

Line Voltage: 100 – 240 VAC Frequency: 47 – 63 Hz

Maximum Continuous Power: 760 Watts Operating Temperature: $10 \, ^{\circ}\text{C}$ to $35 \, ^{\circ}\text{C}$ (50 $^{\circ}\text{F}$ to $95 \, ^{\circ}\text{F}$)

Storage Temperature:-40 °C to 70 °C

(-40 °F to 158 °F)

Operating Relative Humidity: 8% to 90% (non-condensing)

Basic Unit Price: \$181,000

* Also Available: R5D2+ V2X10 with Drive Packs

Part Number: ASY00544-01 Storage: 1x 256 GB SSD 8x 1TB SSD

Razorbill Options/Configurations

Razorbill R5D4X10 System Part Number: ASY00229-01

5U Rack-Mounted Processing System with 4 Input Channels

Height: 5U, 8.75 inches Width: 19 inches Depth: 21.25 inches Weight: 85 lbs

Processor: Dual deca-core Intel Xeon E5-2680-v3 CPUs

Receivers: 2x dual-channel

30 MHz – 6 GHz

30 MHz Max. Bandwidth

Digital Output

Input Channels: 4

Output Channels: None Storage: 1x 256 GB SSD (OS)

16x 600 GB SAS Drives (4.8 TB RAID)

Integrated Tape Drive: Internal LTO-5; Can write LTO-4 tapes

Memory: 128 GB DDR4, 2133 MHz Connections: 4x RF Inputs (SMA/F) 1x 1 PPS (SMA/F)

> 1x 10 MHz Ref (SMA/F) 2x Gigabit Ethernet (RJ-45) 1x VGA Output (DE-15) 1x Mouse (USB)

1x Keyboard (USB) 2x Power (C13)

Line Voltage: 100 - 240 VAC Frequency: 47 - 63 Hz

Maximum Continuous Power: 760 Watts Operating Temperature: 10 °C to 35 °C (50 °F to 95 °F)

Storage Temperature: -40 °C to 70 °C

(-40 °F to 158 °F)

Operating Relative Humidity: 8% to 90% (non-condensing)

Basic Unit Price: \$181,000

Razorbill R5D4X10-IF System * Part Number: ASY00229-02

5U Rack-Mounted Processing System with 4 Input Channels

(4 digital receiver channels) Height: 5U, 8.75 inches

Width: 19 inches Depth: 21.25 inches Weight: 85 lbs

Processor: Dual dodeca-core Intel Xeon E5-2680-v3 CPUs

Receivers: 2x dual-channel 30 MHz – 6 GHz

30 MHz Max. Bandwidth

Digital Output

Input Channels: 4 Output Channels: None Storage: 1x 256 GB SSD (OS)

16x 600 GB SAS Drives (9.6 TB RAID)

Integrated Tape Drive: Internal LTO-5; Can write LTO-4 tapes

Memory: 128 GB DDR4, 2133 MHz Connections: 2x RF Input (SMA/F) 1x IF Input (SMA/F) 1x 1 PPS (SMA/F) 1x 10 MHz Ref (SMA/F)

1x Spare (SMA/F)

2x Gigabit Ethernet (RJ-45) 1x VGA Output (DE-15)

1x DC Indicator Output (Barrel Jack)

1x Mouse (USB) 1x Keyboard (USB) 2x USB 3.0 2x Power (C13)

Line Voltage: 100 - 240 VAC

Frequency: 47 - 63 Hz

Maximum Continuous Power: 760 Watts Operating Temperature: 10 °C to 35 °C

(50 °F to 95 °F)

Storage Temperature: -40 °C to 70 °C

(-40 °F to 158 °F)

Operating Relative Humidity: 8% to 90% (non-condensing)

Basic Unit Price: \$188,000

* R5G4 Razorbills can be upgraded to R5D4X10-IF by adding upgrade kit ASY00229-03.

4U Razorbill Capability Matrix

	System	ASY00542-01 (R4D2X10)	ASY00220-02 (R4D2+ V2 U or UL)	ASY00435-01 (R4D2+V2 RFSW Ext Ref)	ASY00435-02 (R4D2+ V2 RFSW Int Ref)
	Height Width Depth Weight	4U, 7 inches 19 inches 25.75 inches 65 lbs	4U, 7 inches 19 inches 25.75 inches 65 lbs	4U, 7 inches 19 inches 25.75 inches 65 lbs	4U, 7 inches 19 inches 25.75 inches 65 lbs
**************************************	Processor	Dual deca-core CPUs Intel Xeon E5-2680-v3	Dual deca-core CPUs Intel Xeon E5-2680-v3 Quadro P600 (Graphics)	Dual deca-core CPUs Intel Xeon E5-2680-v2	Dual deca-core CPUs Intel Xeon E5-2680-v2
(970)	Receivers	1X dual-channel 30 MHz – 6 GHz 30 MHz Max. Bandwidth Digital Output	1X dual-channel 30 MHz – 6 GHz 30 MHz Max. Bandwidth Digital Output	1X dual-channel 30 MHz – 6 GHz 30 MHz Max. Bandwidth Digital Output	1X dual-channel 30 MHz – 6 GHz 30 MHz Max. Bandwidth Digital Output
	Input Channels Output Channels	2	2 1	2 1	2 1
	Storage	1X 256 GB SSD (OS) 10X 600 GB SAS Drives (6 TB RAID)	1X 1 TB HDD (OS) 10X 600 GB SAS Drives (6 TB RAID)	2X 256 GB SSD 4X 1 TB SSD	2X 256 GB SSD (OS) 4X 1 TB SSD
	Integrated Tape Drive	External LTO-5; Can write LTO-4 tapes	External LTO-5; Can write LTO-4 tapes	External LTO-5; Can write LTO-4 tapes	External LTO-5; Can write LTO-4 tapes
	Memory	128 GB DDR4, 2133 MHz	128 GB DDR4, 2133 MHz	64 GB DDR3, 1600 MHz	64 GB DDR3, 1600 MHz
	Connections	2X RF Inputs (N/F) 1X 1PPS (SMA/F) 1X 10 MHz Ref (SMA/F) 1X Spare (SMA/F) 2X USB 2.0 (Type A) 2X Gigabit Enet (RJ-45) 1X VGA Output (DE-15) 1X Mouse (USB) 1X Keyboard (USB) 2X SFF-8088 SAS (1 on Front, 1 on Rear) 2X Power (C13)	2X RF Inputs (N/F) 1X RF Output (SMA/F) 1X 1PPS (SMA/F) 1X 10 MHz Ref (SMA/F) 1X Spare (SMA/F) 2X USB 2.0 (Type A) 2X Gigabit Enet (RJ-45) 1X VGA Output (DE-15) 1X Mouse (USB) 1X Keyboard (USB) 2X SFF-8088 SAS (1 on Front, 1 on Rear) 2X Power (C13)	2X RF Inputs (N/F) 1X RF Output 1X 10 MHz Ref (SMA/F) 1X 1PPS Input (SMA/F) 2X USB 2.0 (Type A) 2X Gigabit Enet (RJ-45) 1X VGA Output (DE-15) 1X Mouse (USB) 1X Keyboard (USB) 2X SFF-8088 SAS (1 on Front, 1 on Rear) 2X Power (C13)	2X RF Inputs (N/F) 1X RF Output (SMA/F) 1X 1PPS Input (SMA/F) 2X USB 2.0 (Type A) 2X Gigabit Enet (RJ-45) 1X VGA Output (DE-15) 1X Mouse (USB) 1X Keyboard (USB) 2X SFF-8088 SAS (1 on Front, 1 on Rear) 2X Power (C13)
	Electrical/Environmental	Requirements			
	Line Voltage Frequency Max Continuous Power	100 – 240 VAC 47 – 63 Hz 760 Watts	100 – 240 VAC 47 – 63 Hz 760 Watts	100 – 240 VAC 47 – 63 Hz 760 Watts	100 – 240 VAC 47 – 63 Hz 760 Watts
	Operating Temperature Storage Temperature	10 °C to 35 °C (50 °F to 95 °F) -40 °C to 70 °C (-40 °F to 158 °F)	10 °C to 35 °C (50 °F to 95 °F) -40 °C to 70 °C (-40 °F to 158 °F)	10 °C to 35 °C (50 °F to 95 °F) -40 °C to 70 °C (-40 °F to 158 °F)	10 °C to 35 °C (50 °F to 95 °F) -40 °C to 70 °C (-40 °F to 158 °F)
\bigcirc	Operating Relative Humidity	8% to 90% (non-condensing)	8% to 90% (non-condensing)	8% to 90% (non-condensing)	8% to 90% (non-condensing)

