

The **HD4040** is a digital upconverter that achieves previously unavailable density and conservation of headend rack space for upconverter intensive applications such as digital video on demand (DVOD) and cable modem service. Advanced design allows a single card to cover a frequency band from 88 to 858 MHz and still maintain a phase noise specification that exceeds the requirements of 64/256 QAM. Remarkably low out of band noise performance and low spurious are achieved through high level mixing, a microwave frequency IF and multiple levels of filtering.



Each card chassis with common power supply can contain up to 16 independent frequency agile upconverters in a 2U rack mount configuration. The redundancy features of this product make it suitable for the most demanding applications. Built-in power detectors allow for easy input and output level configuration. The controller module features a remote control interface (with optional SNMP), allowing full control and monitoring of all frequencies and levels. This advanced, cost effective upconverter offers high performance, flexibility and space efficiency.

### HD4040 Card Features:

- High level output; +61 dBmV 88 to 858 MHz
- Front panel selectable output frequency in 12.5 kHz step size
- Digital slope compensation to achieve <math>\pm 0.3\text{ dB}</math> slope over any channel
- Auto IF ALC automatically corrects for input level changes (non-bursty)
- Out of band noise performance  
-12 dBmV/6 MHz (-15 dBmV/6 MHz typ)  
-11 dBmV/8 MHz (8 MHz option)  
-30 dBmV/6 MHz >twice RF frequency typical
- Excellent in-band noise performance
- User defined soft alarms for IF and RF levels can be enabled from remote control
- RF ALC allows frequency to be adjusted without affecting the RF level
- RF output mutes when changing output configuration
- High reliability, state-of-the-art design using microstrip MMIC and surface mount technology
- Conservative component derating and 100% burn in help ensure reliable operation
- Low power consumption
- All local oscillators are frequency synthesized and locked to a common internal high stability reference

### HD4000 System Features:

- Local control via Vacuum Fluorescent Display and 4 soft touch push buttons
- Remote control via RS232/RS485/Terminal or optional SNMP
- FLASH memory for easy software updates
- Front panel displays IF and RF power levels
- International internal autosensing power supply (100 to 240 VAC; 50 to 60 Hz); -48 VDC power supply option available
- Internal high reliability fans ensure cool operation for long product life
- 1-to-1 Redundancy (50 ms switching)
- Active front to back cooling allows units to be stacked: 100% rack space efficiency



**VCom Inc.**  
(formerly WaveCom Electronics Inc.)

Distributed by:

**Mega Hertz**

Specifications subject to change without notice – Printed in Canada

br\_hd4040\_12 (July 2003)

800 883 8839  
www.megahz.com  
sales@megahz.com

**HD4040 DIGITAL UPCONVERTER**  
HIGH DENSITY; FREQUENCY AGILE; 64/256 QAM

