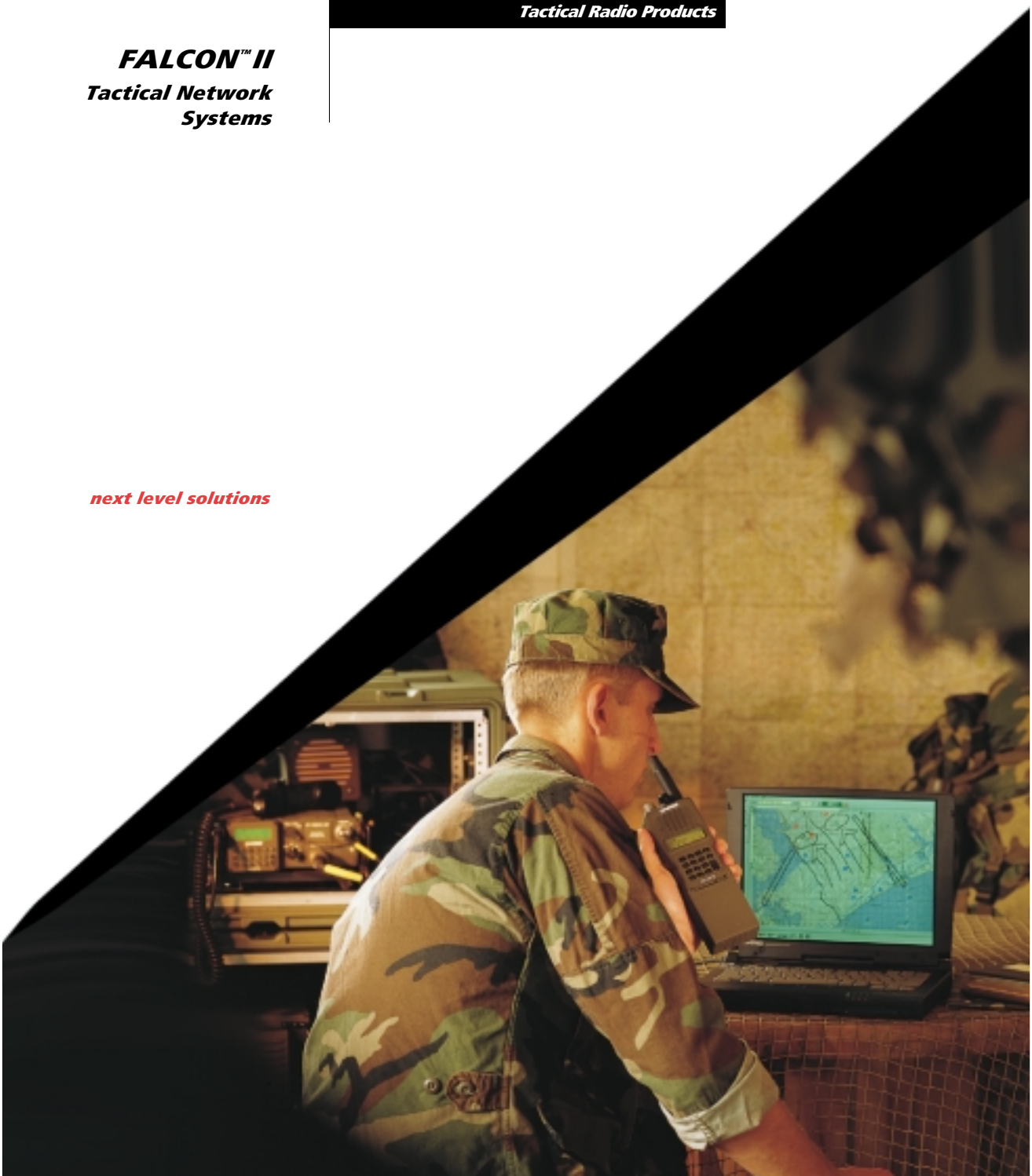
HARRIS

Tactical Radio Products

FALCON™ II

Tactical Network Systems

next level solutions



Falcon™ II Tactical Networking— Simple, Seamless and Secure

The Falcon II family of networked tactical radios includes multiband HF, VHF and UHF variants.

Simple, Seamless and Secure

The effectiveness of any communications network is measured by its ability to simply, quickly and reliably exchange information between multiple network members. Military tactical networks must also be secure, support a broad range of applications and must interface seamlessly with other data and telecommunication networks. The Falcon™ II networking system has all of these characteristics and many more.

Designed for Networking

Harris engineers have recognized the many performance advantages that are gained by embedding the network processor inside of the radio. Building on this concept, the Falcon II tactical radios have been designed for networking from the inside out. This revolutionary family of multiband HF, VHF and UHF radio terminals is equipped with internal TCP/IP stacks and networking subnet capabilities—both implemented on the radio's central PowerPC™ microprocessor.