5U Razorbill Capability Matrix

	System	ASY00271-01 (R5D2 X10)	ASY00543-01 (R5D2+V2X10)	ASY00229-01 (R5D4 X10)	ASY00229-02 (R5D4 X10-IF)
	Height Width Depth Weight	5U, 8.75 inches 19 inches 21.25 inches 85 lbs	5U, 8.75 inches 19 inches 21.25 inches 85 lbs	5U, 8.75 inches 19 inches 21.25 inches 85 lbs	5U, 8.75 inches 19 inches 21.25 inches 85 lbs
	Processor	Dual deca-core CPUs Intel Xeon E5-2680-v3	Dual deca-core CPUs Intel Xeon E5-2680-v3	Dual deca-core CPUs Intel Xeon E5-2680-v3	Dual deca-core CPUs Intel Xeon E5-2680-v3
(BT)	Receivers	1X dual-channel 30 MHz – 6 GHz 30 MHz Max. Bandwidth Digital Output	1X dual-channel 30 MHz – 6 GHz 30 MHz Max. Bandwidth Digital Output	2X dual-channel 30 MHz – 6 GHz 30 MHz Max. Bandwidth Digital Output	2X dual-channel 30 MHz – 6 GHz 30 MHz Max. Bandwidth Digital Output
(E)	Input Channels Output Channels	2 0	2 1	4 0	4 0
	Storage	18X 600 GB SAS Drives (10.8 TB RAID)	1X 256 GB SSD (OS) 8X 600 GB SAS Drives (4.8 TB RAID)	1X 256 GB SSD (OS) 8X 600 GB SAS Drives (4.8 TB RAID)	1X 256 GB SSD (OS) 16X 600 GB SAS Drives (9.6 TB RAID)
	Integrated Tape Drive	LTO-5; Can write LTO-4 tapes	LTO-5; Can write LTO-4 tapes	LTO-5; Can write LTO-4 tapes	Internal LTO-5; Can write LTO-4 tapes
	Memory	128 GB DDR4, 2133 MHz	128 GB DDR4, 2133 MHz	128 GB DDR4, 2133 MHz	128 GB DDR4, 2133 MHz
	Connections	1X RF Inputs (SMA/F) 1X 1PPS (SMA/F) 1X 10 MHz Ref (SMA/F) 2X Spare (SMA/F) 2X USB 2.0 (Type A) 2X Gigabit Enet (RJ-45) 1X VGA Output (DE-15) 1X Mouse (USB) 1X Keyboard (USB) 2X Power (C13)	2X RF Inputs (SMA/F) 1X RF Output (SMA/F) 1X 1PPS (SMA/F) 1X 10 MHz Ref (SMA/F) 1X Spare (SMA/F) 2X USB (Type A) 2X Gigabit Enet (RJ-45) 1X VGA Output (DE-15) 1X Mouse (USB) 1X Keyboard (USB) 2X Power (C13)	4X RF Inputs (SMA/F) 1X 1 PPS (SMA/F) 1X 10 MHz Ref (SMA/F) 2X Gigabit Enet (RJ-45) 1X VGA Output (DE-15) 1X Mouse (USB) 1X Keyboard (USB) 2X Power (C13)	2X RF Input (SMA/F) 1X IF Input (SMA/F) 1X 1 PPS (SMA/F) 1X 10 MHz Ref (SMA/F) 1X Spare (SMA/F) 2X Gigabit Enet (RJ-45) 1X VGA Output (DE-15) 1X DC Indicator Output 1X Mouse (USB) 1X Keyboard (USB) 2X USB 3.0 2X Power (C13)
	Electrical/Environmental	Requirements			
	Line Voltage Frequency Max Continuous Power	100 – 240 VAC 47 – 63 Hz 760 Watts	100 – 240 VAC 47 – 63 Hz 760 Watts	100 – 240 VAC 47 – 63 Hz 760 Watts	100 – 240 VAC 47 – 63 Hz 760 Watts
	Operating Temperature Storage Temperature	10 °C to 35 °C (50 °F to 95 °F) -40 °C to 70 °C (-40 °F to 158 °F)	10 °C to 35 °C (50 °F to 95 °F) -40 °C to 70 °C (-40 °F to 158 °F)	10 °C to 35 °C (50 °F to 95 °F) -40 °C to 70 °C (-40 °F to 158 °F)	10 °C to 35 °C (50 °F to 95 °F) -40 °C to 70 °C (-40 °F to 158 °F)
\bigcirc	Operating Relative Humidity	8% to 90% (non-condensing)	8% to 90% (non-condensing)	8% to 90% (non-condensing)	8% to 90% (non-condensing)

Kite Portable

Processor Family



CACI manufactures a family of high performance wideband SIGINT collection and processing systems. These systems are in use by a variety of DoD and civilian agencies. All CACI hardware solutions are modular and scalable and can be specifically configured to meet customer requirements.

Kite processors are portable ruggedized general-purpose SIGINT collection platforms. These systems have been developed as a host for X-Midas and other software-defined radio applications running on the Linux operating system. Kite processors incorporate dual-channel coherent digital tuners with a frequency range of 30 MHz – 6 GHz and instantaneous bandwidths of 30 MHz each. Inside the Kite is an integrated 2x2 non-blocking matrix switch. The processor includes an integrated GPS receiver capable of providing precision timing and 1 Pulse Per Second (PPS) inputs to the tuners. Kite processors utilize solid state storage devices and come with 3.8 TB of internal storage.

Kite processors are headless and each system comes with a 15" rugged laptop for controlling the system. Kite processors can also be controlled via Virtual Network Console (VNC) connection and the user interface remoted to any external display. Kite systems can be ordered to operate on AC or DC power. Each processor comes complete with an external LTO-5 tape drive, basic user documentation, and rugged shipping containers.

^{*} All prices are for specific stock configurations. Quotes for customized configurations are available upon request.

Kite Portable Processor Family

Kite K9D2S – AC Processor **Part Number:** ASY00175-01

Height: 8.5 inches Width: 9.0 inches Depth: 24.2 inches Weight: 38 lbs

Processor: Dual dodeca-core Intel Xeon E5-2680-v3 CPUs

Receivers: 1x dual-channel 30 MHz – 6 GHz

30 MHz Max. Bandwidth

Digital Output

Input Channels: 2
Output Channels: None
Storage: 2x 256 GB SSD (OS)

4x 960 GB SSD (3.8 TB RAID)

Tape Drive: External LTO-5; Can write LTO-4 tapes

Memory: 128 GB DDR4, 2133 MHz Connections: 2x RF Inputs (SMA/F)

1x GPS Antenna Connection (TNC/F)

2x Spare (SMA/F) 2x USB (Type A)

2x Gigabit Ethernet (RJ-45)

1x SFF-8088 SAS

1x VGA Output (DE-15)

1x Rugged Ethernet (Glenair 805)

1x Power (C13) 1x Grounding Lug

Line Voltage: 100 – 240 VAC Frequency: 47 – 63 Hz

Maximum Continuous Power: 600 Watts
Operating Temperature: 10 °C to 35 °C

(50 °F to 95 °F)

Storage Temperature: -40 °C to 70 °C

(-40 °F to 158 °F)

Operating Relative Humidity: 8% to 90% (non-condensing)

Kite K9D2S – DC Processor **Part Number:** ASY00176-01

Height: 8.5 inches Width: 9.0 inches Depth: 24.2 inches Weight: 38 lbs

Processor: Dual dodeca-core Intel Xeon E5-2680-v3 CPUs

Receivers: 1x dual-channel 30 MHz – 6 GHz

30 MHz Max. Bandwidth

Digital Output

Input Channels: 2
Output Channels: None
Storage: 2x 256 GB SSD (OS)

4x 960 GB SSD (3.8 TB RAID)

Tape Drive: External LTO-5; Can write LTO-4 tapes

Memory: 128 GB DDR4, 2133 MHz Connections: 2x RF Inputs (SMA/F)

1x GPS Antenna Connection (TNC/F)

2x Spare (SMA/F) 2x USB (Type A)

2x Gigabit Ethernet (RJ-45)

1x SFF-8088 SAS

1x VGA Output (DE-15)

1x Rugged Ethernet (Glenair 805) 1x Power (MILSPEC CIRCULAR)

1x Grounding Lug

Line Voltage: 28 VDC Frequency: N/A

Maximum Continuous Power: 600 Watts
Operating Temperature: 10 °C to 35 °C
(50 °F to 95 °F)

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Storage Temperature:-40 $^{\circ}\text{C}$ to 70 $^{\circ}\text{C}$

(-40 °F to 158 °F)

Operating Relative Humidity: 8% to 90% (non-condensing)

Basic Unit Price: \$137,000 Basic Unit Price: \$137,000

Ground Processing System

The Ground Processor is a data ingest, quick look and analysis system providing a sophisticated processing suite of software for non-standardized signals of interest. This system supports offloading data from removable drive packs to a Network Attached Storage (NAS) in 9U of rack space and is delivered with an 18U rack. It is specifically designed to support airborne systems (Kite Portable Sensor and Razorbill Processors with drive packs), so that the sensor can reside on the platform. The storage drives are easily removed and data from them offloaded after a mission or set of missions. The server supports two quad disk drive packs and has a high speed network connection for fast data offload to a 24 TB NAS. The LTO-5 tape drive supports data offloading for shipment or storage. The system comes complete with a KVM tray, UPS, and Adaptive Security Appliance (ASA) providing all rackmount components needed to facilitate fast data ingest and analysis (only 2U server pictured).

