



# Defence & Security Applications

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From manpack communications to airborne command & control, we have offer a wide range of applications.

## Manpack Communications

High powered, high throughput spot beams allow portable, small form factor terminals to receive fibre-like connectivity even in the most remote locations. Using the lightest, most discrete and flexible terminal types, disadvantaged users or early entry forces and first responders can now exploit VOIP and VTC communications, share HD quality full motion video and benefit from the same tools and applications used by higher echelons. Avanti's connectivity can provide over 20Mbps Forward and 10Mbps Return to <50cm terminals and makes the theory of a Single Information Environment reality.

## Comms on the Pause

The explosion in ISR sensor technology has generated an ever-increasing need for bandwidth to share and disseminate raw data and processed intelligence. Mobile and Manoeuvrable headquarters or low-key, more established locations have a need for very high data rates whilst remaining low profile and manoeuvrable. With potential needs to aggregate and disseminate ISR products including: Full Motion Video (FMV), HD video, UAV feeds, HUMINT/COMINT, Area situational awareness and targeting information, Avanti's connectivity can provide over 50Mbps Forward and 20Mbps Return to 65cm fly-away terminals.

## Fixed or Sustained Base Communications

Large operating locations managing multiple remote sites or supporting large numbers of personnel have much larger communications requirements. With increasing focus on command and control, users may need to sustain communications with strategic bases and dispersed teams. Requirements are likely to include the 2-way dissemination of aggregated ISR data and intelligence product and the ability to stream Full Motion Video (FMV), UAV feeds, as well as maintaining Area situational awareness. Operating multiple VOIP lines and VTCs, with a larger requirement for Morale, Welfare and Recreation communications, Sustained Base Locations are most likely to require larger fly away, fixed or semi-permanent terminals to generate very high throughput. Avanti's connectivity can provide over 100Mbps Forward and 50Mbps Return to <1.2m terminals.

## C4ISR

Deployed operational hubs for ISR platforms, such as UAVs or manned reconnaissance aircraft, will generate TBs of surveillance imagery that may need to be disseminated to other sites for processing and analysis. Large fixed, or mobile, terminals can provide the backhaul or relay necessary to deliver a constant 24/7 stream of high capacity traffic back to strategic headquarters or other processing locations. Avanti's connectivity can provide over 425Mbps Forward and 425Mbps Return on 2.4m or 4.5m deployable terminals.

## En Route Mission Command & Control (EMC2)

When a crisis occurs, early entry forces frequently commence moving before the situation on the ground is clear and before a mission plan has been completed. In these situations up to date situational awareness, intelligence updates and mission refinement are critical. Airborne terminals capable of receiving updated information – news streaming, satellite imagery, UAV feeds, FMV, situational awareness etc as well as providing VOIP or VTC connectivity with the strategic base are becoming increasingly important. Avanti's connectivity can provide 40Mbps Forward and 20Mbps Return to a range of hatch-mounted terminal types, or up to 200Mbps to fuselage mounted terminals.

## **Airborne C4ISR Datalink**

Manned airborne ISR platforms generate significant data. Often this data cannot be exploited until the aircraft has returned to a well-found operating base with the means to download and disseminate the feed. Access to a network of fixed beams within an aircraft's operating flightpath, or a dedicated steerable that can track the aircraft's movements allow the data to be disseminated, processed and acted upon in near real-time. Avanti's network of fixed beams or use of High Throughput steerable beams provide the means for manned ISR platforms to disseminate very high data rates of traffic, whilst remaining on task.

## **Airborne Strategic Command & Control**

Many operations require direct Command and Control by Executive levels of Government, even when Executives are travelling. With no option for loss of connectivity dedicated steerable beams that track the Executive's aircraft can assure 100% connectivity with the highest data rates to ensure they have the fullest intelligence picture. Avanti's steerable beams provide 920MHz of assured availability, always-on, maximum throughput capability. With complete obfuscation of the end user's geospositional location in order to safeguard operational security.

## **Critical National Backhaul**

Critical nodal points around the world provide focus for the backhaul of regional data. Due to their criticality, these nodes require multiple bearers that provide fibre-like availability and capacity, but with layers of redundancy and contingency to ensure there is never a risk of loss of connectivity. Avanti's high throughput connectivity can provide fibre like capacity connectivity and operate as a contingency fail-over for primary bearers or, in more austere locations, act as a primary bearer.

## **Communications on the Move (COTM)**

Modern security operations are characterised by mobility, decentralised, networked connectivity, speed of advance and widely dispersed users. In order to support this new approach, vehicle mounted communications have become mission critical. Commercial Satcom is a key element in supporting COTM, operating as part of an integrated suite of capabilities to ensure connectivity in all environments. As platforms increase in complexity and the amount of ISR generated organically or shared across the operating area increases, the throughput of the bearers has to increase significantly without impacting on the shape, design or covertness of the vehicles and without interfering with other sensors fitted. Avanti's high throughput connectivity provides the highest throughputs to the smallest COTM antennas, allowing end users to exploit Full Motion Video, VOIP and situational awareness applications, without breaking contact or slowing their advance.

## **Morale, Welfare & Recreation (MWR) Connectivity**

With an ever more connected world, deployed personnel have ever-higher expectations of maintaining contact with friends and families. Alongside with increases in online gaming and media streaming has placed an ever greater premium on broadband-standard communications, even in the most remote and austere locations. Commercial SatCom provides end users with the means to exploit fibre-like connectivity without touching local internet service providers, thus providing greater assurance around operational security. Avanti's connectivity provides commercial broadband-like connectivity with agreed levels of availability and the ability to react to changes in priority with operational traffic. High Throughput connectivity provides the same fibre-like experience whether users are operating from a manpack terminal in a Forward Operating Base or a fixed 2m dish in a well-sustained base.



Be More.

# Contact

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