Transparent IP

The Harris Falcon II networking system provides a transparent Internet Protocol (IP) interface to the outside world. This interface has gained worldwide acceptance as the standard for network connections in commercial systems and it provides many advantages to military users of the Falcon II radios including:

- Seamless extension of existing Local and Wide Area Networks (LANs, WANs) to the tactical combat net radio network. The RF-6010 Network Access Hub provides a direct interface to other telecommunications and data networks.

- The use of commercial-off-the-shelf (COTS) applications such as E-mail, WEB or database browsers and file exchange. It also provides a direct interface to customized IP-based applications providing capabilities such as Command and Control (C^2), Tactical Messaging, Situational Awareness and Fire Control Systems.
- The dependency on expensive, single-source computer terminals, interface boxes and cables is eliminated. The well-established commercial Internet protocols will support future advances in computer hardware and applications.

Voice, Data and IP Packets on a Single Net

The Harris Tactical Networking system is the first to provide integrated management of voice, Data Terminal Equipment (DTE) data support, and IP packet traffic over a single network:

- Conventional all-informed-net and digital selective call voice is supported through the radio's handset.
- Streamed asynchronous and synchronous data is supported through the radio's front panel DTE interface.
- Transparent IP packet transfer is supported through both a front panel Point-to-Point Protocol (PPP) interface as well as the rear panel Ethernet Port.

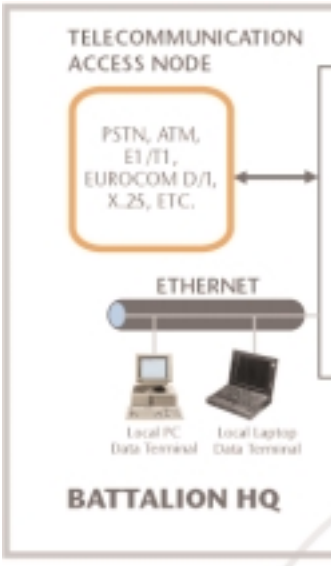
Both voice and DTE data have transmission priority over IP packet transmission. Whenever the radio is keyed from either the handset or DTE connector, the voice break-in feature non destructively stops and later resumes IP traffic seamlessly.

Security

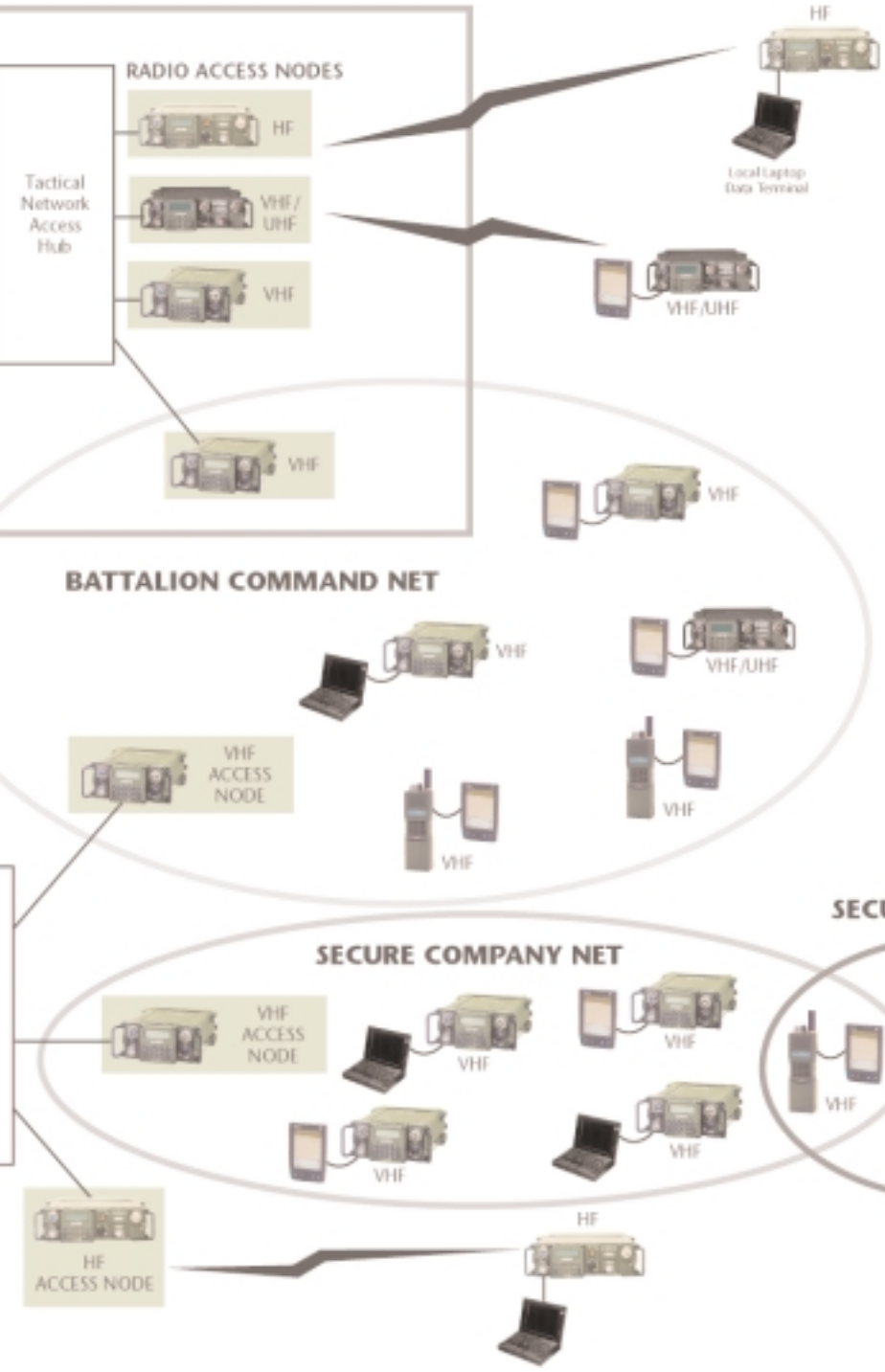
Voice and data carried over a military tactical network must be protected as their contents are often critical to the success of the mission. Citadel™ digital encryption option, common to all Falcon II radios, provides very high-grade digital encryption over all radio links. Due to the fact that it is common to all radios, it can provide end-to-end security of all sensitive voice and data traffic.

