

VB8300

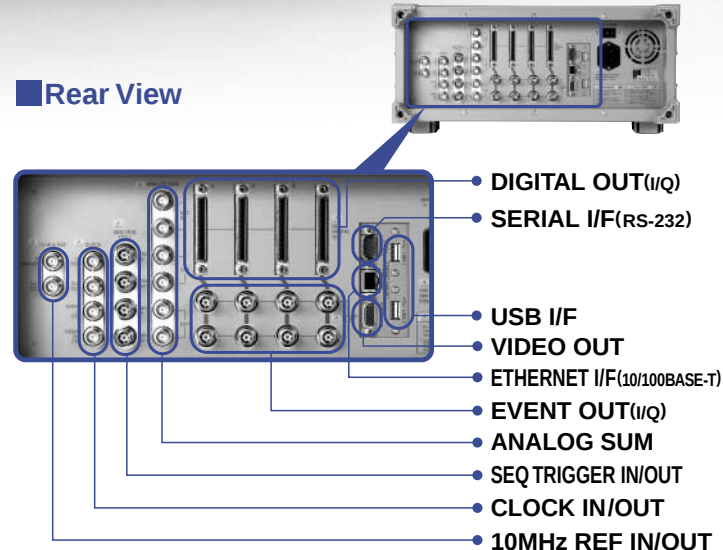
Baseband Signal Generator VB8300

The Most Advanced IQ Baseband Arbitrary Waveform Generator for Developing and Testing Future Mobile Communications

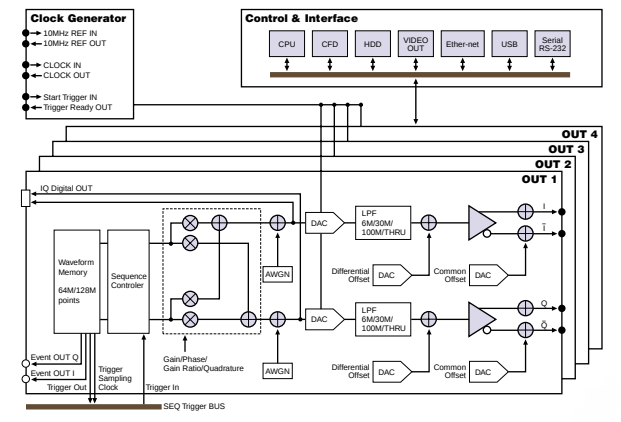
- Ultra Large Waveform Memory: Max. 128Mpoints/ch
- Differential Outputs: 2 and 4 channel models
- High-speed Clock Rate: Max. 300MHz
- Combination Sequence
- Analog Summing Out Option
- Multi channel: Max. 8 channels
- High Output Resolution: 14 bits D/A Converter
- Digital Output Option: 14bits/channel
- Noise Adding
- Ethernet Interface



Rear View



VB8300 Block Diagrams



VB8300 Performance Specifications

IQ Signal Output

Outputs	2, 4 channels (Differential) 8 channels (Single-ended)
Waveform memory	64Mpoints/channel, 128Mpoints/channel
D/A resolution	14 bits
Output resistance	50±1Ω(1kHz Sine)
Rated load	50Ω
Output range(AC peak+DC offset)	-1.5 to +2.5V (50Ω load)
Output Amplitude*1	3.0Vp-p AC (50Ω load, Output Frequency Range ≤100MHz)
Attenuator accuracy	±0.2dB (50Ω load, 1kHz Sine)
DC level accuracy	±(setting value x 1% +3mV) (50Ω load)
Skew (Channel spacing)	<±1.5ns (Filter: Through)
Skew (IQ spacing)	<±1.0ns (Filter: Through)
Filter (Butterworth)	Through, 100MHz, 30MHz, 6MHz (-3dB nominal)

Reference Clock

Frequency range	300kHz to 300MHz
Frequency resolution	1Hz
Frequency stability*2	±1ppm
Aging	±1ppm/year

*1 After the 30 minute warm-up time has passed after calibration
*2 After the 30 minute warm-up time has passed

VB8300 Functional Specifications

Waveform Memory

Memory element length	From 256 points up to the installed memory size
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Waveform Output Control

Clock Shift	Arbitrary number of clock cycles between 0 and 1,000,000
Start trigger	Internal / External
Waveform output sequence	Waveform elements:128 Repetition number of waveform element:1 to 65536 Repetition number of sequence:1 or infinite

