

AR AR08M4 AR4i8 Series

AR08M4 and AR4i8 | Solid-state Power Amplifiers

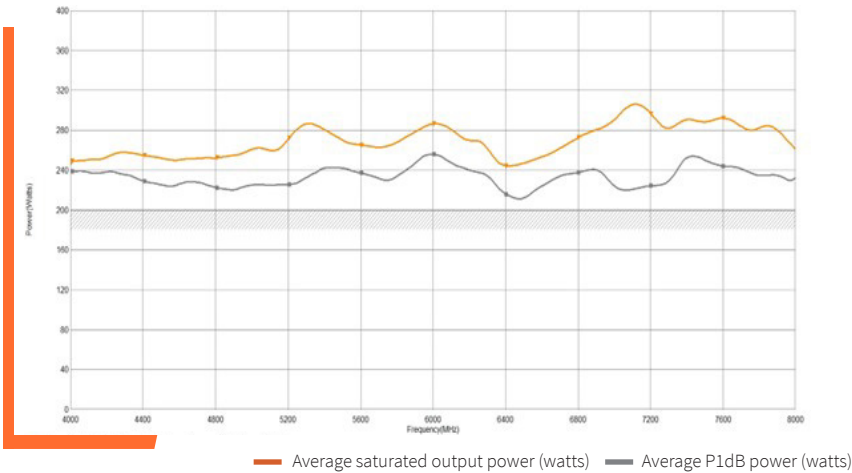


INTRODUCTION

Introducing the AR08M4 (0.8-4.0 GHz) and AR4i8 (4.0-8.0 GHz) solid-state power amplifiers, built on the foundation of AR's market-leading 6 GHz design. These scalable, single-band Class A amplifiers deliver unmatched linearity and exceptional reliability, even under the most rigorous operating conditions. By combining the AR W, M, and I series, users gain a comprehensive operational bandwidth spanning from 80 MHz to 8 GHz.

Additionally, the AR I series offers a cost-effective solution for extending frequencies from 6 GHz to 8 GHz, designed to address the increasing frequency testing requirements of automotive manufacturers. This includes support for testing up to 7.125 GHz for ALSE Radiated Immunity (RI) tests in accordance with ISO 11452-2 and Mobile Transmitter tests per ISO 11452-9 methodology.

The lineup will expand in Q1 2025 with the introduction of a 10-watt model, further enhancing flexibility in high-frequency testing.



AMPLIFIER MODEL	FREQUENCY	P1dB	P3dB	Size
AR08M4-030	0.8 to 4.0 GHz	30 W	40 W	4 U Bench Case
AR08M4-060	0.8 to 4.0 GHz	60 W	80 W	4 U Bench Case
AR08M4-100	0.8 to 4.0 GHz	100 W	150 W	4 U Bench Case
AR08M4-200	0.8 to 4.0 GHz	200 W	300 W	4 U Bench Case
AR08M4-400	0.8 to 4.0 GHz	400 W	500 W	7 U Bench Case
AR08M4-800	0.8 to 4.0 GHz	800 W	1000 W	20 U Rack Case

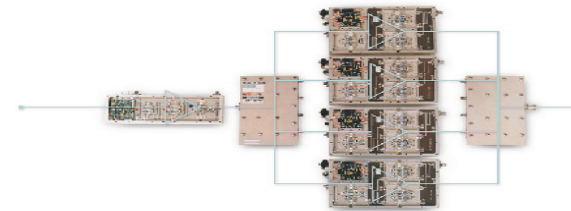
AMPLIFIER MODEL	FREQUENCY	P1dB	P3dB	Size
AR4i8-030	4 to 8 GHz	30 W	40 W	4 U Rack Mount
AR4i8-050	4 to 8 GHz	50 W	60 W	4 U Rack Mount
AR4i8-100	4 to 8 GHz	100 W	120 W	4 U Rack Mount
AR4i8-200	4 to 8 GHz	200 W	230 W	7 U Rack Mount
AR4i8-400	4 to 8 GHz	400 W	500 W	25 U Rack



