

VEGA

RF Channel Simulator

VEGA

The most integrated and cost effective multi-standard channel simulator for:

- Chipset designers,
- Receiver Manufacturers,
- Laboratory experimentations,
- Broadcasters,
- Satellite operators.

Vega is the reference to check performances.



Key features :

- Real time Channel profile simulations
- Up to 20 adjustable terrestrial paths
- AWGN generation (white noise generator)
- Adjustable Bandwidth capabilities from 1.5 MHz up to 10 MHz
- Fading generator
- Doppler modes: classical, pure, flat, Gaussian + Rice Doppler profiles
- Simulation of your specific satellite profiles
- Remote control programming
- LMS* (Land Mobile Satellite) DVB-SH profile
- Preset profile for DTV standards

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 VHF band, 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.

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Specifications¹

■ RF Inputs

- o RF Input connector: Type N Female
- o RF Input Frequency range:
 - VHF Band: 170 to 240 MHz
 - UHF Band: 470 to 862 MHz
 - S Band: 2.170 GHz to 2.2 GHz
(see ordering information section)
- o Input Frequency agility: 1 Hz
- o RF Input level range: - 15 dBm to - 25 dBm
(RF Input max level: + 5 dBm)
- o Input Intercept Point 3rd order (IIP3) > 10 dBm

■ RF Outputs

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

■ Bandwidth capabilities

- o Adjustable from 1.5 MHz to 10 MHz (1kHz)

■ 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 (PI3/PO3 profiles)

o Preset configurations:

- F1: Fixed reception (Ricean)
- P1: Portable reception (Rayleigh)
- TU6: Typical Urban reception
- PI3: Portable Indoor reception
- PO3: Portable Outdoor reception

Satellite Propagation (DVB-SH profile):

- o Land Mobile Satellite (LMS) Mode*:
 - Slow fading
 - Internal LMS (3 states, Rice and Raleigh models)

- o External profile capability
- o Satellite movement: Delay and Frequency drift

Hybrid Propagation

(DVB-SH profile, Terrestrial and Satellite combination):

- o Up to 12 Terrestrial paths adjustable in amplitude, delay, phase and Doppler
- o Delta Level capabilities between propagation paths
- o Delta Time capabilities between propagation paths
- o Delta Frequencies capabilities between propagation paths

■ AWGN Generator:

- o C/N adjustable from - 4 dB to + 40 dB, step 0.1 dB
- o White Impulse Noise capability

■ DTV standard compatibility:

- o DVB-T, DVB-T2, DVB-T2 extended, DTMB, ATSC, DVB-H, DVB-SH, CMMB, ISDB-T/T_B, ATSC-MH, FLO™ DAB, T-DMB

■ Display (available for Lab form factor only)

- o Bright color transmissive TFT display
- o XGA resolution (1024*768)
- o Touch Screen display

■ Connectivity

- o 1 x RJ45 connector for Ethernet 10/100 Base T connection
- o Automatic Remote Control programming
- o 3 x USB connectors
- o SCPI standard control command

■ Physical

- o Operating temperature range: 0°C to 40°C
- o Dimensions (LxIxH): LabForm: 350x230x250
Rack Form: 450x500x44
- o Power supply: 90 to 250VAC - 47/63 Hz - 100VA maximum

Ordering Information

TMR-VGA0-2120	Channel Emulator with VHF (170-240 MHz) input/output - 1 RU rack form factor - Adjustable Output Attenuator
TMR-VGA0-2130	Channel Emulator with UHF (470-860 MHz) input/output - 1 RU rack form factor - Adjustable Output Attenuator
TMR-VGA0-2170	Channel Emulator with S-Band (2170-2200 MHz) input/output - 1 RU rack form factor - Adjustable Output Attenuator
TML-VGA0-2120	Channel Emulator with VHF (170-240 MHz) input/output - Lab form factor - Adjustable Output Attenuator
TML-VGA0-2130	Channel Emulator with UHF (470-860 MHz) input/output - Lab form factor - Adjustable Output Attenuator
TML-VGA0-2170	Channel Emulator with S-Band (2170-2200 MHz) input/output - Lab form factor - Adjustable Output Attenuator

¹ Specifications are not contractual and are subject to revision without notice.

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