

# COMMUNICATIONS CAPABILITY THAT **FITS EVERY MISSION**

- **TruNet™ AR-1500 networked  
communications airborne radio**



# THE NEXT-LEVEL RADIO FOR EVOLVING GLOBAL NEEDS

Strong communications capability is critical to every mission you carry out. Not only for the fast-changing environment of the modern battlespace, but also to take advantage of new and evolving technologies.

The Collins Aerospace TruNet™ AR-1500 networked communications airborne radio delivers software-defined capabilities for country-specific customization. It's designed to stay advanced as needs and missions change.

This powerful radio is in broad use today, providing secure and highly adaptable communications worldwide. It's procurable via Direct Commercial Sale and simple to integrate. Fortify your missions – current and future – with the AR-1500.

## Capabilities

### EMBEDDED ENCRYPTION CAPABLE

#### EXTENDED RANGE LINE OF SIGHT

- 30 MHz -1.8 GHz
- AM/FM VULOS

#### OPTIONAL WAVEFORMS

- Electronic Counter-Countermeasures (ECCM)
  - SATURN/networking
  - HAVE QUICK I & II
  - TALON I & II
- Sovereign, host-country

#### INDIGENOUS, EXTERNAL CRYPTO HOSTING





# MEET YOUR IDEAL SYSTEM

A powerful feature of the radio is its customizability to host-country needs. From sovereign waveforms to multinational interoperability and advanced encryption security, the AR-1500 offers tailorable functionality in a form factor that also makes it easier, faster and more cost-effective to integrate.

PROVEN FLEXIBILITY



## ARCHITECTURE

- Flexibility built in – meets the demands of a quickly evolving threat environment
- Cost-effective – addresses the financial impracticality of continuous hardware changes
- Software Communications Architecture (SCA) 2.2.2, enabling quick porting vs. full development
- Data and networking
- Encryption options include: interoperability with external encryptors; and internal encryption capability

## SYSTEM FEATURES

- High power amplifier (HPA)/low-noise amplifier (LNA)
- Mounts/smart mounts
- Enables extensive country sovereignty through TruTest automated test station
  - Assembly and test under manufacturing licensing agreement
  - Repair options reduce return-to-service time frames

## EASY INTEGRATION AND GROWTH

- Form-factor consistency eases integration
  - 15+ legacy variants to AR-1500
  - AR-1500 to Type 1 COMSEC
- The AR-1500 retains the same form factor as the 629F and Talon radios it replaces. It shares a common hardware baseline with our ARC-210 RT-2036(C) networked communications airborne radio.
- Software evolution
  - Updates are field-loadable for faster deployment and lower costs
  - Maximum technology transfer

# BACKUP WHENEVER YOU NEED IT

From instructor-led programs to self-directed study, we offer a wide range of training solutions for operators and maintenance personnel that improve job performance and reduce overall program life-cycle cost. Our instructional system design specialists develop comprehensive training solutions that include needs assessments, planning, development and ongoing reinforcement to meet your unique requirements.

## ARCHITECTURE

- Platform integration – engineering support, start to finish
- Training and assistance available on-site
- Standard one-year warranty; extended warranty available
- Performance-based logistic solutions
- Manufacturing license available (where authorized)
- On-site test and check capability, with on-site repair





## SERVICE PLANS TO EXCEED YOUR EXPECTATIONS

Whether you have a few radios or hundreds, the Collins Avionics Service Program (CASP<sup>SM</sup>) can guarantee the availability and maintainability of your systems and equipment.

The quality of all parts and repairs is backed by our OEM workmanship warranty. Collins Aerospace maintains direct access to the intellectual property, product engineering and manufacturing expertise to provide your best overall service solution.

Start by choosing one of the following programs or services and let us tailor it to your specific needs.

### **TECHNOLOGY TRANSFER AGREEMENTS**

Collins Aerospace can provide a solution that includes the TruTest automated test station, technology transfer that includes manufacturing licensing agreements (MLA) and training to establish local intermediate (I) level repair capability.

### **CASP EXCHANGE**

Includes an extensive inventory of rotatable spares ready for dispatch from our worldwide distribution network. By leveraging our strategically placed pool of parts, you will reduce the spares you need to purchase and minimize the overall part replacement turnaround time.

### **CASP PERFORMANCE BASED LOGISTICS (PBL)**

A fully integrated and customizable maintenance solution for your communications systems. This option combines proven, best commercial practices with Collins Aerospace expertise in supporting challenging military operational requirements to establish guaranteed availability and performance. Our PBLs offer scope flexibility to provide the best fit with your specific mission needs.



TruTest automated test equipment enables maximum technology transfer for local manufacturing and repair capability.

