

# GV<sup>2</sup>Series

## Digital/Analog FM



3.5 kW – 80 kW  
FM Transmitters

 **Radio**<sup>®</sup>  
Digital AM & FM

 **Dr**m

**JUST  
ADD  
AUDIO**

 **nautel**

# DIGITAL | EFFICIENT | INTELLIGENT | PROVEN



## Proven Architecture

The GV Series represents years of Nautel transmission innovation. These new designs incorporate everything you have come to expect from a modern Nautel digital/analog transmitter. Engineered using Nautel's field-proven binary combined high-power architecture, they offer the industry's highest digital power outputs, commercial-grade instrumentation, advanced intelligent features, and award-winning control via Nautel's AUI. All of this capability is packaged in thoughtful uncluttered designs that allow easy access for maintenance.

Broadcasters worldwide have installed over 4,000 systems based on Nautel's high power architecture and serve the globe's largest and most successful stations.

## GV2 Enhancements

- New IQ interface card
- New HTML AUI
- Embedded compute engine with 10X more processing power
- Optimized power supplies
- Solid state storage
- Virtualization Engine

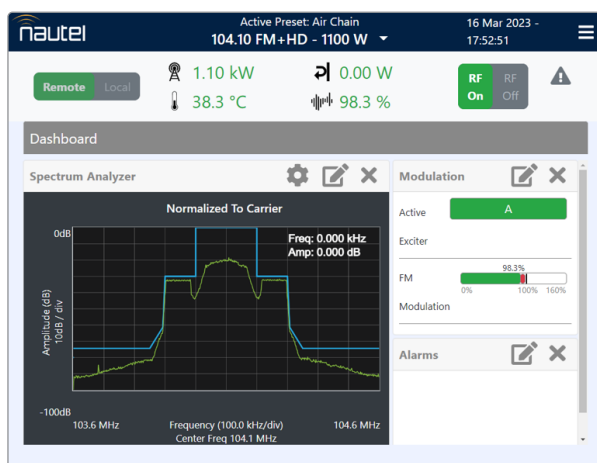
## Exceptional Hybrid Efficiency

**70%**  
at -20 dB

**60%**  
at -14 dB

**55%**  
at -10 dB

## MORE CONTROL



## 100% Remote Access

No matter where you are, you're only moments away from ensuring your GV2 Series transmitter is operating optimally. Open any modern web browser, enter your transmitter's IP address, login, and you're connected.

## SNMP Support

GV2 Series transmitters support SNMP (Simple Network Management Protocol), a standard protocol that allows network management systems to monitor GV2 transmitters.

## Real Time Built-In Instrumentation

GV2 Series transmitters include built-in instrumentation that would cost tens of thousands of dollars if purchased separately.

## Unique MER instrumentation

Real-time MER (Modulation Error Ratio) provides the ability to diagnose issues such as MP3 carrier interference with the analog signal due to FM analog signal over-modulation.

# GV<sup>2</sup>



## LESS IS MORE

Nautel GV2 transmitters are the first in the industry capable of integrating all HD Radio™ components inside the transmitter. That means LESS wiring, boxes, cost and complexity MORE of what you need.\* The GV2 supports HD Radio™ with Xperi Gen4 Importer, Exporter, and Engine implementations for HD radio encoding, station logo and artist experience and is the first solution that locks FM and HD signals synchronously to eliminate HD FM blend drift. Omnia® for Nautel covers all FM and HD Radio audio processing needs and provides Livewire® AoIP inputs for all audio streams. No additional hardware is required.



## JUST ADD AUDIO

AUDIO IN



RF Out

Everything Else Is Inside



## HD Digital Radio Test Drive

Analog FM broadcasters can easily evaluate the potential of HD Radio transmission in their market; with a purchased GV2, broadcasters can test HD for up to 6 months without needing to install and purchase \$40-50K of HD gear. Ask your Nautel representative for more details\*\*

\* Requires optional purchase of Nautel's Software-Based Air Chain.

\*\* The program is currently focused on US and Canadian installations. Talk to your Nautel representative if you would like to consider a trial in other locations. Other conditions apply.

## Digital Deployment Flexibility

In addition to the generous employment options facilitated by Nautel's software-based air chain, broadcasters can also choose to implement their HD Radio transmission using a traditional external importer/exporter approach combined with Nautel's engine card.