Part Number: ASY00181-01

Height: 9U, 15.75 inches

Width: 19 inches Depth: 29 inches Weight: 434 lbs

Processor: 2x Intel Xeon E5-2680-v3 CPUs

Storage: 1x 256 GB SSD (OS)

8x 1 TB SSD (2x 4 TB Removable Drive Packs)

24 TB of Network Attached Storage (24x 1.2 TB Hard Drives)

1x LTO-5 Tape Drive

Memory: 128 GB DDR4, 2133 MHz

Outgoing Connections: ASA Network Connections

Battery Backup: 3 kVA UPS

Line Voltage: 160-294 VAC (Power to the UPS) Frequency: 47-70 Hz (Power to the UPS) Operating Temperature: 10 °C to 35 °C

(50 °F to 95 °F)

Storage Temperature:-40 $^{\circ}\text{C}$ to 70 $^{\circ}\text{C}$

(-40 °F to 158 °F)

Operating Relative Humidity: 8% to 90% (non-condensing)

Basic Unit Price: \$160,000





FIRFFIY RM-7

The FIREFLY™ RM-7 is a complete rack-mounted, 12-channel COMINT sensor that supports GEOnet™-based private network and TNG enterprise precision Time and Frequency Difference of Arrival (T/FDOA) geolocation; RF situational awareness; remoted signal acquisition; and audio streaming. Both local and remote operations are supported.

Part Number: See Configuration Options below

Configuration Options:

Part Number	Configuration
7000-0316	3-Tuner, AC Input, External SAASM TFNG Compatible (not included)
7000-0321	3-Tuner, AC Input, Integrated Internal Non-SAASM TFNG Source

Height: 1U, 1.75 inches Width: 19 inches Depth: 19.81 inches Weight: 13 lbs

Number of RF Tuners: 3 Number of DDC Channels: 12

Frequency Range: 3 MHz - 3000 MHz

Instantaneous RF Bandwidth: 120 MHz (40 MHz per analog tuner) **DDC Channel Bandwidth:** 6.5, 10, 20, 50, 100, 150, 200 kHz

Demodulation: AM, FM, SSB, HF ALE **Data Archive**: Removable Hard Drive

Signal Acquisition: PTT and signal detections

Connections: 1x HF RF Input (SMA/F)

1x V/UHF RF Input (SMA/F)

1x GPS RF Input (SMA/F) (for 7000-0321)

1x 1PPS (SMA/F) (for 7000-0316)

1x 10 MHz Ref (SMA/F) (for 7000-0316)

1x Power (D38999/20WB5PA)

1x Gigabit Ethernet (RJFTV2PEM1G)

Input Power: 92 – 138 VAC

Power Frequency: 47 – 63 Hz

Nominal Continuous Power: 55W

Operating Temperature: 0 °C to 55 °C

Vibration: Suitable for ground and airborne environments

Altitude: Operational to 15k feet unpressurized

Basic Unit Price: 7000-0316: \$160,000

7000-0321: \$165,000



Sentry Options/Configurations

The Sentry Passive Sensor is an outdoor-rated passive signal collection system designed to support the counter s-UAS mission. The system features 4 dual-channel independent high-performance receivers, each with an instantaneous bandwidth of 30 MHz and frequency ranges up to 6 GHz. With an integrated 2.4 / 5.8 GHz Wi-Fi detection capability and 2.4 / 5.8 GHz receive and transmit Wi-Fi capability, the Sentry Sensor is well equipped for a wide variety of mission sets. An integrated processor allows for software-defined digital signal processing on the sensor.

Sentry Passive Sensor (Passive Detection)
Part Number: ASY00272-01, ASY00273-01

Height: 21 inches Width: 36.38 inches Depth: 13.99 inches Weight: 130 lbs

Processor: Intel Xeon E5-2699-v3 CPU

Receivers: 2x Dual Channel 30 MHz – 6 GHz

30 MHz Max. Bandwidth per Channel

Digital Output

Wideband RF Input Ports: 1
Wi-Fi RF Input Ports: 3
Output Channels: None
Storage: 6x 480 GB SSD
Memory: 128 GB DDR4

2133 MHz

Connections: 1x RF Input (N/F)

3x Wi-Fi Input (N/F)

1x GPS Antenna Connection (N/F)

1x Ruggedized AC Power Input (MILSPEC)
1x RFCU I/O Connection (MILSPEC)

IX NECO I/O COMMECTION (WILSTEC)

1x Wi-Fi RFCU I/O Connection (MILSPEC)



Operating Temperature: -20 °C to 50 °C (-4 °F to 122 °F)
Storage Temperature: -40 °C to 70 °C (-40 °F to 158 °F)

Basic Unit Price: ASY00272-01: \$165,000

ASY00273-01: \$165,000



Sentry Options/Configurations

The Sentry+ Active Sensor is an outdoor-rated signal collection system with built-in arbitrary waveform generation. The system features 2 dual-channel independent high-performance receivers, each with an instantaneous bandwidth of 30 MHz and frequency ranges up to 6 GHz. Wideband arbitrary waveforms can be created in two separate bands to allow for multi-band simultaneous RF output. With an integrated 2.4 / 5.8 GHz Wi-Fi detection capability and 2.4 / 5.8 GHz receive and transmit Wi-Fi capability, the Sentry+ Active Sensor is well equipped for a wide variety of mission sets. An integrated processor allows for software-defined digital signal processing at the node for both receive and transmit capability.

Sentry+ Active Sensor (Passive Detection PLUS Active Mitigation)

Part Number: ASY00261-01, ASY00262-01

Height: 28.75 inches Width: 41.5 inches Depth: 13.95 inches Weight: 200 lbs

Processor: Intel Xeon E5-2699-v3 CPU

Receivers: 2x Dual Channel 30 MHz – 6 GHz

30 MHz Max. Bandwidth per Channel

Digital Output

Wideband RF Input Ports: 1 Wi-Fi RF Input Ports: 3 Output Channels: 2 Storage: 6x 480 GB SSD

Memory: 128 GB DDR4, 2133 MHz Connections: 1x RF Input (N/F) 1x RF Output (N/F)

3x Wi-Fi Input (N/F)

1x GPS Antenna Connection (N/F)

1x Ruggedized AC Power Input (MILSPEC)

1x RFCU I/O Connection (MILSPEC)

1x AMP I/O Connection (MILSPEC)
1x Wi-Fi RFCU I/O Connection (MILSPEC)

2x Ruggedized Ethernet (Rugged RJ-45)

2x Ruggedized Ethernet w/POE (Rugged RJ-45)



Part Number	Input Voltage	Input Power Frequency	Maximum Continuous Power	Power Type	Power Input Type
ASY00261-01	115 VAC	50/60 Hz	1500 Watts	Single Phase	5-15/20
ASY00262-01	230 VAC	50/60 Hz	1500 Watts	Single Phase	L6-20

Operating Temperature:-20 °C to 50 °C (-4 °F to 122 °F) **Storage Temperature:**-40 °C to 70 °C (-40 °F to 158 °F)

Basic Unit Price: ASY00261-01: \$252,000

ASY00262-01: \$252,000

Sentry Options/Configurations

The Sentry Amplifier is a powerful outdoor-rated RF amplification system. For systems that require high-power RF amplification, the Sentry Amplifier provides more than 50 Watts of RF output across a wide frequency range and is designed to work in conjunction with the Sentry+ Active Sensor. The Sentry Amplifier can be operated remotely via integrated communication interfaces. RF power output monitoring is integral to the design and can be remotely queried.