# A PIONEER, ALWAYS PUSHING FORWARD

Collins Aerospace brings nearly 90 years of radio communications innovation experience to the AR-1500. Our radio technologies have played critical roles in the success of challenging missions, whether in today's dynamic battlespaces or making history as part of humankind's first steps on the moon.

Our AR-1500 evolved from our proven AN/ARC-210 Talon programmable digital communication system. Over the last 25 years, more than 50,000 ARC-210 radios have served the communications needs of 45 nations on more than 180 platforms. Our customers have put their trust in our technologies and support for decades. We will continue to earn that trust in the decades ahead.

- We've designed the AR-1500 to provide complete interoperability with our earlier airborne V/UHF radio variants
- The AR-1500's full software programmability keeps the radio ready to advance with customers' changing needs
- With SATURN waveform capability, the AR-1500 can meet UHF voice and data communication requirements well into the future

## PART OF A POWERFUL FAMILY

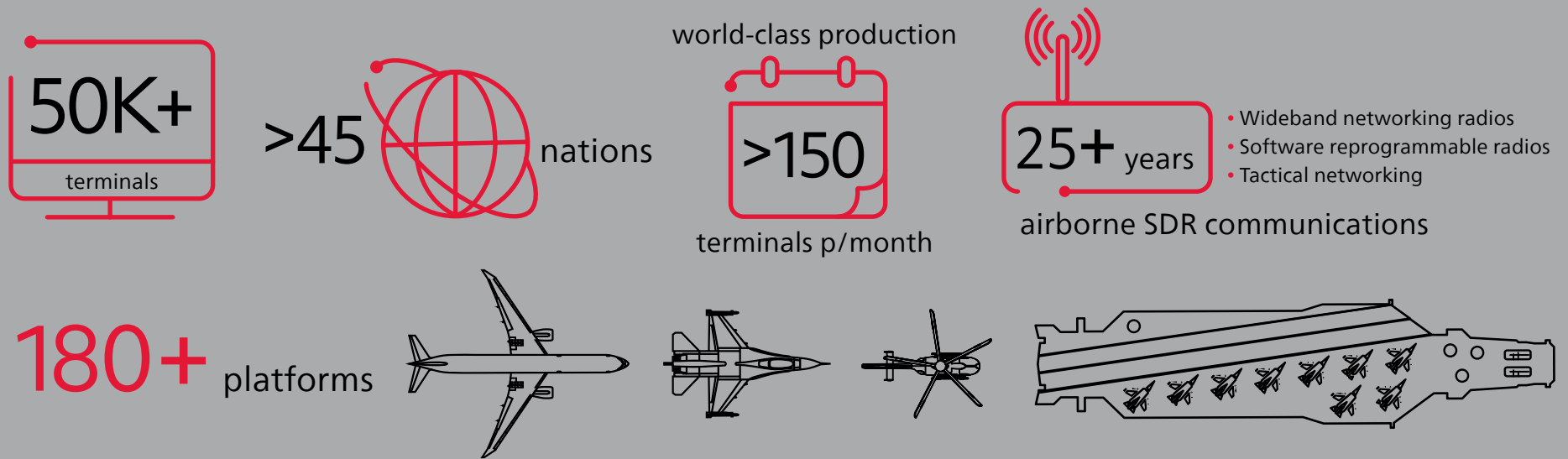
The AR-1500 is part of the TruNet family of communications solutions. Every element within this family smoothly interoperates with all the others. Designed for true connectivity between your airborne and ground forces across the entire battlespace.

- ARC-210 RT-2036(C) networked communications airborne radio
- TruNet AR-1500 networked communications airborne radio
- TruNet™ AN/PRC-162(V)1 two-channel networking ground radio