Intuitive touchscreen interface

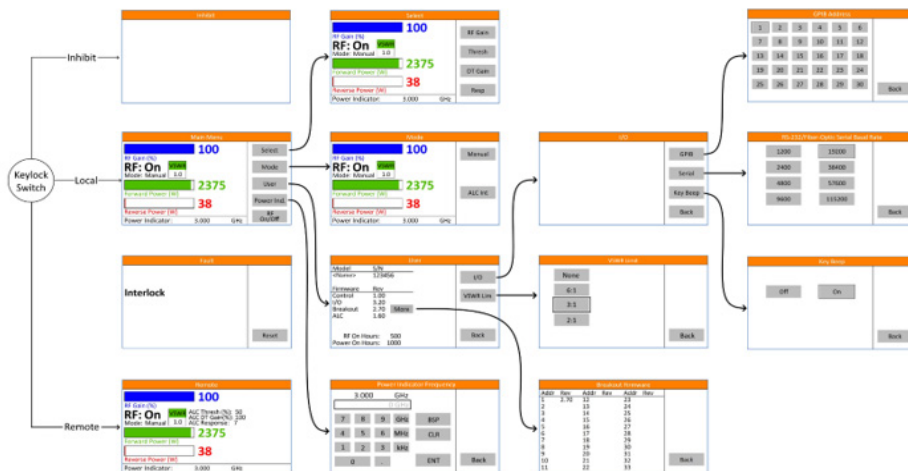
Modular design

Modular product design offers several advantages, starting with a reduced bill of materials (BOM), as standard components are shared across various models, leading to lower production costs and simplified inventory management.



- Reduced BOM
- Reduced Spare Parts List
- Soft Fail
- Ease and Speed of Service
- Power upgrade paths

It also results in a reduced recommended spare parts list, since fewer unique parts are needed for maintenance or repairs, streamlining logistics and minimizing downtime. A soft fail feature means that when one module fails, the entire system does not go down, allowing the product to continue functioning in a limited capacity until service is performed. The ease and speed of service are significantly enhanced, as individual modules can be quickly replaced or upgraded without needing to disassemble the entire product. Additionally, modular designs offer power upgrade paths, enabling users to easily enhance the performance of their product by upgrading specific modules, rather than replacing the whole system.



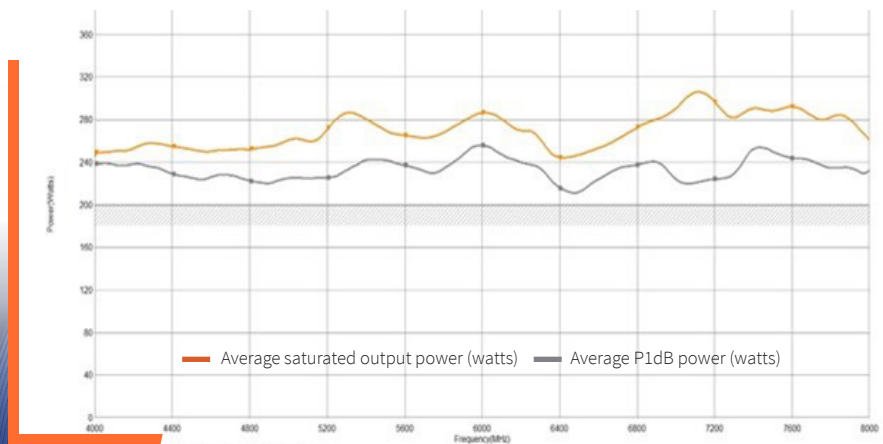
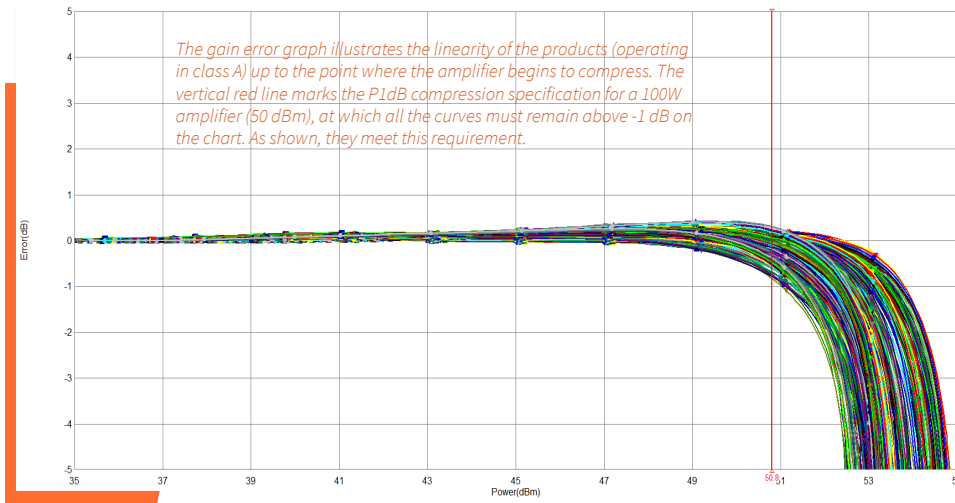
IEEE 488 (GPIB)
USB 2.0
ETHERNET
RS232