Sentry Amplifier

Part Number: ASY00274-01, ASY00275-01

Height: 21 inches Width: 34.9 inches Depth: 14 inches Weight: 135 lbs

Frequency Coverage: 20 MHz – 6 GHz

Output Power CW: 20 – 600 MHz: 80 Watts

800 MHz – 2.6 GHz: 100 Watts

2.8 - 6 GHz: 50 Watts

 $\textbf{RF Inputs:} \ 1$

High Power RF Outputs: 3

Remote Control & Monitoring: RS-485 or Ethernet TCP/IP

Connections: 1x RF Input (N/F)

3x RF Output (N/F)

1x Ruggedized AC Power Input (MILSPEC) 1x Controller I/O Connection (MILSPEC) 1x Auxiliary I/O Connection (MILSPEC) 1x Ruggedized Ethernet (Rugged RJ-45)



Part Number	Input Voltage	Input Power Frequency	Maximum Continuous Power	Power Type	Power Input Type
ASY00274-01	115 VAC	50/60 Hz	900 Watts	Single Phase	5-15/20
ASY00275-01	230 VAC	50/60 Hz	900 Watts	Single Phase	L6-20

Operating Temperature: -20 °C to 50 °C (-4 °F to 122 °F) Storage Temperature: -40 °C to 70 °C (-40 °F to 158 °F)

Basic Unit Price: ASY00274-01: \$108,000

ASY00275-01: \$108,000

Sentry Options/Configurations

The Sentry RF Conditioning Unit (RFCU) is specifically designed to maximize RF sensitivity in a variety of mission environments. The unit features multi-band amplification and filtering to maximize overall system performance when used in conjunction with Sentry or Sentry+Nodes. Out-of-band RF interference is also minimized by the RFCU to ensure proper system performance.

Sentry RFCU

Part Number: ASY00174-01

Height: 6.5 inches Width: 13 inches Depth: 16 inches Weight: 24 lbs

Frequency Bands: 50 MHz – 1 GHz

1 GHz – 6 GHz

Number of RF Inputs: 2 (N/F) Number of RF Outputs: 1 (N/F) Enclosure: NEMA 4 type

Connections: RF: N-Type

Power & Control: MIL Circular 28 VDC

RS-485/2-wire

Operating Temperature: -20 °C to 50 °C (-4 °F to 122 °F) Storage Temperature: -15 °C to 85 °C (5 °F to 185 °F)

Basic Unit Price: \$48,000





Sentry Options/Configurations

The Sentry MIMO Wi-Fi RFCU features multi-band amplification and filtering to maximize overall system performance when used in conjunction with Sentry or Sentry+ Sensors. Out-of-band RF interference is also minimized by the RFCU to ensure proper system performance. The unit features built-in power amplifiers for missions that require an active Wi-Fi capability.

Sentry MIMO Wi-Fi RFCU
Part Number: ASY00201-01

Height: 10.53 inches Width: 17.12 inches Depth: 19.5 inches Weight: 26 lbs

Frequency Bands: 2.4 GHz / 5.8 GHz

Enclosure: NEMA 3R / IP24

Connections:

22

RF: 3x RF In (N-Type)
3x RF Out (N-Type)

Power: 28 VDC / 100 Watts Max

Operating Temperature: -20 °C to 50 °C (-4 °F to 122 °F) Storage Temperature: -40 °C to 55 °C (-40 °F to 131 °F)

Basic Unit Price: \$26,000



Sentry Options/Configurations

The Sentry Passive Antenna Subsystem includes all necessary components required for the Sentry Passive Node. The system includes antennas, antenna mounts, RF cables, and portable masts for one Passive Sentry Sensor.

Sentry Passive Antenna Subsystem

Part Number: ASY00222-02

Height: 11 feet Min – 23 feet Max

Width: 60 inches **Depth:** 57 inches

Overall Footprint: 78 inches Diameter

Weight: 107 lbs

Antennas: 3x 2.4/5.8 GHz Dual Band Omni

1x 1 GHz to 6 GHz Omni 1x 30 MHz to 1 GHz Omni

1x GPS Antenna- 1575 MHz 4.5 dBic

Operating Temperature: -40 °C to 55 °C (-40 °F to 131 °F) Storage Temperature: -40 °C to 55 °C (-40 °F to 131 °F)

Basic Unit Price: \$14,400



Sentry Options/Configurations

The Sentry Active Antenna Subsystem includes all necessary components required for the Sentry+ Active Sensor. The system includes antennas, antenna mounts, RF cables, and portable masts for one Active Sentry+ Sensor.

Sentry Active Antenna Subsystem
Part Number: ASY00223-01

Height: 11 feet Min – 24.5 feet Max

Width: 60 inches **Depth:** 57 inches

Overall Footprint: 78 inches Diameter

Weight: 215 lbs

Antennas: 3x 2.4/5.8 GHz Dual Band Omni (TX/RX)

1x 1 GHz to 6 GHz Omni (RX) 1x 30 MHz to 1 GHz Omni (RX) 1x 1.7 to 6.1 GHz Omni (TX)

1x 20 MHz to 1 GHz and 800 MHz to 3 GHz Dual-Band Omni (TX)

1x GPS Antenna - 1575 MHz / 4.5 dBic

Operating Temperature: -40 °C to 55 °C (-40 °F to 131 °F) Storage Temperature: -40 °C to 55 °C (-40 °F to 131 °F)

Basic Unit Price: \$23,300



Sentry Options/Configurations

The Sentry Microwave Link Subsystem provides wireless connectivity between the Sentry sensor nodes. Each system contains both ends of a single wireless link. The system includes hardware for pole mounting the link in an outdoor environment.

Sentry 24 GHz Microwave Link Subsystem

Part Number: ASY00221-01

Height: 80 inches **Width:** 60 inches **Depth:** 57 inches

Weight: 35.27 lbs (including mounting hardware)

Antennas: 2x Air Fiber 24 Microwave Link

Hardware: 1x Blue Sky Mast

Power: 50 Watts via Power over Ethernet (PoE) **Max. Link Throughput:** 1.4 Gbps Full Duplex

Connections: 1x Data/PoE (RJ-45)

Encryption: 128-Bit AES

Link Frequency: 24.05 – 24.25 GHz

Operating Temperature: -40 °C to 55 °C (-40 °F to 131 °F) Storage Temperature: -40 °C to 55 °C (-40 °F to 131 °F)

Basic Unit Price: \$9,300



Sentry Options/Configurations

The Sentry Rugged Central Server Subsystem is comprised of a 2U Xeon-class server, a rugged storm case, an unmanaged network switch, an Uninterruptible Power Supply (UPS), an 8-port mid-span PoE injector, and a power distribution unit.

Sentry Rugged Central Server Subsystem
Part Number: ASY00224-01, ASY00301-01

Height: 17 inches **Width:** 27 inches **Depth:** 40 inches

Processor: Dual Intel Xeon E5-2643v2

Storage: 2.4 TB RAID **Memory:** 64 GB DDR3-1660

Operating Temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage Temperature: -40 °C to 55 °C (-40 °F to 131 °F)

Part Number	Input Voltage	Input Power Frequency	Maximum Continuous Power	Power Type	Power Input Type
ASY00224-01	115 VAC	60 Hz	600 Watts	Single Phase	5-15/20
ASY00301-01	220 VAC	50/60 Hz	600 Watts	Single Phase	L6-20

Basic Unit Price: \$26,000

Sentry Options/Configurations

The custom configured Sentry Operator Workstation includes dual 24" IPS monitors, desktop workstation, keyboard, and mouse.

Sentry Operator Workstation
Part Number: ASY00225-01

Processor: Intel Xeon E5-1603v3

Storage: 500 GB

Memory: 16 GB DDR4-2133

Operating Temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage Temperature:-40 °C to 55 °C (-40 °F to 131 °F)

Basic Unit Price: \$6,100

Sentry Options/Configurations

Sentry Counter s-UAS Complete System Part Number:

ASY00241-02: 220 VAC 50/60 Hz ASY00241-03: 115 VAC 50/60 Hz

CACI's Counter s-UAS defense system offers an end-to-end system for the detection, tracking, interdiction, engagement, and neutralization of group 1 and 2 commercial drones. The system design is modular and scalable for application in different environments, and additional sensors can be integrated to expand overall defense capabilities. The system provides 24/7 all-weather coverage and is designed for automated operations utilizing an intuitive Graphical User Interface (GUI) for system operation.

