

75 m Antenna



30+ km Coverage

HARC-Tethered Drone adds dramatic network and comms range extension to your drone. Cameras too.

A lightweight expeditionary system, HARC-TD flies the antenna(s) for your MANET or conventional radios as high as 75 m (250 ft) above ground level (AGL) at density altitudes up to 3600 m (12,000 ft). The HARC-TD drone is small, minimizing visual profile when flying, quiet, and safe to handle. The airborne drone is electrically powered via its tether and can fly indefinitely, for hours or days.

With HARC-TD, your radio with Type 1 encryption can stay on the ground while its antenna is high overhead, relayed via a HARC-TD-UHF payload module. Your MANET radio uses interchangeable, waveform-specific payload modules: HARC-TD-TSM, HARC-TD-WaveRelay, HARC-TD-MNMIMO. And high performance camera modules can also be flown, for persistent ISR.

To deploy HARC-TD, connect a vehicle battery or generator power, connect your radio's antenna port, and press the "Up" button. The drone rapidly ascends to a user-set altitude and keeps station indefinitely. If ground power is interrupted, the drone safely and rapidly descends using its on-board backup battery. When your comms are completed, minutes or days later, press the "Down" button and return the drone to the ground.

**Let a tethered drone extend
your communications range**

HARC-TD

- **Radio/waveform independent**
- **Persistent, flies indefinitely**
- **Highly portable, safe to handle**

SYNTONICS



Communication Innovations in the RF Domain

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Product Characteristics:

Line-of-sight to horizon 30+ km (20+ miles)

MANET Radios including:

- TrellisWare TW radios using the TSM™ waveform
- Persistent Systems MPU radios using the Wave Relay® waveform
- Silvus StreamCaster radios using the MN-MIMO™ waveform
- Harris radios using the TSM-X waveform

UHF (225-450 MHz)

Waveforms including: SRW, ANW2, P25, TETRA, EPLRS, FM voice, others

Conventional Radios including:

PRC-117, PRC-148, PRC-152, PRC-153, PRC-154, PRC-155, civilian radios

Cameras including:

- NOCTIS dual imager IR with optional Class 4 laser pointer
- ION 30X 720- HD EO imager
- DUO+ EO/IR payload with optional laser illuminator

Electrical & Mechanical:

User power supply 800 W Universal AC; vehicle DC power adapter available

Operating altitude 50 m (164 ft) AGL

Max. density altitude 3600 m (12,000 ft) ASL

Temps, Operating -10 to +60 C

Temps, Storage -40 to +80 C



Comms over Terrain

Photo Courtesy U.S. Army



Comms from Shore-to-Ship

Photo Courtesy U.S. Army



Comms into Urban Canyons

Other FORAX-HARC configurations are available

	HARC-Tactical	HARC-2S1U	HARC-4S2U
Radios supported	• 1-Any half-duplex radio, any waveform, 225-450 MHz	• 1-VHF or SINCGARS retrans pair (SNAP interface included) • 1-UHF, any waveform (e.g., ANW2, SRW, EPLRS, voice)	• 4-VHF including SINCGARS (SNAP interface included) • 2-UHF, any waveform (e.g., ANW2, SRW, EPLRS, voice)
Airborne weight	• ~ 2.0 kg with UHF antenna	• ~ 16 kg with antennas & cables	• ~ 43 kg with antennas & cables
Packaging	• Component in aerostat's enclosure	• Weathertight Chassis	• Modular in aerostat's enclosure