Multiple remote control options are available including IEEE 488 (GPIB), USB 2.0, Ethernet, and RS232. These interfaces allow for seamless integration with different control systems and enable efficient data transfer across a range of setups, whether in modern or legacy systems. The versatility of multiple communication protocols ensures compatibility with different devices and networks, supporting remote monitoring and automation.

This ultimately increases operational efficiency and adaptability across diverse testing scenarios.



TECHNICAL ADVANTAGES



“The AR08M4 and AR4i8 amplifier series offers several technical advantages that set it apart from other amplifiers in the market. These features ensure optimal performance, reliability, and efficiency across a wide range of demanding applications.”

High Linearity: Ensures minimal signal distortion, making it ideal for applications requiring high fidelity.

High Power Output: Capable of delivering significant power, which is crucial for various industrial, EMC, aerospace, and defence applications.

Wide Frequency Range: Covers a broad frequency range from 4 to 8 GHz, complementing the 1G and 4G series.

High Efficiency: Efficient power usage reduces heat generation and energy consumption.

Reliability: The solid state design offers robust performance and long operational life, even in harsh VSWR environments.

Thermal Management: Advanced thermal management techniques ensure stable operation and prevent overheating.



80MHZ TO 8GHZ BANDWIDTH

The new M (0.8-4.0 GHz) and I (4.0-8.0 GHz) series, combined with the AR W Series, enable a functional bandwidth of 80 MHz to 8 GHz. The system operates over three bands: 80 MHz to 1.0 GHz, 0.8-4 GHz, and 4-8 GHz.

It offers a three-box cost-effective solution that meets the increased frequency test demands of automotive manufacturers, up to 7.215 GHz for ALSE RI tests ISO aligned to 11452-2 test methodology, 200 V/m CW

W Series		M Series		I Series	
Frequency	P1dB	Frequency	P1dB	Frequency	P1dB
0.05 to 1 GHz	25 Watt	0.8 to 4 GHz	30 Watt	4 to 8 GHz	30 Watt
0.08 to 1 GHz	80 Watt	0.8 to 4 GHz	60 Watt	4 to 8 GHz	50 Watt
0.08 to 1 GHz	125 Watt	0.8 to 4 GHz	100 Watt	4 to 8 GHz	100 Watt
0.08 to 1 GHz	250 Watt	0.8 to 4 GHz	200 Watt	4 to 8 GHz	200 Watt
0.08 to 1 GHz	500 Watt	0.8 to 4 GHz	400 Watt	4.0 to 8.0 GHz	400 Watt
0.08 to 1 GHz	1000 Watt	0.8 to 4.0 GHz	800 Watt		