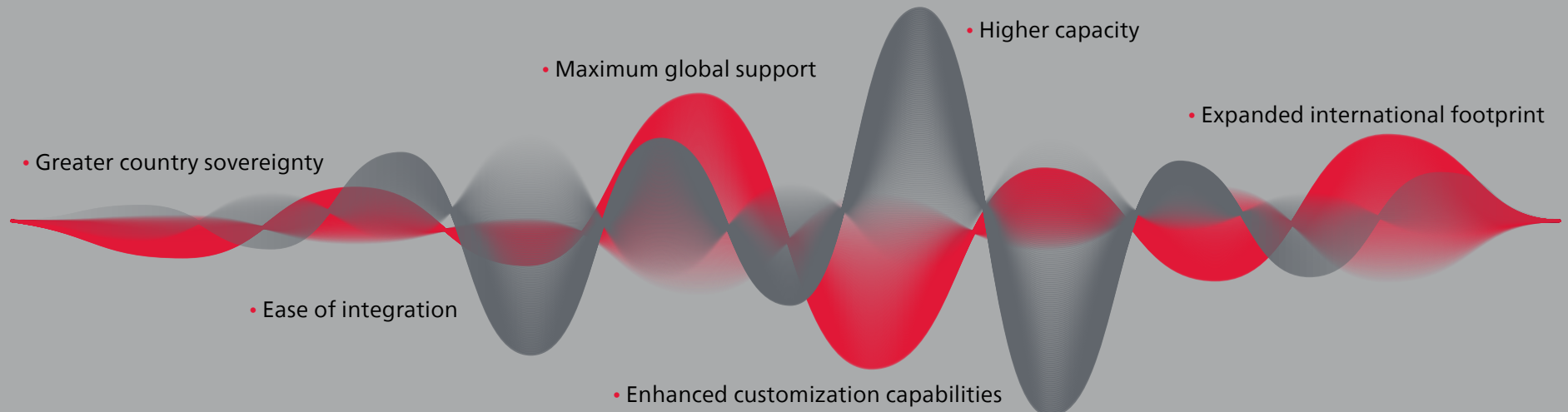
## WHERE WE ARE

World leader in airborne tactical communications



## WHERE WE ARE GOING

System design and waveform integration for the future needs of the U.S. and allied communities



## SOFTWARE DEFINED RADIO

<b>822-3325-001</b>	<b>AR-1500 R/T</b>
072-1448-005	Software - V/UHF Line of Sight (VULOS)
072-5449-005	Software - Saturn Edition 3/4
072-1409-005	Software - Have Quick I/II
072-6671-005	Software - TALON I/II
072-6672-001	SW - Sentinel Encryption (AES-256)

## ANCILLARIES

<b>REMOTE CONTROL UNITS</b>	
822-2092-002	Half-size control (C-12719A/379F-21A)

<b>HIGH POWER AMPLIFIER</b>	
822-2852-001	High power amplifier (AM-7642 )
622-9465-001	HPA mount

<b>MOUNTS</b>	
622-4934-001	Isolated (MT-4935/ARC)
622-8766-001	Low profile (MT-6567/ARC)
822-1708-002	Link 11 smart mount (994M-4A)

<b>CONNECTORS</b>	
988-9200-003	RT mating connector kit
988-9200-032	RCU mating connector kit

<b>DATA LOADER</b>	
822-3310-001	Data loader DL-8171A

## DOCUMENTATION

946-0PU7-001	Equipment specification
946-0PU8-001	Interface control document (ICD)
987-0081-501	Installation drawing



# TRUNET AR-1500

## SPECIFICATIONS

Power	+28 VDC, 200 W (transmit), 50 W (receive)
Weight	5.5 kg (12.2 lbs)
Width	12.7 cm (5 in)
Height	14.2 cm (5.6 in)
Length	25 cm (9.85 in)
Test specifications	MIL-STD-461F, MIL-STD-810G, MIL-STD-704D/E/F

## FREQUENCY RANGE

- Coverage: 30-1850 MHz
- VHF 30-88 MHz close air support
- VHF 108-118 MHz navigation
- VHF 118-137 MHz air traffic control
- VHF 137-156 MHz land mobile
- VHF 156-174 MHz maritime
- UHF 225-512 MHz military/networking
- UHF 764-805, 806-824, 851-869, 869-902, 935-941 MHz public safety bands
- L band 1250-1450, 1755-1850 MHz (networking)

## CHANNEL BANDWIDTHS

- 5 kHz, 8.33 kHz, 12.5 kHz, 25 kHz, 1.2 MHz, 5 MHz, 10 MHz, 30 MHz and software definable

## TUNING

- 1.25 kHz, 8.33 kHz increments

## TRANSMIT OUTPUT POWER

- AM: 10 W-15 W (30-400 MHz)
- FM/PM: 15 W-23 W (30-450 MHz)
- FM: 5 W  $\pm$  1 dB (450-512, 764-805, 806-824, 851-869, 896-902, 935-941 MHz)
- FM/PM: 20 W (1250-1450, 1755-1850 MHz)
- External HPA 50 W Peak Envelope Power (PEP)

## WAVEFORM OPTIONS

- HAVE QUICK I & II
- TALON I & II
- Sentinel Encryption (AES-256)
- Saturn ed3/4
- Link 22 Interoperability
- Scan (four channel)
- LOS: AM voice/data, FM voice/data
- ATC (8.33 kHz and 25 kHz channels) with embedded FM immunity
- Public Safety IAW TIA-603-C, including CTCSS and CDCSS
- Link 11/Link 22

## EXTERNAL COMSEC FUNCTIONALITY

- Ability to host indigenous crypto

## FUTURE GROWTH

- TSM
- Sovereign encryption
- SEDR ED4
- ESSOR
- TETRA
- APCO 25
- Joint Networking Waveform (JNW) – international wideband
- Joint Combat Waveform (JCW) – international narrowband
- Ability to host indigenous SCA waveforms

To learn more, go

→ [collinsaerospace.com/trunet](https://collinsaerospace.com/trunet)

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