Basic Active Unit Price (4 Passive Sensors / 1 Active Sensor): \$1,700,000

Passive Only Unit Price (4 Passive Sensors): \$1,250,000* Maintenance Support After the First Year: \$250,000

The cost of the system includes:

- Counter s-UAS System (4 passive sensors and 1 active sensor)
- One year of phone support, M-F 8am-5pm EST, to assist the customer with trouble-shooting the system
- User manuals and installation manuals (and any updates within the first year)
- Customer site-specific emplacement recommendations
- Quarterly software updates for deployed systems, to include the most up-to-date threat signatures
- One user training class for up to 4 people at the CACI facility in Dulles, VA or Sarasota, FL
- Factory acceptance test report
- One year warranty on system hardware, which covers parts and labor, including shipping and insurance
- Shipping and handling for CONUS deliveries
- Basic installation and system set-up support, not to exceed 2 people for 5 business days. Travel costs will be billed separately based on location of installation. Site-specific installation requirements will be priced separately.

After the first year, individual customer support needs can be addressed based on number of systems and deployment locations. But at a minimum CACI recommends budgeting \$250,000 for support of each system, which would include:

- · Quarterly software updates for deployed systems, to include most current threat signatures
- One year of phone support, M-F 8am-5pm EST, to assist the customer with trouble-shooting the system
- User manuals/setup manuals updates
- One user training class for up to 4 people at the CACI facility in Dulles, VA or Sarasota, FL

System Components (4+1 System):

Description	Part Number	Qty per System
Sentry Passive Sensor	ASY00273-01	4
Sentry+ Active Sensor	ASY00262-01	1
Sentry Amplifier	ASY00275-01	1
Sentry RF Conditioning Unit (RFCU)	ASY00174-01	5
Sentry MIMO Wi-Fi RFCU	ASY00201-01	5
Sentry 24 GHz Microwave Link Subsystem	ASY00221-01	5
Sentry Passive Antenna Subsystem	ASY00222-02	4
Sentry Active Antenna Subsystem	ASY00223-01	1
Sentry Rugged Central Server Subsystem	ASY00301-01	1
Sentry Operator Workstation	ASY00225-01	1

 $^{^{}st}$ A passive only system does not have the capability to mitigate/neutralize threats.

Mobile Sentry Processor Subsystem

Part Number: ASY00565-01

The Mobile Sentry Processor Subsystem consists of receivers, processors, network equipment, and a MIL-COTS power supply system.

Height: 6.8 inches*
Width: 19 inches*
Depth: 25 inches*
Weight: 87 lbs*
Main Processor:

CPU: Intel Xeon-D 1587
Memory: 128 GB DDR4 RAM

Storage: 256 GB SSD Storage, 256 GB SSD OS

Central Server:

CPU: Intel Xeon-D 1587

Memory: 128 GB DDR4 RAM

Storage: 2 TB SSD Storage/OS

Receivers: 4 Independently Tuned Channels

30 MHz to 6 GHz

40 MHz Max. Instantaneous Bandwidth per Channel

Digital Output

Output Channels: 1 (Software-Defined Bit Stream and Waveform)

Connections: 1x Wide Range AC Power Input (MILSPEC)

1x Wide Range DC Power Input (MILSPEC)
1x Antenna Interface Connection (MILSPEC)

1x Spare RF Connection (N/F)
1x Spare RF Connection (N/F)

AC Line Voltage: 100 – 240V AC Frequency: 50/60 Hz DC Input Voltage: 9.5 to 36V

Maximum Continuous Power: 700W (includes power consumed by a connected Antenna Interface Unit)

Operating Temperature: 0 °C to 40 °C

(32 °F to 105 °F)

Storage Temperature: -40°C to 70 °C

(-40 °F to 158 °F)

Operating Relative Humidity: 8% to 90% (non-condensing)

Basic Unit Price: \$223,000

* Unit dimensions and weight are approximate

Sentry Options/Configurations

Mobile Sentry Antenna Interface Unit

Part Number: ASY00566-01

The Mobile Antenna Interface Unit consists of an RF conditioning system, a GPS Receiver, a Wi-Fi Processor and High-Power Amplifiers. The design includes integrated transmit/receive switches for the antenna ports to minimize the number of antennas.

Height: 5.8 inches*
Width: 16 inches*
Depth: 22 inches*
Weight: 55 lbs*

Frequency Coverage: 20 MHz – 6 GHz

Output Power CW: 20 MHz – 1 GHz: 40W

700 MHz – 6GHZ: 32W

Connections: 1x Low-Band Antenna (N/F)

1x High-Band Antenna (N/F) 2x Wi-Fi Antenna (N/F) 1x GPS Antenna (N/F)

1x Processing Unit Connection (MILSPEC)

Control and Monitoring: Ethernet and RS-485

Maximum Continuous Power: 200W Operating Temperature: 0 °C to 50 °C

(32 °F to 122 °F)

Storage Temperature: -40°C to 70 °C

(-40 °F to 158 °F)

Operating Relative Humidity: 8% to 90% (non-condensing)

Basic Unit Price: \$93,000

* Unit dimensions and weight are approximate

Mobile Sentry Interconnect Cable Assembly

Part Number: ASY00419-nn

The Mobile Sentry Interconnect Cable enables simplified field setup for the Mobile Sentry system. The cable includes RF, power, serial-control, and ethernet communication.

Length: Variable

Cable Diameter: 1.5 inches

Operating Temperature: 10 °C to 50 °C

(50 °F to 122 °F)

Storage Temperature: -40°C to 70°C

(-40 °F to 158 °F)

Operating Relative Humidity: 8% to 90% (non-condensing)

Basic Unit Price: Determined by cable length (nn = cable length in feet)

Example: 25 Foot Length: ASY00419-25

MTA-100

The MTA-100 is a powerful rack-mounted RF amplification system. For systems requiring high-power RF output capability, the MTA-100 provides 100 Watts of output power over a wide frequency range. This system is designed to work in conjunction with our output-enabled Razorbill processor family. The amplifier covers a wide frequency range of 20 MHz – 1 GHz. Remote control is achieved through an integrated Ethernet TCP/IP controller.



Part Number: ASY00150-XX*

Height: 2U / 3.5 inches

Depth: 20 inches

Frequency Range: 20 MHz – 1 GHz
Output Power CW: 100 Watts

Input Ports: 1 (SMA/F) **Output Ports:** 1 (N/F)

Remote Control: Ethernet TCP/IP (RJ-45)

Input Power: 100 – 240 VAC **Frequency:** 47 – 63 Hz

Maximum Continuous Power: 550 Watts





* ASY00150-01: Keyed; ASY00150-02: Not Keyed

MTA-610

The MTA-610 is a powerful rack-mounted wideband RF amplification system. For systems requiring high-power RF output capability, the MTA-610 provides 50 Watts to 100 Watts over a wide frequency range. This system is designed to work in conjunction with our output-enabled Razorbill processor family. The amplifier covers a wide frequency range of 20 MHz – 6 GHz. Remote control is achieved through an integrated Ethernet TCP/IP controller. RF Power output monitoring is integrated in the design and can be remotely queried.

Part Number: ASY00186-01

Height: 3U / 5.25 inches

Depth: 20 inches

Frequency Range: 20 MHz - 6 GHz

Output Power CW: 20 – 600 MHz: 80 Watts

800 MHz - 2.6 GHz: 100 Watts

2.8 - 6 GHz: 50 Watts

Input Ports: 1 (N/F)

Output Ports and Security Keylock Switch Options:

ASY00186-01: 1x (Single-band switched output)

ASY00186-02: 1x (Single-band switched output with

physical key switch control)

ASY00186-03: 3x (Three separate antenna outputs / one per RF band)

ASY00186-04: 3x (Three separate antenna outputs / one per RF band

with physical key switch control)

Remote Control and Monitoring: Ethernet TCP/IP

Input Power: 100 – 265 VAC
Power Frequency: 47 – 440 Hz

Maximum Continuous Power: 900 Watts **Operating Temperature:** 10 °C to 35 °C

(50 °F to 95 °F)

Storage Temperature: -40 °C to 70 °C

(-40 °F to 158 °F)

Operating Relative Humidity: 8% to 90% (non-condensing)

Basic Unit Price (all models): \$84,000





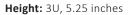
Universal Receivers

Universal Receiver Chassis

The Universal Receiver Chassis is a rack-mounted receiver assembly. The unit consists of four receivers that can be configured to meet specific mission requirements.