Tactical Networking

The military tactical Internet is fast becoming the infrastructure that will support a wide variety of battlefield management systems. Possible applications include Command and Control (C^2), Tactical Messaging, Situational Awareness, Fire Control and Data Base Access to name just a few. The Harris Tactical Network System has the performance and features necessary to take on The challenges of the 21st Century Battlefield.



Multi-radio vehicular installations are quickly integrated together through the radios' Ethernet ports.



HF radios provide long-range communications from forward observer locations back to tactical operations centers.

Multiband VHF/UHF radios can be networked in VHF command nets and also provide UHF communications for air support.

Subnet Solutions – The Harris Advantage

Network access through the Falcon II VHF handheld provides direct access to landline communications networks.

The Harris Falcon II radio's advanced subnet capabilities deliver significant advantages over competing systems. The radio's HF and VHF subnet functions process the IP data packets within the radio; conglomerating IP data packets that have common destinations, compressing and encrypting the data prior to transmission over the radio channel.

Channel access is the subnet's second major function. The channel bandwidths, propagation characteristics, and data rates supported over HF and VHF frequency bands are vastly different. To address these differences, the channel access protocols must be tailored to the specific band of operation. The Harris networking channel access protocols, optimized for the specific frequency band in which they are used, address these issues. In all cases, channel access protocols, in the Harris solution, take advantage of the radio's knowledge of the channel conditions to optimize the IP packet transmissions.

The VHF radio uses a proprietary Multiple Access with Collision Avoidance (MACA) protocol for optimum channel utilization. The Harris protocol matches the real time changes in channel conditions by dynamically adjusting the transmission data rate on a transmission by transmission basis.

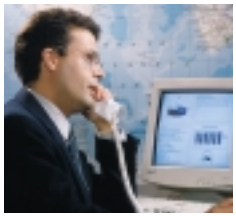
The HF radio delivers optimum packet transmission over a wide range of HF channel conditions by taking advantage of the latest HF data modem and channel access protocols defined in MIL-STD-188-110B and MIL-STD-188-141B respectively. Harris has been a strong participant in the development of these HF standards, having been a leader in the development of new technology for HF communications for the last 40 years.

Communications Solutions for Today and Beyond

Harris Corporation is a global communications company, providing solutions that take customers to the next level of competitiveness, productivity, and profitability.

The capabilities, products, and applications at Harris are focused in four communications markets—wireless, broadcast, government systems, and network support. Harris solutions include microwave and wireless loop systems; secure radios, national law enforcement, and air traffic control communications systems; analog and digital television and radio systems; enhanced services and digital switching platforms, telecommunication tools, and test systems and network management systems for worldwide communications service providers and broadcasters.

The company's 105-year history of strong technological resources and reputation, with an aggressive concentration on the global communications market, allows it to address the escalating demand for broader bandwidth communications. The corporation has sales and service facilities in nearly 90 countries.



Wireless

Broadcast

Government Systems

Network Support

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