



# VIDA<sup>®</sup> TRANSCODER

## MULTIPLE AIR INTERFACE SOLUTION

### HARRIS UNIQUE INTEROPERABILITY BETWEEN DIGITAL TECHNOLOGIES

The Voice, Interoperability, Data, and Access (VIDA) Transcoder uses standard off-the-shelf components and sophisticated digital voice coding software to allow customers to deploy VIDA networks using multiple air interfaces and digital voice formats. With the Transcoder, a single VIDA network can support communication between any combination of OpenSky<sup>®</sup>, P25<sup>IP</sup> Phase 1, P25<sup>IP</sup> Phase 2, and legacy analog sites and radios.

#### FEATURES

Ability to transcribe calls between different encryption algorithms (AES-128, AES-256).

Multiple Transcoder application Virtual Machines can share the call load and back each other up in case of a server failure.

Provisioning via the VIDA Device Manager, Harris' infrastructure and radio programming tool.

Call activity and alarm reporting to the VIDA management systems.

Information Assurance certified to support the highest levels of system security.

#### VIDA TRANSCODER OVERVIEW

The VIDA Transcoder uses a vocoder library that is based on AMBE+2<sup>™</sup> technology for all modes. AMBE+2 provides superior voice quality, noise suppression, and gain control. AMBE+2 technology produces P25 full rate voice that is backwards compatible with legacy IMBE<sup>™</sup> technology. The Transcoder uses the Parametric Conversion method to transcode between modes and provide the highest quality voice with negligible degradation in quality due to the conversion. The VIDA Transcoder supports the following modes: P25 Phase 1 (full rate), P25 Phase 2 (half rate), ProVoice<sup>™</sup>, OpenSky (AMBE+2 – 2400), and ADPCM (32 kbps).

#### MIXED MODE SYSTEMS

In a mixed mode system, the transmitting radio and RF site operate in their native format (P25 Phase 2 in the example shown on the back of this page). Other P25 Phase 2 sites as well as dispatch consoles, logging recorders, and the Interoperability Gateway receive the audio in this same format. The Transcoder converts the voice packets for forwarding to RF sites and radios which use other formats (P25 Phase 1 in the example shown).

#### SYSTEM DESIGN FLEXIBILITY

In a VIDA System with an Interoperability Gateway to interface to legacy systems, the VIDA Transcoder can be used to interface with multiple vocoder types for interoperability.

## GENERAL SPECIFICATIONS

### Hardware Components:

The VIDA Transcoder application runs on a Virtual Machine on the VIDA Core server. Specifications for the VIDA Premier Core server are shown below.

- Two 2.40-GHz CPUs
- Eight 16-GB RDIMMs
- Two Intel® I350 Quad Port 1 GB Adapters
- Ball Bearing Rail Kit
- Two 770W, AC, PID 1U Power Supplies
- Security Bezel
- Windows® Datacenter 2012 Operating System
- VMWare® vSphere® Virtual Machine

### Mechanical:

Height: 1.7 in. (4.3 cm)  
 Width: 18.98 in. (48.2 cm)  
 Depth: 30.98 in. (78.7 cm)  
 Weight: 30.0 lb (13.6 kg)

### Power Requirements:

Input Voltage: 100-240 VAC (90 to 264 VAC, min/max)  
 Input Current: 9.5A at 110 VAC, 4.5A at 220 VAC (15A max inrush)

### Safety:

UL 60950-1 Second Edition  
 CAN/CSA-C22.2 No. 60950-1 Second Edition  
 EN 60950-1 Second Edition  
 IEC 60950-1 Second Edition  
 AS/NZS 60950-1  
 GB4943 2001

## GENERAL SPECIFICATIONS (CONT'D)

### EMC – Emissions

47 CFR Part 15 (CFR 47) Class A	VCCI Class A
AS/NZS CISPR22 Class A	EN61000-3-2
CISPR22 Class A	EN61000-3-3
EN55022 Class A	KN22 Class A
ICES003 Class A	CNS13438 Class A

### EMC – Immunity

EN55024	EN300386
CISPR24	KN24

### Environmental:

Operating Temperature: +41 to +95°F  
 (+5 to +35°C)  
 Storage Temperature: -40 to +149°F  
 (-40 to +65°C)

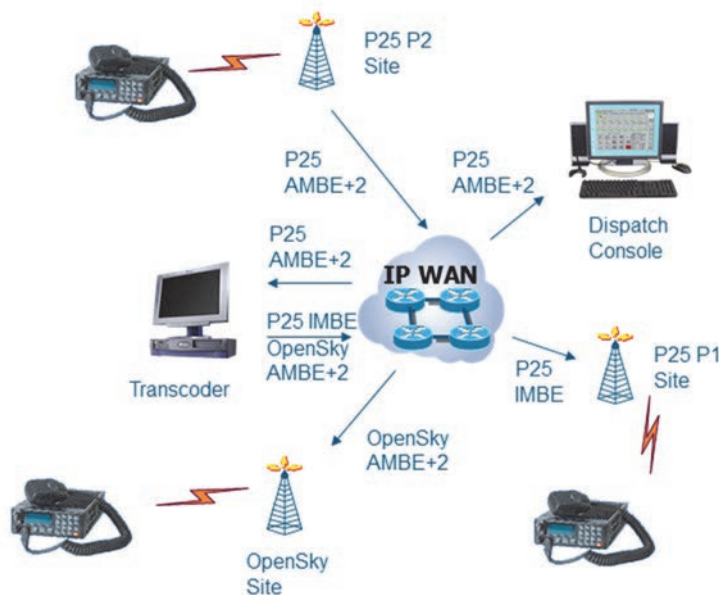
### Operational Features:

Up to 200 concurrent calls for VIDA Enterprise or 100 concurrent calls for VIDA Premier  
 Supports P25 Full Rate (Phase 1), P25 Half Rate (Phase 2), ProVoice, OpenSky (AMBE-2400), OpenSky 2 (AMBE+2-2400), and ADPCM (32 kbps) voice formats  
 Supports Transcription between AES-128 and AES-256  
 Supports remote key loading from the Network Key Management Facility (KMF) for P25 and from the Unified Administration Server (UAS) for OpenSky  
 Allows Static Configuration via VIDA Device Manager  
 Dynamic Database information from the Unified Administration Server  
 Provides Call Activity to the Activity Warehouse  
 Provides fault and error indications to the Regional Network Manager (RNM)

Technical specifications are subject to change without notice. Product sales are subject to applicable U.S. export control laws.

### About Harris Corporation

Harris Corporation is a leading technology innovator that creates mission-critical solutions that connect, inform and protect the world. The company's advanced technology provides information and insight to customers operating in demanding environments from ocean to orbit and everywhere in between. Harris has approximately \$8 billion in annual revenue and supports customers in 125 countries through four customer-focused business segments: Communication Systems, Space and Intelligence Systems, Electronic Systems, and Critical Networks.



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