

R3000 EMI RECEIVERS



Fully IF digital EMI receiver family. Full Compliance to CISPR 16-1 for measurement of electromagnetic interference in accordance with the requirements of EMI standards such as CISPR, EN 550xx, FCC and MIL.

R3000 EMI receivers are PC based microprocessor controlled with advanced software for EMC automation. Fitted with continuously active pre-selectors that allow excellent dynamic range and precise EMC measurements.

TECHNICAL SPECIFICATIONS EMI RECEIVERS

	R3010	R3030	R3300
FREQUENCY			
Frequency Range	9kHz-30MHz	9kHz-300MHz	9kHz-3000MHz
Frequency Setting	1Hz (9kHz-30 MHz)	1Hz (9kHz-300 MHz)	1Hz (9kHz - 1000 MHz) 10Hz (1000 - 3000 MHz)
Internal Reference Frequency			
Aging per Year	2×10^{-6}	2×10^{-6}	2×10^{-6}
Temperature Drift	15×10^{-5} (+10 °C to +40 °C)	15×10^{-5} (+10 °C to +40 °C)	15×10^{-5} (+10 °C to +40 °C)
External Reference Frequency	10 MHz	10 MHz	10 MHz
Frequency Display Local (manual mode)	Numeric Display	Numeric Display	Numeric Display
Resolution	1Hz	1Hz	1Hz
Frequency Display Remote (manual mode)	Numeric Display	Numeric Display	Numeric Display
Resolution	1Hz	1Hz	1Hz
Frequency Display Remote (sweep mode)	Graphic Display on PC SW	Graphic Display on PC SW	Graphic Display on PC SW
Resolution	Frequency Step (zoom function)	Frequency Step (zoom function)	Frequency Step (zoom function)
Measurement Time (manual mode)	2 ms to 90 min	2 ms to 90 min	2 ms to 90 min
Resolution	1 ms (< 60 sec) 1 sec (> 60 sec)	1 ms (< 60 sec) 1 sec (> 60 sec)	1 ms (< 60 sec) 1 sec (> 60 sec)
Measurement Time (sweep mode)	2 ms to 60 s	2 ms to 60 s	2 ms to 60 s
Resolution	1 ms	1 ms	1 ms
RESOLUTION BANDWIDTHS			
Digital EMI Filters BW	200 Hz (-6dB Bandwidth) 9 kHz (-6dB Bandwidth) 120 kHz (-6dB Bandwidth)	200 Hz (-6dB Bandwidth) 9 kHz (-6dB Bandwidth) 120 kHz (-6dB Bandwidth)	200 Hz (-6dB Bandwidth) 9 kHz (-6dB Bandwidth) 120 kHz (-6dB Bandwidth) 1MHz (Impulse Bandwidth)
Hardware Filters BW	15 kHz 1 MHz	15 kHz 1 MHz	15 kHz 1 MHz

PRESELECTION**Fixed & Tunable Filters**

9 kHz to 150 kHz
 150 kHz to 2 MHz
 2 MHz to 6 MHz
 6 MHz to 15 MHz
 15 MHz to 30 MHz

LEVEL**Maximum Input Level**

DC Voltage 50 V (AC-coupled)
 CW RF Power +20 dBm
 Pulse Spectral Density +97 dBμV/MHz

Immunity to Interference

Image Frequency > 60 dB
 Intermediate Frequency > 70 dB
 RF Shielding 3 V/m (50 Ω termination)

Noise Floor

	(IF 200 Hz)	(IF 9kHz)
Peak	< -10 dBμV	< 10 dBμV
Quasi Peak	< -15 dBuV	< 5 dBuV
CISPR Average	< -20 dBuV	< 0 dBuV
RMS	< -20 dBuV	< 0 dBuV
CISPR RMS	< -20 dBuV	< 0 dBuV

FRONT PANEL**Knob**

Display 3,5 Inch TFT with Touch Panel
Features Virtual Keyboard
Level Display (digital) Numeric (resolution 0,01 dB)
Level Display (analog) Bargraph
Detectors Peak, Quasi-Peak, CISPR Average, RMS, CISPR RMS
Number of Contemporary Detectors 3
Display Units dBμV, dBm, dBμV/m, dBμA/m, dBA/m, dBμA, dBpW

