The Model 10W1000C is a portable, self-contained, air-cooled, broadband, solid state amplifier designed for applications where instantaneous bandwidth and high gain are required. Push-pull circuitry is utilized in the high power stages to lower distortion and improve stability. The 10W1000C, when used with an RF sweep generator, will provide a minimum of 10 watts of swept power. Included is a front panel gain control which permits the operator to conveniently set the desired output level. The 10W1000C is protected from RF input overdrive by limiting diodes and an RF input leveling circuit which controls the RF input level to the RF amplifier first stage when the RF input level is increased above 0 dBm. The RF Amplifier stages are protected from over temperature by removing the DC voltage to them if an over temperature condition occurs due to cooling blockage or fan failure. There is a digital display on the front panel to indicate the operate status and fault conditions when an over temperature, power supply, or amplifier fault has occurred. The unit can be returned to operate when the condition has been cleared. The 10W1000C includes digital control for both local and remote control of the amplifier. This 8-bit RISC microprocessor controlled board provides both IEEE-488 (GPIB) and asynchronous, full duplex RS-232 control of all amplifier functions.

![10W1000C Typical Power Output](image-url)
SPECIFICATIONS
Model 10W1000C

RATED POWER OUTPUT ................................................................. 10 watts minimum
INPUT FOR RATED OUTPUT .......................................................... 1.0 milliwatt maximum

POWER OUTPUT @ 3dB COMPRESSION
Nominal........................................... 20 watts
Minimum........................................... 10 watts

POWER OUTPUT @ 1dB COMPRESSION
Nominal........................................... 17 watts
Minimum........................................... 10 watts

FLATNESS ................................................................. ±1.0 dB typical
................................................................. ±1.5 dB maximum

FREQUENCY RESPONSE.......................................................... 500 kHz-1000 MHz instantaneously

GAIN (at maximum setting)......................................................... 40 dB minimum

GAIN ADJUSTMENT (Continuous Range) ........................................ 20 dB minimum (4096 steps remote)

INPUT IMPEDANCE ............................................................... 50 ohms, VSWR 2.0:1 maximum

OUTPUT IMPEDANCE ............................................................... 50 ohms, nominal

MISMATCH TOLERANCE * .......................................................... 100% of rated power without foldback. Will operate
without damage or oscillation with any magnitude and phase of source and load impedance.

MODULATION CAPABILITY ......................................................... Will faithfully reproduce AM, FM, or pulse
modulation appearing on the input signal

HARMONIC DISTORTION .......................................................... Minus 20 dBc maximum at 10 watts

THIRD ORDER INTERCEPT POINT ........................................... 50 dBm typical

PRIMARY POWER (selected automatically) ..................................... 90-132, 180-264 VAC
50/60 Hz, single phase
300 watts maximum

REMOTE INTERFACES ............................................................. IEEE-488, RS-232

CONNECTORS
RF ................................................................. Type N female
REMOTE CONTROL
IEEE-488 ................................................................. 24 pin female
RS-232 ................................................................. 9 pin Subminiature D (female)

REMOTE INTERLOCK ............................................................. 15 Pin Subminiature D

COOLING ................................................................. Forced air (self contained fans)

WEIGHT ................................................................. See Model Configurations

SIZE (WxHxD) ................................................................. See Model Configurations
* See Application Note #27

MODEL CONFIGURATIONS

<table>
<thead>
<tr>
<th>MODEL NUMBER</th>
<th>RF INPUT</th>
<th>RF OUTPUT</th>
<th>WEIGHT</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>10W1000C</td>
<td>Type N female on front panel</td>
<td>Type N female on front panel</td>
<td>20.5 kg (45.0 lb)</td>
<td>50.3 x 15.5 x 37.6 cm (19.8 x 6.1 x 14.8 in)</td>
</tr>
<tr>
<td>10W1000CM1</td>
<td>Type N female on rear panel</td>
<td>Type N female on rear panel</td>
<td>20.5 kg (45.0 lb)</td>
<td>50.3 x 15.5 x 37.6 cm (19.8 x 6.1 x 14.8 in)</td>
</tr>
<tr>
<td>10W1000CM2</td>
<td>Same as 10W1000C with enclosure removed for rack mounting</td>
<td>Type N female on rear panel</td>
<td>16.0 kg (35.0 lb)</td>
<td>48.3 x 12.7 x 37.6 cm (19.0 x 5.0 x 14.8 in)</td>
</tr>
<tr>
<td>10W1000CM3</td>
<td>Same as 10W1000CM1 with enclosure removed for rack mounting</td>
<td>Type N female on rear panel</td>
<td>16.0 kg (35.0 lb)</td>
<td>48.3 x 12.7 x 37.6 cm (19.0 x 5.0 x 14.8 in)</td>
</tr>
<tr>
<td>10W1000CM4</td>
<td>Same as 10W1000CM3 with firmware changes – The 10W1000CM4 turns on and is at maximum gain when the AC imput is applied in either the local or remote functions</td>
<td>Type N female on rear panel</td>
<td>16.0 kg (35.0 lb)</td>
<td>48.3 x 12.7 x 37.6 cm (19.0 x 5.0 x 14.8 in)</td>
</tr>
</tbody>
</table>