Stingray Tactical Relay System

Overview

The Sigma Defense Stingray Tactical Relay System is an integrated C5ISR hardware and software tactical communications platform. Stingray connects people, systems, and data from space to operator, enabling faster access to data and intelligence from edge to core to cloud for better situational awareness and end-to-end insights in the decision-making process.

The Stingray Tactical Relay delivers high bandwidth, low latency ISR support to the warfighter for fast and reliable creation and transmission of Full Motion Video (FMV) streams, two-way data exchange with DoDIN customers (C2 services), two-way sensor control, ingest/ distribution of Global Broadcast Service (GBS) FMV streams, and management of ISR data. It is a robust suite of communications equipment available in 3 configurations that all maintain full Authority to Operate (ATO) certification: rack mount, case mount, and Miniray that includes:

- Antenna: Options for Ka/Ku/X-Band 1.35m (rack & case) or 96cm (Miniray)
- Multi-enclave support – unclassified, classified (S), black transport
- Server with Virtual Machine (VM)
- Broadcast-grade FMV encoder / transcoder
- TDMA or FDMA modem options: ODU Comtech 1050TS/ iDirect 9350
- ODU GBS (Global Broadcast Service) Receiver
- Multiple Uninterruptible Power Supply (UPS) options available

Standard Capabilities

- ISR sensor backhaul/control and C2 transport
- Encode/transcode/transport at least four H.264 or one H.265 FMV feeds plus associated metadata
- Simplified operator Setup via Stingray Configuration Utility (SCU) for rack mount models
- Network/satellite transport data up to 25 Mbps via Ka, Ku, X-band, and/or 100 Mbps terrestrial
- ISR data integration from remote platforms into UVDS
- Antenna is dual LNB configured
- Local ISR video hosting to collocated personnel (Unified Video Server)

Additional Capabilities

- C2 services for collocated personnel[1]
- Two-way sensor control (remote sensor operation)
- Local Processing, Exploitation & Dissemination (PED)
- Direct ISR product downlink to Stingray via optional Rover 6/TREs,
- Cross Domain Solution – Latest Forcepoint Solutions (HSGsp and HSG)[2]
- Inject of ISR product into local Mobile Adhoc Networks (MANET)

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[1] Connectivity to customer-provided C2 enclave is supported – optional user enclave kits are available for higher port density needs

[2] Contingent upon customers enclave and sponsorship

	Stingray Tactical Relay System		
	Rack Mount	**Case Mount**	**Miniray**
Model #	TRK705020	TRK705030	TRK502040
Antenna	AVL 1.35m FIT	AVL 1.35m FIT	Panther II 96cm
Frequency Band	Ka/Ku/X-band	Ka/Ku/X-band	Ka/Ku/X-band
GBS Receiver	YES	YES	Optional
Modem	FDMA, TDMA	FDMA, TDMA	FDMA, TDMA
Black Transport Available I/O Ports	3	3	2
Red Transport Available I/O Ports	6	10	2
Server	YES	YES	Configuration Varies
UV Server with PED Functionality	YES	Optional	NO
Encoding / Transcoding	Encode 3 sensor feeds (analog/digital) Transcode 4 H.264/1 H.265 streams	Encode 2 sensor feeds (analog/digital) Transcode 4 H.264/1 H.265 streams	Encode 2 sensor feeds (analog/digital) Transcode 4 H.264/1 H.265 streams
FMV Encoding / Transcoding	YES	YES	YES
Stingray Control Unit (SCU)	YES	NO	NO
C2 Services	YES*	YES*	YES*
Transport Router	Located in ODU	Located in ODU	Located in Comm Lite Rack
Power	6.5 Amps	6.5 Amps	4 Amps
AC Input	100 – 240 VAC and 50/60 HZ	100 – 240 VAC and 50/60 HZ	100 – 240 VAC and 50/60 HZ
Operating Time on UPS / Battery	UPS for up to 30 minutes of operation	UPS for up to 30 minutes of operation	(3) 2590 batteries included in UPS Deliver Up to 4 Hours of Operation
Size	6 Transit Cases - 405 lbs	6 Transit Cases - 405 lbs	2 Transit Cases - 140 lbs or 2 backpacks (65 lbs each)
Weight	405 lbs	405 lbs	140lbs
Options			
Direct Downlink from Aircraft	Yes - Additional equipment required (i.e Rover 65 or Tactical Radio Network)		
Duplex Datalink to/from Aircraft	Yes - Additional equipment required		
Directional Antennas for Datalink	Yes - Additional equipment required (i.e Rover 65 or Tactical Radio Network)		
Two-Way Sensor Control	YES	YES	YES

About Sigma Defense

Sigma Defense Systems LLC is a leading technology company serving the Department of Defense (DoD) providing systems and services for Intelligence, Surveillance, and Reconnaissance since 2006. The company's software-focused approach to tactical communications accelerates information collection and sharing for faster decision-making and better mission outcomes. Customers turn to Sigma Defense for engineering, program management, and logistics services supporting technical solutions that encompass ground, air, and space-based systems. Sigma Defense is headquartered in Perry, GA with satellite offices in both CONUS and OCONUS. For more information, visit **sigmadefense.com** and follow **Sigma Defense on LinkedIn** for news and updates.