INPUT & OUTPUT**RF Input**

Impedance 50 Ω
 Connector(s) N female (RF 9 kHz to 30 MHz)
 VSWR 2,0 to 1,0 (attenuation 0 dB)
 1,2 to 1,0 (attenuation ≥ 10 dB)
 Input Attenuator 0 dB to 50 dB in 10 dB steps

IF Output

Impedance 50 Ω
 Connector N female
 IF Frequency 10,7 MHz

Tracking Generator +50 to +95 dBμV

GENERAL

Interface Ethernet 10/100 MB (TCP Port: 1893)

PC Requirement Pentium Dual Core Processor
 Above 1GB RAM (min)
 Ethernet 10/100 MB Network Board
 WIN XP, WIN VISTA, WIN 7 OS

Power Supply 230Vac ± 10% 50-60Hz

Power Consumption 50VA

Operating Temperature 0° to 45°C

Storage Temperature -20° to 70°C

Size (WxHxD) 450x135x436mm.

Weight 14 kg.

R3010**R3030****R3300**

9 kHz to 150 kHz
 150 kHz to 2 MHz
 2 MHz to 6 MHz
 6 MHz to 15 MHz
 15 MHz to 30 MHz
 30 MHz to 60 MHz
 60 MHz to 140 MHz
 140 MHz to 300 MHz

50 V (AC-coupled)
 +20 dBm
 +97 dBμV/MHz

> 60 dB
 > 70 dB
 3 V/m (50 Ω termination)

(IF 200 Hz)	(IF 9kHz)	(IF 120kHz)
< -10 dBμV	< 10 dBμV	< 10 dBμV
< -15 dBuV	< 5 dBuV	< 5 dBuV
< -20 dBuV	< 0 dBuV	< 5 dBuV
< -20 dBuV	< 0 dBuV	< 5 dBuV
< -20 dBuV	< 0 dBuV	< 5 dBuV

3,5 Inch TFT with Touch Panel
 Virtual Keyboard
 Numeric (resolution 0,01 dB)
 Bargraph
 Peak, Quasi-Peak, CISPR Average, RMS, CISPR RMS
 3
 dBμV, dBm, dBμV/m, dBμA/m, dBA/m, dBμA, dBpW

50 Ω
 N female (RF 9 kHz to 30 MHz)
 N female (RF 30 MHz to 300 MHz)
 2,0 to 1,0 (attenuation 0 dB)
 1,2 to 1,0 (attenuation ≥ 10 dB)
 0 dB to 50 dB in 10 dB steps

50 Ω
 N female
 10,7 MHz (< 30 MHz)
 18 MHz (> 30 MHz)

+50 to +95 dBμV (9 kHz to 150 MHz)

Ethernet 10/100 MB (TCP Port: 1893)

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 Ethernet 10/100 MB Network Board
 WIN XP, WIN VISTA, WIN 7 OS

230Vac ± 10% 50-60Hz

50VA

0° to 45°C

-20° to 70°C

450x135x436mm.

14 kg.

9 kHz to 150 kHz
 150 kHz to 2 MHz
 2 MHz to 6 MHz
 6 MHz to 15 MHz
 15 MHz to 30 MHz
 30 MHz to 60 MHz
 60 MHz to 140 MHz
 140 MHz to 300 MHz
 300 MHz to 600 MHz
 600 MHz to 1000 MHz
 1000 MHz to 2000 MHz
 2000 MHz to 3000 MHz

50 V (AC-coupled)
 +20 dBm
 +97 dBμV/MHz

> 60 dB
 > 70 dB
 3 V/m (50 Ω termination)

(IF 200 Hz)	(IF 9kHz)	(IF 120kHz)
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< -15 dBuV	< 5 dBuV	< 5 dBuV
< -20 dBuV	< 0 dBuV	< 5 dBuV
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