

# C2 for Mission Assured Communication in Support of the Joint Warfighting Concept



## EXECUTIVE SUMMARY

SOF communicators are asked to do something nearly impossible: connect forces that were never built to talk to each other, in environments that are designed to stop them, with less gear than they had yesterday. The radios work. The networks exist. But stitching them together in real time, under fire, with a two-man comms section supporting a twelve-man element, is where the margin disappears.

Coalition partners show up on a different waveform. The conventional force is on a network the SOF team can't reach. SATCOM goes dark. The team is supposed to maintain C2 with four separate elements and call for fires at the same time.

Most communications solutions were built for enterprise or garrison environments and then pushed forward. REDCOM Sigma was built for the edge environment first. That difference matters.

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*The demand for SOF missions has grown by more than 35 percent over three years. The communications infrastructure has not kept pace.*

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## FOUR CHALLENGES EVERY SOF COMMUNICATOR KNOWS

### 1. INTEROPERABILITY IS STILL A LIE

Every platform claims to interoperate — until it meets a coalition partner's 25-year-old VHF radio, a TSM mesh network, and a Navy vessel's IP network simultaneously. The result is operators being burdened with different radios into order to communicate with all the disparate units.

### 2. DDIL IS THE BASELINE, NOT THE EXCEPTION

Near-peer adversaries have spent decades studying how we communicate and building systems to stop it. Jamming, spoofing, satellite suppression, and cyber intrusion are expected in any contested environment. A comms plan built around a single transport path is built to fail. SOF units need the ability to move across transport options automatically, without halting the mission to troubleshoot.

### 3. SWAP IS EATING COMBAT POWER

The average SOF communicator downrange manages multiple separate devices. Every one of those devices is weight, battery drain, configuration complexity, and a potential failure point. Communications equipment that requires a vehicle to move, a contractor to configure, or a dedicated signal specialist to operate has no place at the team level. The tooth-to-tail ratio has to work in favor of the mission.

### 4. TRAINING TIME IS A TAX NOBODY CAN AFFORD

Complex systems have a hidden cost: the hours it takes to train on them, maintain proficiency after a rotation, and rebuild from scratch. At the team level, those hours compete directly with the definition of Special Operations. Any solution requiring days of training or a field service rep to maintain is a liability, not a capability.

## HOW REDCOM SIGMA SOLVES IT

REDCOM Sigma is a software-based Command and Control platform that runs on the hardware you already have, connects the radios you already own, and gives every echelon a single interface to manage all comms. Sigma was selected by Army PEO C3N for network modernization at the tactical edge and by the Air Force for the Tactical Operations Center-Light (TOC-L). It is available today on a GSA MAS contract for immediate procurement.

### ONE INTERFACE, INFINITE INTEROPERABILITY

Sigma bridges IP and RF networks in real time. Analog radios, MANET nodes, SATCOM terminals, SIP phones, TSM talk groups, and TAK devices all connect through the same platform and can be joined together on the fly. Coalition interoperability becomes a configuration, not a negotiation.

### RESILIENT BY DESIGN

Sigma is built to operate when the network does not. It runs fully standalone, with no cloud dependency, no higher-echelon infrastructure, and no sustained SATCOM link required. When the primary transport goes down, Sigma routes to the next available path with limited operator intervention: IP fails, move to SATCOM; SATCOM gets jammed, move to MANET. The communicator keeps executing the mission.



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## SIMPLE ENOUGH TO OPERATE WITHOUT A SIGNAL SECTION

Sigma's interface was built for operators, not network administrators. Users with no prior Sigma experience can be mission-ready in hours. There are no proprietary programming cables or specialized configuration tools. The admin interface runs in a standard web browser, and new connections are added in seconds without taking the system offline. At the team level, simplicity is the difference between a system that gets used and one that stays in the bag.

## SOLUTIONS TO COVER EVERY SOF DEPLOYMENT SCENARIO

Sigma runs on third-party hardware, in the cloud, on a hypervisor, or on REDCOM's own purpose-built platforms. The Sigma ecosystem consists of hardware and software that work together to deliver unmatched interoperability for SOF operators:

**REDCOM STRIKE.** An 8 kg ruggedized laptop running Sigma with a built-in four-port radio gateway, expandable to eight ports. Supports SATCOM, 4G/5G, MANET, IP phones, and ATAK clients from a single device. Hot-swappable batteries keep STRIKE running and comms up all day.



**Sigma XRI.** A family of robust C2 radio interoperability platforms with four analog radio ports plus unlimited IP radio connections. Fits in a rucksack. Mounts in a vehicle. Connects disparate nets in minutes. Available as a stand-alone C2 box with integrated Sigma software (XRI-400), or as a module for Anduril Voyager systems, Curtiss-Wright PacStar systems, or any computer with a PCIe slot.

**Sigma Client for ATAK.** Full C2 voice and PTT on the Android device operators already carry. Supports preconfigured and ad hoc channels (talk groups), live video streaming from drones and external cameras, encrypted chat, and spatial audio that assigns different nets to the left or right headset.



**Sigma Client for Windows.** Provides users with voice, video, chat, and PTT channels on any Windows laptop or tablet. Monitor channels, see cypher state (CT or PT), transmit to one or many all at once, and even initiate changes to radio settings (including frequency and waveform) from the push of a button.

**Sigma C2 Console.** Provides the SOF operator with a single screen displaying all active connections. Patching a radio net to a satellite link is drag-and-drop. No configuration menus. No scripting. No calling back to a network operations center.



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## WHAT SIGMA LOOKS LIKE FOR SOF OPERATORS

### COALITION OPERATIONS

An ODA is operating alongside partner force elements running three different radio systems on two different frequency bands. Adding a Sigma XRI-400 to the communications plan bridges all three networks. Every element can now communicate directly. No liaison officers. No relay station. No voice procedure to route traffic through an interpreter.

### EXPEDITIONARY COMMAND POST

A JSOTF is establishing a forward command element with limited infrastructure and no fixed SATCOM terminal. One REDCOM STRIKE handles it: TAK server, voice C2 for six subordinate elements, SATCOM integration when windows are available, and 5G as the backup transport. One device. One communicator. Fully operational in under ten minutes.

### DDIL OPERATIONS

SATCOM links have been suppressed. The only available path is a short-range MANET. Sigma continues operating on the available transport, maintaining C2 across the element without reconfiguration. When the SATCOM window reopens, Sigma rejoins the wider network. The team never broke stride.

### FIRES COORDINATION

A JTAC running Sigma Client on ATAK or Windows can communicate directly with a radio net, an IP phone at the ASOC, and a MANET node simultaneously. The common operating picture and the voice nets are on the same device. Fires calls are not routed through a relay. Contact-to-clearance timelines compress.

## GETTING SIGMA TO THE FORCE

REDCOM Sigma is available now. No developmental programs or waiting on a program of record.

- **Available on GSA.** GSA Multiple Award Schedule contract 47QTCA24D002N
- **JITC tested.** Tested for cybersecurity and interoperability at JITC and listed on the DoDIN APL
- **Proven.** Selected by the U.S. Army and Air Force for tactical edge network modernization
- **SOFWERX ready.** Available for SOFWERX rapid prototyping and non-FAR agreements

## THE BOTTOM LINE

SOF does more with less than any other force in the world. Communications infrastructure should work the same way. REDCOM Sigma gives SOF one platform that manages every net, every radio, and every transport path — resilient when the network fails, simple enough that any operator can run it, and light enough to go everywhere the mission demands.

The problems that have made SOF comms hard for decades are solvable. REDCOM has been solving them for the Army, Air Force, Marines, and allied partners for years.



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