VEGA
RF Channel Simulator

- Real time simulation of terrestrial, satellite and hybrid channels,
- Up to 20 adjustable terrestrial paths,
- White noise generator integrated,
- LMS (Land Mobile Satellite) profile,
- Preset profile for DTV standards,
- Simulation of your specific satellite channels

Description

Vega, RF Channel Simulator from TeamCast, is the right tool to test and qualify your mobile and fix receivers for any kind of Digital TV standards. Thanks to its powerful real time process, from your basic original signal, Vega can produce a realistic broadcast transmission to check the good behaviour and the limits of your receiver on the field. With Vega, a wide panel of laboratories, chipsets and receivers manufacturers have the tool to secure time-to-market, performance, quality assurance for their products and services. Dedicated to Tests & Measurement, Vega exists in two form factors (Rack form and Lab form) for a better installation inside your facility (R&D, Production Lines,…).

High Performance & Reliability

The VEGA RF Channel Simulator supports UHF Band and S-band signals (others frequencies band on request). Covering 1.5 MHz up to 10 MHz Channel bandwidth signals, VEGA handles the terrestrial, satellite and hybrid channels propagation modes. It’s compact and easy to use.

Key Features:

- Real time Channel profile simulations
- Compact & easy to use solution
- Multi-path signal generator (up to 20 paths) adjustable in delay, amplitude, phase and Doppler influence
- AWGN generation (white noise generator)
- Adjustable Bandwidth capabilities from 1.5 MHz up to 10 MHz
- Fading generator
- Doppler modes: classical, pure, flat, Gaussian and Gaussian + Rice Doppler profiles
- LMS (Land Mobile Satellite) profile including slow fading, 3 states, Rice and Rayleigh models
- Simulation of your specific satellite profiles
- Remote control programming
Technical Specifications

- **RF Inputs:**
  - RF Input connector: Type N Female
  - RF Input Frequency range:
    - UHF Band: 470 to 862 MHz
    - S band: 2,170 GHz to 2,2 GHz
  - Input Frequency agility: 1 Hz
  - RF Input level range: -15 dBm to -25 dBm
  - RF Input max level: +5 dBm
  - Input Intercept Point 3rd order (IIP3): > +10 dBm

- **RF Outputs**
  - RF Output connector: Type N Female
  - RF Output level range: -20 dBm to -110 dBm (steps 0.1 dB)
  - Without Fading and Noise settings
    - MER > 36 dB
  - Shoulders: > 45 dB

- **Bandwidth capabilities:**
  - Adjustable from 1.5 MHz to 10 MHz (1 kHz)

- **Channel Propagation Profile**
  - Terrestrial Propagation:
    - up to 20 paths adjustable in amplitude, delay, phase and Doppler,
    - Pure, Classical (« Jakes »), Flat, Gaussian and Gaussian + Rice Doppler profile
  - Satellite Propagation:
    - Land Mobile Satellite (LMS) Mode:
      - Slow fading,
      - Internal LMS (3 states, Rice and Raleigh models),
    - External profile capability
    - Satellite movement: Delay and Frequency drift
    - Hybrid propagation (Terrestrial and Satellite combination):
      - Up to 12 Terrestrial paths adjustable in amplitude, delay, phase and Doppler
      - Delta Level capabilities between propagation paths
      - Delta Time capabilities between propagation paths
      - Delta Frequencies capabilities between propagation paths

- **AWGN Generator:**
  - C/N adjustable from – 4 dB to + 40 dB
  - White Impulse Noise capability

- **DTV standard compatibility:**
  - DVB-T, DVB-T2, DVB-T2 extended, DTMB, ATSC,
  - DVB-H, DVB-SH, CMNB, ISDB-T/Tb, ATSC-MH, FLO
  - DAB

General Specifications

- **Display (available for Lab form factor only):**
  - Bright color transmissive TFT display
  - XGA resolution (1024*768)
  - Touch Screen display

- **Connectivity**
  - 1xRJ45 connector for Ethernet 10/100 Base T connection

- **Automatic Remote Control programming**
  - SCPI standard control command

- **Physical**
  - Operating temperature range: 0°C to 40°C
  - Power supply: 90 to 250VAC – 47-63Hz – 100VA maximum

Ordering Information

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<td>Channel Emulator with UHF (470-860 MHz) input/output – 1-RU rack form factor – Adjustable Output Attenuator</td>
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<tr>
<td>TMR-VGA0-2170</td>
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1: Specifications are not contractual and are subject to revision without special warning.