Waveform Output

Output attenuator setting	+6.0 to -20.0dB (resolution: 0.1dB)
Output phase setting	-180deg to +180deg (resolution: 0.5deg)
Amplitude error setting	-30% to +30% (resolution: 0.5%)
Phase error setting	-30deg to +30deg (resolution: 0.5deg)
DC voltage offset (Common-mode)	-500mV to +1500mV (resolution: 1mV)
DC voltage offset (Differential)	-100mV to +100mV (resolution: 0.2mV)

Digital Output Option

Output data	Analog / Digital (Each OUT independence)
Output format	2's complement / Offset binary
Output level	LVDS (Differential 100Ω terminated)
Output connector	HIROSE DX10A-68S

Analog Summing Option

Summing Signal	Channel selectable (IQ and/or external input)
Output attenuator	0dB Fixed (Depend on the Output attenuator setting for each channels)
DC voltage offset (Common-mode)	-500mV to +1500mV (resolution: 1mV)
DC voltage offset (Differential)	-100mV to +100mV (resolution: 0.2mV)

Sequence Trigger Option

Trigger source	Select one from output channels and external input
Sampling trigger source	Select one from output channels and external input

VB8300 Interfaces and Storage Devices

LAN	Standard : 10Base-T/100Base-TX Auto detect Connector : RJ-45 Protocol : TCP/IP
Serial	Standard : EIA RS232 Connector : 9pin D-sub male Communication speed : 9600 to 115200 bps Communication method : Asynchronous
USB	Standard : USB 1.1 (Host) Connector : USB-A x2
Storage devices	CF : Compact Flash™ Type I (Memory card) HDD : 30GB

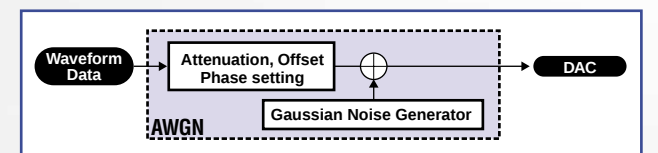
VB8300 General Specifications

Operating conditions	Temperature : 5 to 40°C Humidity : 20 to 80%RH (no condensation)
Power supply voltage	100 to 120VAC / 220 to 240VAC
Power supply frequency	50 / 60Hz
Maximum power consumption	300VA
External dimensions	426(W) x 176(H) x 450(D) mm (Excludes the handles and other projections)
Weight	Approx. 16kg

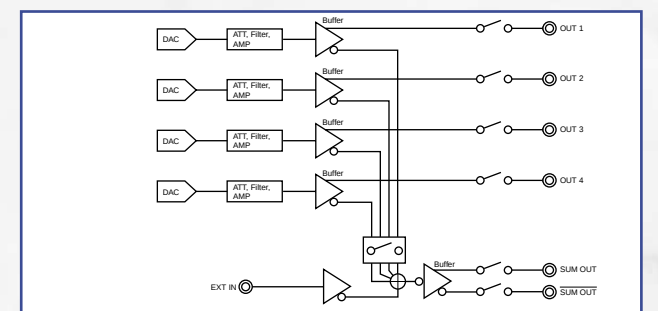
VB8300 Model and Suffix Code

Model	Suffix Code	Description
703155		VB8300 Baseband Signal Analyzer
	-0642	2ch(1 Output, Differential output), 64MPoints Memory
	-1282	2ch(1 Output, Differential output), 128MPoints Memory
	-0644	4ch(2 Output, Differential output), 64MPoints Memory
	-1284	4ch(2 Output, Differential output), 128MPoints Memory
	-0648	8ch(4 Output, Single-ended output), 64MPoints Memory
	-1288	8ch(4 Output, Single-ended output), 128MPoints Memory
Power Cable	-D	UL, CSA standard
	-F	VDE standard
	-S	BS standard
	-R	SAA standard
Options	/D2	2ch Digital Output (for 703155-0642 or 703155-1282)
	/D4	4ch Digital Output (for 703155-0644 or 703155-1284)
	/D8	8ch Digital Output (for 703155-0648 or 703155-1288)
	/AT	Analog Summing Out, Sequence Trigger

VB8300 Noise Adding



VB8300 Analog Summing Out Option



Characteristic

ACPR(Adjacent Channel Power Ratio)