Part Number: ASY00145-nn (see configuration options below)

Part Number	30 MHz – 6 GHz Input Channels	30 MHz – 18 GHz Input Channels
ASY00145-01	8	0
ASY00145-02	0	4
ASY00145-03	4	2



Instantaneous RF Bandwidth: 30 MHz / channel

Output Stream: SDDS Packetized Data **Connections:** 8x Gigabit Ethernet (RJ-45)

1x 1PPS (SMA/F)

1x 10 MHz Ref (SMA/F)

1x Power (C13)

Input Power: 100-265 VAC Power Frequency: 47-440 Hz Maximum Continuous Power: 150W Operating Temperature: 10 °C to 35 °C

(50 °F to 95 °F)

Storage Temperature: -40 °C to 70 °C

(-40 °F to 158 °F)

Operating Relative Humidity: 8% to 90% (non-condensing)

Basic Unit Price: ASY00145-01: \$179,000

ASY00145-02: \$230,000 ASY00145-03: \$203,000





Yellowstone Radio Family Universal Chassis

Yellowstone Universal Receivers are our top-of-the-line ruggedized, rack-mountable, modular, general-purpose SIGINT collection platform family. These systems have been developed as a host for X-MIDAS and other software defined radio applications running on the Linux operating system and can be ordered with our latest generation digital tuners. The Yellowstone Radio Family is specifically designed to tolerate harsh physical and thermal conditions while supporting a new modular design that allows for configuration changes in the radio and server chassis. These systems can be configured to support up to 4 quad-channel independent built-in high-performance receivers, each with an instantaneous bandwidth of 120 MHz. The radio supports a frequency range of 30 MHz to 18 GHz, which is configuration-dependent. The radio is also equipped with multi-channel output options that are compatible with MTA class amplifier systems. The Yellowstone Universal Chassis can be configured with up to 12 TB of self-encrypting storage using NVMe or solid-state storage devices.

Yellowstone Radio Family Universal Chassis

Part Number: ASY00478-01

2U Rack-Mounted Universal Chassis that Interfaces with other Yellowstone Modules (see following pages). This system is modular, allowing users to swap different Yellowstone modules into the chassis.

Height: 2U, 3.75 inches

Width: 19 inches

Depth: 21.25 inches

Connections: 1x C13 AC Power Input

1x PPS Input (SMA/F)

1x 10 MHz Reference Input (SMA/F)

Line Voltage: 85 – 264 Vrms AC

Maximum Continuous Power: 500 Watts
Operating Temperature: 10 °C to 35 °C
(50 °F to 95 °F)

(30 1 10 33 1

Storage Temperature: -40 °C to 70 °C

(-40 °F to 158 °F)

Operating Relative Humidity: 8% to 90% (non-condensing)

Basic Unit Price: Call for Pricing

Yellowstone Radio Family Universal Chassis

Yellowstone Receiver Modules

The Yellowstone Universal Radio Chassis is modular and allows the user to attach receive / transmit modules

Part Number: See configuration options below Operating Temperature: 10 °C to 35 °C

Height: 2U, 3.75 inches (50 °F to 95 °F)

Width: 19 inches Storage Temperature: -40 °C to 70 °C

Depth: 21.25 inches (-40 °F to 158 °F)

Input Power: 12-36 VDC Operating Relative Humidity: 8% to 90% (non-condensing)

Maximum Continuous Power: 120 Watts

Basic Unit Price (all models): Call for Pricing

Configuration Options:

Part Number	Description	30 MHz – 6 GHz Input Channels	20 MHz – 6.4 GHz Input Channels	30 MHz – 18 GHz Input Channels	Bandwidth
ASY00504-01	One Dual Channel Coherent Receiver	2	0	0	30
ASY00505-01	Two Dual Channel Coherent Receivers	4	0	0	30
ASY00522-01	One Dual Channel Coherent Receiver	0	0	2	30
ASY00523-01	Two Dual Channel Coherent Receiver	0	0	4	30
ASY00540-01	One Dual Channel Receiver	2	0	0	80
ASY00541-01	Two Dual Channel Receivers	4	0	0	80
ASY00520-01	One Dual Channel Coherent Receiver	0	2	0	80
ASY00521-01	Two Dual Channel Coherent Receivers	0	4	0	80
ASY00512-01	One Quad Channel Coherent Receiver	0	4	0	80
ASY00513-01	Two Quad Channel Coherent Receivers	0	8	0	80
ASY00509-01	One Quad Channel Receiver	4	0	0	40
ASY00510-01	Two Quad Channel Receivers	8	0	0	40

Connections:

Part Number	Gigabit Ethernet (RJ-45)	10 Gigabit Ethernet	Input Channel (SMA/F)	Power (C13)
ASY00504-01	2	0	2	1
ASY00505-01	4	0	4	1
ASY00522-01	2	0	2	1
ASY00523-01	4	0	4	1
ASY00540-01	1	1	4	1
ASY00541-01	2	2	8	1
ASY00520-01	1	1	4	1
ASY00521-01	2	2	8	1
ASY00512-01	1	1	2	1
ASY00513-01	2	2	4	1
ASY00509-01	1	1	2	1
ASY00510-01	2	2	4	1

Yellowstone Transmitter Modules

The Yellowstone Universal Radio Chassis is modular and allows the user to attach receive / transmit modules.

Part Number: See configuration options below

Height: 2U, 3.75 inches **Width:** 19 inches **Depth:** 21.25 inches

Configuration Options:

Part Number Output Channels		Description		
ASY00482-01	1	One 6 GHz Signal Generator + Pentek		
ASY00517-01	1	One 6 GHz Signal Generator / 120 MHz BW		
ASY00518-01	2	Two 6 GHz Signal Generator / 120 MHz BW		

Connections:

Part Number	Gigabit Ethernet (RJ-45)	Output Channel (SMA/F)	1PPS Out (SMA/F)	10 MHz Ref Out (SMA/F)	Power (C13)
ASY00482-01	1	1	1	1	1
ASY00517-01	2	1	0	0	1
ASY00518-01	4	2	0	0	1

Input Power: 12-36 VDC

Maximum Continuous Power: 120 Watts
Operating Temperature: 10 °C to 35 °C
(50 °F to 95 °F)

Storage Temperature: -40 °C to 70 °C

(-40 °F to 158 °F)

Operating Relative Humidity: 8% to 90% (non-condensing)

Basic Unit Price (all models): Call for pricing

Universal Simulator

Universal Simulator Chassis

The Universal Simulator Chassis provides two highly customizable simulated signal outputs with frequency capability from 10 MHz - 6 GHz.

Part Number: ASY00146-01

Height: 2U, 3.5 inches Width: 19 inches Depth: 20 inches Weight: 10 lbs Output Channels: 2

Output Power: up to 15 dBm **Frequency Accuracy:** 2.5 ppm

Connections: 2x RF Outputs (SMA/F)

2x 1 PPS (SMA/F) 2x 10 MHz Ref (SMA/F) 2x Gigabit Ethernet (RJ-45)

1x Power (C13) **Line Voltage:** 100 – 240 VAC

Frequency: 47 – 63 Hz

Power Requirements: ~15 Watts **Operating Temperature:** 0 °C to 55 °C

(32 °F to 131 °F)

Basic Unit Price: \$26,000





RATTLER Simulator

The RATTLER is a compact, portable signal emulator designed to be utilized to test and train operators on the usage of signal collection systems. The system is designed to output a surrogate waveform of high visibility Signals Of Interest (SOI) to aid in the training of operators. Additionally, the system can be utilized as a pre-deployment system check to provide to the appropriate maintenance channels. Two frequency range options are available for SOI output (50 MHz – 2.2 GHz or 400 MHz – 4.4 GHz).

The RATTLER is a single tabletop chassis system consisting of a serialized transmission board, a touchscreen interface, and a proprietary software suite. The chassis includes a processor, a programmable software-defined radio, and a Graphical User Interface (GUI) that is accessed through the supplied touchscreen. The RATTLER software suite consists of RATTLER signal emulation software running on the Red Hat Enterprise Linux (RHEL) operating system.

Part Number: ASY00064-01* and ASY00066-01**

Height: 6.5 inches Width: 7 inches Depth: 15.2 inches Weight: 10 lbs

RF Connections: 2x SMA/F

Remote Command/Control: 1x Gigabit Ethernet (RJ-45)

External Display: HDMI

USB 2.0 Ports: 4

Power: 100 – 240 VAC @ 47 – 63 Hz Maximum Continuous Power: 150 Watts

* ASY00064-01

Frequency Range: 400 MHz – 4.4 GHz

Basic Unit Price: \$25,000

** ASY00066-01 (Viper)

Frequency Range: 50 MHz - 2.2 GHz

Basic Unit Price: \$25,000





Playback System Assembly PBSA2

The Playback System Assembly is a rack-mountable signal replay platform designed to be utilized to test and train operators on the usage of signal collection systems. The PBSA2 is designed to output previously recorded signals with the ability to remix them to user controlled radio frequencies. This second generation assembly provides two software defined RF outputs. Each RF output is independently controlled and each has a frequency range of 10 MHz – 6 GHz. The assembly also includes an LTO-5 tape drive that allows for ingesting large data files from tape. The PBSA2 includes 4.8TB of RAID storage to store large amounts of data for playback.

