

# Mobile Telemetry Assets



ATR supports detachments aboard aircraft carriers and land-based sites with personnel and portable telemetry handling systems that provide the same advanced features as the home system at the NAS Patuxent River Cedar Point complex.

At the Atlantic Test Ranges (ATR), the Real-time Telemetry Processing System (RTPS) transfers data from complex measuring instruments on test aircraft to flight test engineers located at any of nine Project Engineer Stations (PES). In addition to the fixed system at ATR, the Telemetry team has fielded a number of mobile systems that can be used by flight test programs across the country and around the world.

## TELEMETRY ACQUISITION SYSTEM

The Telemetry Acquisition System (TAS) units consist of a pedestal, an antenna and a boresight camera. The TAS can be controlled manually or slaved to pointing vectors. The antenna supports data acquisition from dynamic flight profiles, while the boresight camera has a 30x zoom to provide the operator and test team with real-time situational awareness. TAS antennas are tuned to L/S-band (1.435 GHz - 2.395 GHz) and C-band (4.4 GHz - 5.150 GHz).

### TAS-90

TAS-90s are positioned on and around airfields and at fixed off-base and temporary remote locations. With a 4-foot parabolic reflector, the TAS-90 provides coverage typically with a 50-mile radius.

### TAS-50

The small size of the TAS-50 (occasionally called “miniTAS” or “TAS-lite”) allows it to be used on and around airfields, on board and around ships and at temporary remote locations. TAS-50s are installed on mobile systems at ATR and can be installed on other mobile platforms as required. The TAS-50 provides coverage typically with a 20-mile radius.

## FOR MORE INFORMATION

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TAS-90 with 4-foot parabolic reflector



TAS-90 with horn antenna



TAS-50

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## AUTOMATIC TRACKING TELEMETRY ACQUISITION SYSTEM



ATTAS

The Automatic Tracking Telemetry Acquisition Systems (ATTAS) at ATR are antenna systems that can be manually controlled by the operator, slaved to pointing vectors or automatically controlled by feedback from the conically scanning feed.

A transportable version of the ATTAS, installed on a 15-foot trailer, supports remote site projects with a long duration. These systems are equipped with either 8-foot solid parabolic reflectors or 10-foot reflectors with removable outer petals. Transportable ATTAS antennas are tuned to L/S- and C-bands. The antenna system is mounted on a scissor lift that can raise the antenna 72 inches in order to provide unobstructed coverage. The trailers have extendable down-riggers that provide stability and enable the system to be leveled.



MTAV



Bluebird Mobile Telemetry Vehicle



MITS-12



MITS-24

## MOBILE TELEMETRY VEHICLES MOBILE TELEMETRY ACQUISITION VEHICLE (MTAV)

The MTAV supports short- and long-term remote site telemetry acquisition, and outfitted with an ATTAS antenna to collect telemetry data. The ATTAS, with a 6-foot reflector, is mounted on a scissor lift that can raise the antenna an additional 72 inches, allowing for maximum coverage above the vehicle enclosure. The MTAV is equipped with all-wheel drive for off-road access and an onboard generator.

## BLUEBIRD MOBILE TELEMETRY VEHICLE

The Bluebird Mobile Telemetry Vehicle is a salvaged bus that was converted into a mobile PES. The Bluebird Mobile Telemetry Vehicle is available to support legacy programs that have yet to convert to the new RTPS Interactive Analysis and Display System (IADS) display capability. It is used in cases where the customer's displays are designed to run on the Silicon Graphics system. It can also be outfitted with test-specific equipment.

## MOBILE INTEGRATED TELEMETRY SYSTEM (MITS-12 & MITS-24)

MITS vehicles are designed to provide support for various remote site detachments in a comfortable, climate-controlled enclosure. These vehicles have all the RTPS IV tools and processing features, including IADS capability.

MITS vehicles are equipped with two 42-inch plasma displays and all telemetry control equipment that is normally associated with RTPS at ATR: an external tracking antenna, UHF communications system, recording devices, and analysis and display software with video display capability. Internal generators provide enough power for total independent operation of the vehicles at any location.

MITS vehicles differ only in the amount of seating available: The 43-foot MITS-12 contains 12 workstations and the MITS-24 is a 53-foot transportable trailer containing 24 workstations.