Centaur® High Capacity Data Radio (HCDR™)

An intelligent, self-managing, ad hoc network radio. Mobility and security are key features in this UHF communications and data backbone.
HCDR delivers the flexibility of a mobile network. This means no fixed infrastructure, and this data network is always available – even on-the-move at high speeds. HCDR is the only radio of its kind creating a communications backbone for messaging, internet and situation awareness supporting mission-critical on the move operations. This battle-proven radio provides high-speed data information between maritime, ground forces and air support.

HCDR’s intelligent self-managing capability simplifies operations minimising the requirement for training. With no user input required, simply switch it on and go. HCDR is reliable and robust, working in the most demanding conditions. All radios have been temperature tested to -35°C to +71°C. This tough radio provides high throughput with low latency making it a highly effective networking radio that exceeds the demanding needs of the modern battlefield.

Centaur® High Capacity Data Radio (HCDR™)

Exelis, the world’s largest supplier of tactical communication systems, bridges the data networking gap with Centaur’s High Capacity Data radio (HCDR). This ad hoc system creates a self-forming, self-healing, self-managing adaptive mobile network.
EASE OF USE:

- Internet data connectivity with either commercial or military plug and play hardware
- Easy to use - minimal training required
- Simple data interface with VHF, HF communications
- Robust, reliable and combat-proven
- Common equipment for land, sea and air platforms
SELF-HEALING, SELF-FORMING AD HOC NETWORKING
Each HCDR continuously monitors its connectivity status to all neighbours and can promote itself to a cluster head to instantly heal any backbone fragmentation caused by battlefield movement dynamics. Data is transported seamlessly across the battlefield without the need for user intervention.
### SPECIFICATIONS

#### Physical Characteristics
- **Dimensions**: 194 mm x 411 mm x 297 mm
- **Weight**: 14 kg

#### System Characteristics
- **Frequency range**: 225 to 450 MHz
- **Power output**: Adaptive up to 20 W
- **User data rate**: Adaptive up to 8 Mbps
- **Embedded COMSEC**: UK or export options
- **Embedded TRANSEC**: Yes
- **Platform**: Land, Sea and Air
- **Operational temperature**: -35°C to +71°C including solar
- **Storage temperature**: -55°C to +71°C including solar
- **Environmental**: Def Stan 00-35
- **Power**: 24 volt vehicle
- **Reliability (MTBF)**: >5000 hours
- **Maintainability (MTTR)**: Remove and replace <15 minutes. No preventative maintenance or adjustments
- **Test**: Full Built-in-Test (BIT) fault isolation
HCDR OVERVIEW:
> Backbone of the Centaur tactical communications system
> Intelligent, self-managing ad hoc network
> Mobile tactical communications using dynamic routing
> Fully secure with AES 256-bit encryption
> Reduced susceptibility to jamming with low probability of detection or intercept
> Excellent multipath interference immunity
> The Exelis HCDR and its predecessors are deployed with 11 NATO countries
> 4 MHz wide frequency occupancy Spread Spectrum
> Unicast or multicast IP capability

DATA ON-THE-MOVE:
> Facilitates the rapid transfer of situation awareness information
> Embedded IP router/gateway enabling internet on-the-move
> Adaptive transmission power and channel data rate with forward error correction
> No dedicated fixed base station required
> High bandwidth with low latency
> Open architecture TCP/IP UHF data networking
> Messaging on-the-move with most C2 messaging software

HCDR delivers benefits that enhance battlefield communications.