Part Number: ASY00277-01 **Height:** 5U, 8.75 inches

Width: 19 inches Depth: 20 inches Weight: 85 lbs

Output Power: up to +15 dBM (frequency and bandwidth dependent)

Output Frequency: 10 MHz – 6 GHz

Output Channels: 2

Output Bandwidth: 2x @ up to 40 MHz BW Processor: Dual Intel Xeon E5-2680-v4 Memory: 128 GB DDR4, 2133 MHz

Storage: 1x 256 GB SSD (OS)

8x 600 GB SAS Drives (4.8 TB RAID)

Tape Drive: LTO-5 / Rack-Mounted

Optical Drive: DVD/RW

Connections:

Server Assembly: 1x VGA Output (DE-15)

4x USB 3.0 (Type A)

2x 10GBase-T Ethernet (RJ-45) 4x Gigabit Ethernet (RJ-45) 1x SFF-8088 SAS (Rear)

2x Power (C13)

Tape Drive: 1x Power (C13)

1x SFF-8088 SAS (Rear)

SDR Chassis: 2x RF Outputs (SMA/F)

2x 10 MHz Ref Input (SMA/F) 2x 1PPS Input (SMA/F)

2x Gigabit Ethernet 1x Power (C13) Line Voltage: 100 – 240 VAC Frequency: 47 – 63 Hz

Maximum Continuous Power: 700 Watts Operating Temperature: $10~^{\circ}\text{C}$ to $35~^{\circ}\text{C}$

(50 °F to 95 °F)

Storage Temperature: -40 °C to 70 °C

(-40 °F to 158 °F)

Operating Relative Humidity: 8% to 90% (non-condensing)

Basic Unit Price: \$60,000

Enhanced Playback System EPBSA

The Enhanced Playback System Assembly (EPBSA) is a rack-mountable signal capture and playback server designed to provide wideband record and playback to support operator training on the use of signal collection systems. The EPBSA is designed to output previously recorded signals with the ability to remix them to user-controlled radio frequencies. The EPBSA is a single server solution occupying 4U of rack space. The server has removable drive packs to allow for quick access of to collected data. To support long duration recordings or playback, the server has external SAS connections to support a large JBOD. The EPBSA software suite runs on the Red Hat Enterprise Linux (RHEL) operating system and consists of signal generator configuration, channel selection, and data offload functionality.

Part Number: ASY00056-02

Height: 4U, 7 inches Width: 19 inches Depth: 29 inches Weight: 85 lbs

Processor: Dual Dodeca-core Intel Xeon E5-2680-v3 CPUs

Input Channels: 4

Input Frequency: 10 MHz - 6 GHz

Input Bandwidth: 2x @ 160 MHz BW or 4x @ 50 MHz BW **Output Channels:** 2 (Each channel has 2x connections)

Output Frequency: 10 MHz - 6 GHz

Output Bandwidth: 2x @ up to 160 MHz BW

Storage: 1x 256 GB SSD (OS)

2x Quad Drive Packs (Not populated w/ disks)

Tape Drive: External LTO-6

Memory: 128 GB DDR4, 2133 MHz Connections: 2x RF Outputs (N/F) 4x USB 2.0 (Type A) 4x SAS (SAS External)

> 2x Gigabit Ethernet (RJ-45) 1x DVI Output (DVI)

2x Power (C13)

Line Voltage: 100 – 240 VAC

Frequency: 47 – 63 Hz

Maximum Continuous Power: 800 Watts

Operating Temperature: 10 °C to 35 °C

(50 °F to 95 °F)

Storage Temperature: -40 °C to 70 °C

(-40 °F to 158 °F)

Operating Relative Humidity: 8% to 90% (non-condensing)

Basic Unit Price: \$92,000

Antennas

RF Front End Family



CACI designs and manufactures a wide variety of high performance antenna systems and antenna feeds. These systems are in use by a variety of DoD and Civilian agencies. All CACI hardware solutions are modular and scalable and can be specifically configured to meet customer requirements.

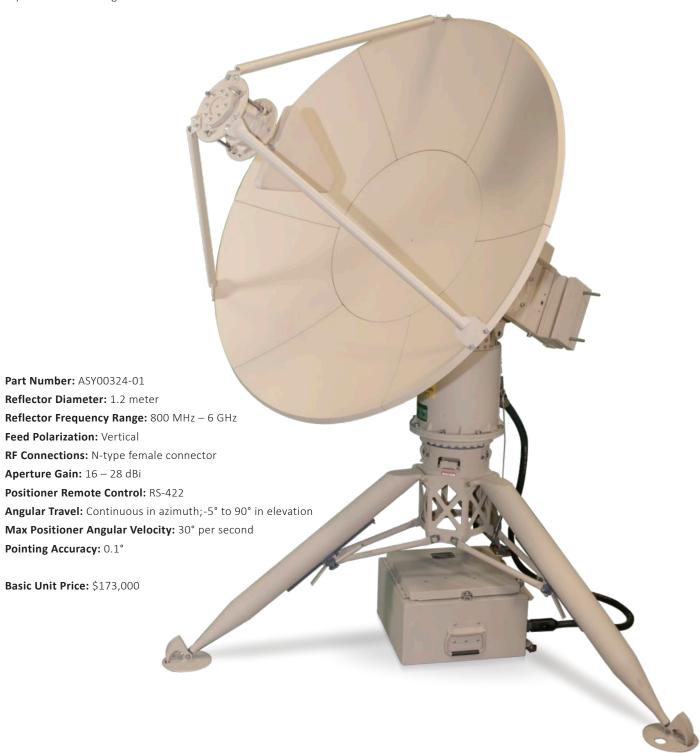
This High-Gain Antenna is an ultra-wideband antenna system consisting of a 1.8 meter reflector mounted on a high-performance 2-axis positioner. This system is optimized for reception of linearly polarized signals in the frequency range of 800 MHz – 6 GHz. The RF path is internally routed through a low-loss rotary joint, enabling the positioner to support continuous azimuth motion. This system includes antenna, positioner, and tripod. RF conditioning unit and other accessories are available. An integrated Ku-band down converter option is available at an additional cost.

This system is not rated for outdoor use in the current configuration, but can be configured for outdoor use.



High-Gain Antenna- 1.2 Meter

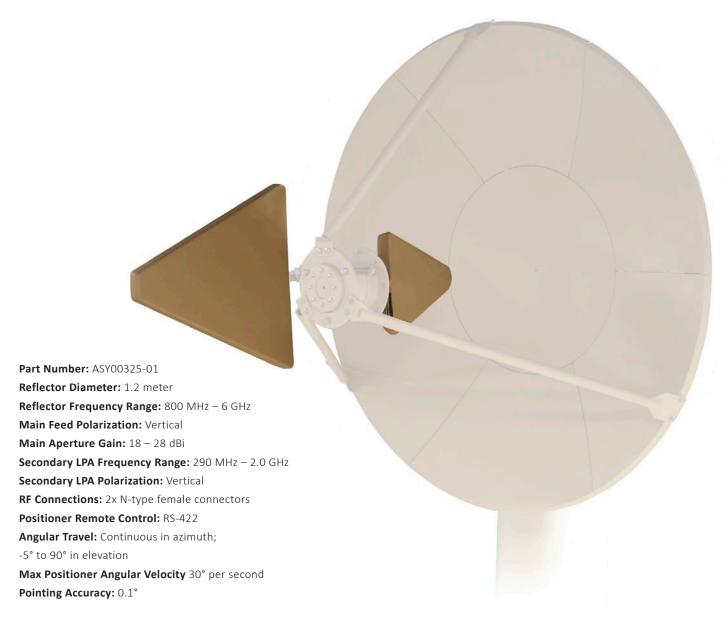
This antenna is an extremely wideband antenna system consisting of a 1.2 meter reflector mounted on a high-performance 2-axis positioner. This system is optimized for reception of linearly polarized signals in the frequency range of 800 MHz – 6 GHz. The RF path is internally routed through a low-loss rotary joint, enabling the positioner to support continuous azimuth motion. This system includes antenna, positioner, and tripod. RF conditioning unit and other accessories are also available.



