

# CHEETAH

## TACTICAL SATCOM SYSTEM

**Cheetah** is a highly secure, lightweight, military satellite communications system, which is appropriate for rapid, worldwide all-terrain operational deployment. Suitable for strategic and operational level command and control, as well as for tactical use, Cheetah is ideal for Advance and Special Forces in amphibious and land operations. It offers a combination of communications management, ground infrastructure, transportable bases and portable terminal types. With a comprehensive user configuration facility Cheetah enables rapid re-deployment and re-tasking.

### KEY POINTS

- Strategic/Operational/Tactical utility
- Security through high-grade encryption
- Voice recognisable speech
- Messaging for optimised formats
- Real-time synchronised data transfer
- Supports both conventional and covert operations
- Lightweight, rugged, autonomous field terminals
- Rapid assembly and assured satellite acquisition
- Designed for deployment and operations in the world's extreme environments
- Minimised use of satellite resources through DAMA



Cheetah provides both commanders and highly mobile troops with a uniquely reliable communications capability. Whatever the operational configuration selected, the rugged system provides consistent security and accessibility. Headquarters of any size can be rapidly supported by a secure and reliable PC based communications link both rearward and forwards and mobile troops can connect into this satellite network in under 5 minutes. Advanced DAMA technology combined with off-line messaging and data provides rapid and assured communications.

### Terminals

The System offers two terminal types: the 'Fly-Away' Headquarters Terminal and the Tactical Patrol Terminal.

#### Headquarters Terminal

The Headquarters Terminal provides a highly proficient yet portable satellite terminal capable of providing support to a fully autonomous deployed system network, either as the hub of a system, in support of a mobile or static headquarters, or as tactical end terminal in its own right. Using the unique Cheetah DED (Data Entry Device), via a Windows based PC management, it can support data, messaging and voice, and fax or printer.



#### Patrol Terminal

The Patrol Terminal is an ultra lightweight tactical option with the full security and DAMA functionality of the HQ terminal. Rapidly assembled, it provides data, messaging and voice commensurate with the HQ Terminal.

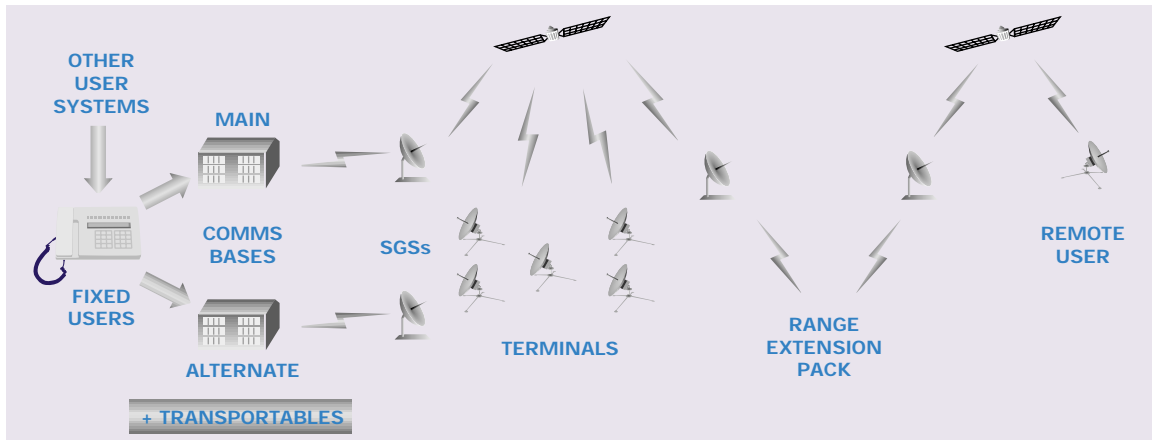
#### The Cheetah System

The Cheetah System comprises Ground Infrastructure options of Main Communications Bases, Satellite Ground Station patches, Transportable Communication Bases and Range Extension Facilities in support of a Headquarters and Patrol Terminals. Any number of terminals can be supported and the system architecture is customer determined.



The Communication Bases offer a comprehensive range of management facilities catering for a user's specific needs. The security architecture can also be uniquely configured to the customer's needs.

### CHEETAH SYSTEM



### TECHNICAL SPECIFICATION

#### Patrol Terminal Characteristics:

Weight: <12.5kg including battery  
 Longlife battery: (>500Wh) weighs < 2.8kg  
 Battery Life: 28 typical days  
 Transportable size:  
 < 11 ltrs displacement volume  
 EIRP: >39dBW  
 G/T: >7dB/K  
 Frequency: X Band (Tx -7.9 to 8.4Ghz;  
 Rx - 7.25 to 7.75Ghz)  
 Services: Voice-recognisable speech,  
 Messaging (customised and  
 ACP127 formats), &  
 Synchronous data 600 to  
 64Kbps  
 Data Rates: Patrol Terminal 19.5Kbps

#### Headquarters Terminal Characteristics:

Weight: <115kg  
 Size: < 400ltrs  
 EIRP: > 49dBW  
 G/T: > 11dB/K  
 Services: Voice-recognisable speech,  
 Messaging, & Synchronous  
 data 600 to 64Kbps  
 Data Rates: 64Kbps

#### Environment:

Operating Temperature:  
 -30°C to +55°C  
 Storage Temperature:  
 -40°C to +70°C  
 Wind Stability Operating  
 20m/s  
 Shock & Vibration  
 DEF\_STAN 00-35 Test M3 &  
 M4  
 Other DEF\_STAN 07-55  
 series (e.g. altitude  
 DEF\_STAN 07-55; TEST B21)

#### Network Performance:

Grade of Service (GOS):  
 98% probability of call  
 success first time (User  
 configurable)  
 System Expansion:  
 Simultaneous support to  
 hundreds of Field Terminals in  
 numerous separate  
 operational networks  
 Network Control Features:  
 Prioritisation, Traffic  
 Minimise, Off-line Planning

#### System Security

COMSEC through High-grade encryption  
 NETSEC key management including OTAR  
 COMPUSEC  
 TEMPEST



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