High-Gain Antenna with Transmit

This High-Gain Antenna with Transmit is a dual-band antenna system consisting of a 1.2 meter segmented reflector and a side mounted Log-Periodic Array (LPA) both mounted on a high-performance 2-axis positioner. The main reflector is designed to receive linearly polarized signals in the frequency range of 800 MHz – 6 GHz. The side-mounted LPA can serve as a secondary reception antenna or transmit antenna for signals with frequency ranges from 290 MHz – 2.0 GHz. For transmission applications, the antenna can handle output powers up to 1000 Watts.

The RF path for both antennas is internally routed through a low-loss rotary joint, enabling the positioner to support continuous azimuth motion. This system includes two antennas, positioner, and tripod. RF conditioning unit and other accessories are also available. RF cables are not included with order.



Basic Unit Price: \$179,000

Azimuth-Only / Offset Fed Reflector (OFR)

The Offset Fed Reflector (OFR) is capable of collecting signals from 800 MHz – 6 GHz with outstanding gain performance. The antenna features a high-performance azimuth positioner for fast, precise, and accurate target tracking. The RF path is internally routed through a low-loss rotary joint, enabling the positioner to support continuous azimuth motion. It features a compact parabolic reflector and is designed to be operated inside a radome. This system includes an antenna, positioner, and tripod.



Part Number: ASY00327-01 Reflector Diameter: 1.0 meter Frequency Range: 800 MHz – 6 GHz

Feed Polarization: Vertical

RF Connections: N-type female connector

Aperture Gain: 10 - 29 dBi

Positioner Remote Control: RS-422

Angular Travel: Continuous/Azimuth only

Max Positioner Angular Velocity: 30° per second

Pointing Accuracy: 0.1°

Basic Unit Price: \$92,000



UHF Tightly-Coupled Array (TCA)



The UHF TCA is a compact wideband directional antenna system. The system is optimized for the reception of linearly polarized signals in the frequency range of 200 MHz – 600 MHz. The antenna array is 24" x 48" and maintains a system gain of 24 dB.

The RF path is internally routed through a low-loss rotary joint, enabling the positioner to support continuous azimuth motion. The antenna has integrated low-noise amplifiers at each element to maximize sensitivity.

Part Number: ASY00330-01 Aperture Size: 24" W x 48" H

Frequency Range: 200 MHz - 600 MHz

Antenna Polarization: Vertical

RF Connections: N-type female connector

System Gain: 24 dB

Positioner Remote Control: RS-485, 4-wire **Angular Travel:** Continuous / Azimuth only

Max Positioner Angular Velocity: 10° per second

Pointing Accuracy: 1.0°

Basic Unit Price: \$34,000

Dual-Polarization UHF Tightly-Coupled Array (DPTCA)

The Dual-Polarization UHF TCA (DPTCA) is a compact wideband directional antenna system. The system is capable of receiving both linear and circular polarized signals in the frequency range of 200 MHz – 600 MHz. The antenna array is 48" x 48." The DPTCA outputs vertically and horizontally polarized signals for processing at the receiver system. The RF path is internally routed through a low-loss rotary joint, enabling the positioner to support continuous azimuth motion. The antenna has integrated low-noise amplifiers at each element to maximize sensitivity. This configuration includes antenna, positioner, riser, and tripod.

This system is not rated for outdoor use in the current configuration.



8x4 RF Switch Matrix

The 8x4 RF Switch Matrix is our latest generation non-blocking RF switch matrix designed to work with CACI's RF conditioning units. The switch supports up to 8 input ports and 4 output ports. Each output port can be connected to any one of the input ports. The switch is designed to work in conjunction with CACI's second generation RFCUs to provide low-noise amplification and gain between the antenna and the processor, as well as advanced Built-In-Test and remote calibration capabilities. The switch can support signals up to 6 GHz and is mountable in any standard 19" rack while occupying 2U of height. The switch matrix is remote controlled through an RS-485, 2-wire serial interface.



Part Number: ASY00042-01 Height: 2U, 3.5 inches Depth: 21 inches Input Ports: 8 (N/F) Output Ports: 4 (SMA/F)

Switch Remote Control: 50 MHz – 6 GHz

Frequency Band: 50 MHz – 6 GHz

Isolation: 40 dB minimum **Insertion Loss:** 0 dB

Power: 100 – 240 VAC @ 47 – 63 Hz **Maximum Continuous Power:** 50 Watts

Control: RS-485, 2-wire

Basic Unit Price: \$46,000



Second Generation RF Conditioning Unit and RFCU Power Control Unit

CACI's latest RF Conditioning Units (RFCU) employ advanced rugged designs aimed at optimizing antenna performance across wide frequency ranges. These systems are optimized for installation at locations where remote diagnostic capabilities are required. Our RFCUs are designed for use in conjunction with CACI's RF switch matrix and are designed to eliminate line loss due to long cable runs between the antenna and processor for signals up to 6 GHz. They incorporate embedded test capability to remotely monitor system performance. Tailored with hardware filters to perform specific RF environment shaping, they optimize the collected RF bandwidth. CACI's RFCUs are designed to work with our 8x4 RF Switch Matrix and require a CACI RFCU-PCU power control unit.

RFCU-LSC

Part Number: ASY00036-01

Frequency Band: 800 MHz - 1.81 GHz

2 GHz – 3.6 GHz 3.9 GHz – 6 GHz

Number of RF Inputs: 1 (N/F)

Number of RF Outputs: 1 (N/F)

Enclosure: NEMA 4 type

Connectors:

RF: N-type

Power and Control: MIL Circular; 28 VDC; RS-485, 2-wire

Basic Unit Price: \$26,000





RFCU-Uv2

Part Number: ASY00037-01

Frequency Band: 250 – 500 MHz (Configurable)

Number of RF Inputs: 4 (N/F) Number of RF Outputs: 1 (N/F) Enclosure: NEMA 4 type

Connectors:

RF: N-type

Power and Control: MIL Circular; 28 VDC; RS-485, 2-wire

Basic Unit Price: \$21,000

RFCU-PCU

Part Number: ASY00052-02

Number of 220 VAC Power Inputs: 1 (MIL Circular)
Number of RS-485 Control Inputs: 1 (MIL Circular)
Number of 220 VAC Power Outputs: 2 (MIL Circular)

Number of 28 VDC / RS-485 Power / Control Outputs: 3 (MIL Circular)

Enclosure: NEMA 4 type
Connectors: 7 (MIL Circular)
Basic Unit Price: \$16,000



Accessories

Family	System	Description	Part Number	Price (Qty. 1)
Accessory	Razorbill Desktop Simulator	A fully integrated SIGINT processing system featuring direct conversion receivers and transmitter. Exercises functionality of a Razorbill Processor in a desktop style environment at a lower cost.	ASY00447-01 ASY00447-02	\$43,000 \$37,000
Accessory	SC Antenna Mast	3-meter Aluminum Mast for use with SC Class Antennas	ASY00134-01	\$4,000
Accessory	Positioner Tripod	Portable Aluminum Tripod for use with AS Class Antennas	ASY00135-01	\$12,000
Accessory	Dual-Pol TCA 2-Axis Positioner with Tripod	Dual-Axis Positioner with Dual Slip Rings, Controller, and Aluminum Tripod	ASY00136-01	\$126,000
Accessory	Dual-Pol TCA 2-Axis Positioner with Radome	Dual-Axis Positioner with Dual Slip Rings, Controller, Riser, and 8-foot Radome and Base	ASY00137-01	\$143,000
Accessory	Antenna RF Cable Kit	RF Input Cable Kit Including 100-foot LMR400 Cable and Connection Accessories	ASY00094-01	\$500
Accessory	R4D2+ RF Upgrade Kit	Upgrade Kit for Existing R4D2+ Processors	ASY00138-01	\$59,000
Accessory	R5G4 Upgrade Kit	Upgrade Kit for Existing R5G4 Processors	ASY00229-03	\$125,000
Accessory	Drive Pack	Four (4) SSD Drive Packs Provide up to 4 TB of RAID Storage	FRU-00067	\$5,700
Accessory	Sunshade Assembly	Blue Sky Mast Sunshade for Active Node	ASY00289	Call for Pricing
Accessory	Sunshade Assembly	Blue Sky Mast Sunshade for Passive Node	ASY00350	Call for Pricing
Accessory	Rack Mount POE	Rack-Mountable 8 Port PoE	ASY00348-01	\$34,000









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