HD MultiCast+ Importer/Exporter



GV <sup>2</sup> SERIES		Upgradeable GV <sup>2</sup> 3.5	GV <sup>2</sup> 5	Upgradeable GV <sup>2</sup> 7.5	GV <sup>2</sup> 10	Upgradeable GV <sup>2</sup> 15	GV <sup>2</sup> 20	GV <sup>2</sup> 30 <sup>N</sup>	Upgradeable GV <sup>2</sup> 30	GV <sup>2</sup> 40	GV <sup>2</sup> 60	GV <sup>2</sup> 80
Analog Only	Max Power	4.1 kW	5.5 kW	8.2 kW	11 kW	16.5 kW	22 kW	33 kW	33 kW	44 kW	66 kW	88 kW
	Typical Efficiency	71%	72%	71%	72%	71%	72%	72%	71%	72%	72%	72%
FM + HD -20dB	Total Avg Power MP1 <sup>1</sup>	3.9 kW	5.2 kW	7.8 kW	10.4 kW	15.5 kW	20.7 kW	31.1 kW	31.1 kW	41.4 kW	62.1 kW	82.8 kW
	Analog Power MP1 <sup>1</sup>	3.8 kW	5.1 kW	7.7 kW	10.3 kW	15.4 kW	20.5 kW	30.8 kW	30.8 kW	41.0 kW	61.5 kW	82.0 kW
	Analog Power MP3 <sup>1</sup>	3.8 kW	5.0 kW	7.5 kW	10.0 kW	15.0 kW	20.0 kW	30.0 kW	30.0 kW	40.0 kW	60.0 kW	80.0 kW
	Typical Efficiency	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%
FM + HD -14dB	Total Avg Power MP1 <sup>1</sup>	3.6 kW	4.8 kW	7.2 kW	9.6 kW	14.4 kW	19.2 kW	28.9 kW	28.9 kW	38.5 kW	57.7 kW	77.0 kW
	Analog Power MP1 <sup>1</sup>	3.5 kW	4.6 kW	6.9 kW	9.3 kW	13.9 kW	18.5 kW	27.8 kW	27.8 kW	37.0 kW	55.5 kW	74.0 kW
	Analog Power MP3 <sup>1</sup>	3.4 kW	4.5 kW	6.8 kW	9.0 kW	13.5 kW	18.0 kW	27.0 kW	27.0 kW	36.0 kW	54.0 kW	72.0 kW
	Typical Efficiency	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%
FM + HD -10dB	Total Avg Power MP1 <sup>1</sup>	2.8 kW	3.7 kW	5.6 kW	7.4 kW	11.1 kW	14.9 kW	22.3 kW	22.3 kW	29.7 kW	44.6 kW	59.4 kW
	Analog Power MP1 <sup>1</sup>	2.5 kW	3.4 kW	5.1 kW	6.8 kW	10.1 kW	13.5 kW	20.3 kW	20.3 kW	27.0 kW	40.5 kW	54.0 kW
	Analog Power MP3 <sup>1</sup>	2.5 kW	3.3 kW	5.0 kW	6.6 kW	10.0 kW	13.0 kW	20.0 kW	20.0 kW	26.0 kW	40.0 kW	52.0 kW
	Typical Efficiency	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%
HD Only -20dB	Max Power MP3 <sup>1</sup>	2.1 kW	2.8 kW	4.1 kW	5.5 kW	8.3 kW	11.0 kW	16.5 kW	16.5 kW	22.0 kW	33.0 kW	44.0 kW
	Typical Efficiency	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%
HD Only -14dB	Max Power MP3 <sup>1</sup>	1.7 kW	2.3 kW	3.4 kW	4.5 kW	6.8 kW	9.0 kW	13.5 kW	13.5 kW	18 kW	27.0 kW	36.0 kW
	Typical Efficiency	54%	54%	54%	54%	54%	54%	54%	54%	54%	54%	54%
HD Only -10dB	Max Power MP3 <sup>1</sup>	1.5 kW	2.0 kW	3.0 kW	4.0 kW	6.0 kW	8.0 kW	12.0 kW	12.0 kW	16.0 kW	24.0 kW	32.0 kW
	Typical Efficiency	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%
HD Options	JUST ADD AUDIO*	Software-Based Air Chain with Omnia for Nautel, vPorter, vExgine, Blend-Lock, Air Chain Selector										
	Legacy	HD Multicast+ Importer Exporter and engine card										
AC Input		1-Ph 175-265 V or 3-Ph 175-265 V / 303-459 V (47-66 Hz) <sup>2</sup>										
Power Modules		2	4	8	12	16	24	32	48	64		
Switching Power Supplies		4	8	16	24	32	48	64				
Power Factor		0.98 (unity power factor corrected)										
Height (in/cm)		72.5 (184.2)									103.7 (263.4) <sup>4</sup>	
Width (in/cm)		23 (58.4)				36 (91.4)		51 (129.5)	66 (167.5)		102(259)	132(335)
Depth (in/cm)		33 (83.8) <sup>3</sup>										
Weight (in/cm)		333 (151)		421 (191)		830 (376)		1235 (560)	1,640 (744)		2600(1182)	3420(1555)

<sup>(1)</sup> Typical power measured with 1.1:1 VSWR

<sup>(2)</sup> Actual ac input voltage range is 90-265V/156-459V; transmitter limited to 1/3 rated power below 175/303 V.

<sup>(3)</sup> Depth can be reduced to 30" (76.2 cm) with the rear filter panel(s) and front door(s) removed.

<sup>(4)</sup> Please discuss your specific height and layout needs with Nautel sales representatives.

Specifications subject to change. Please refer to individual product specification sheets for full product details.

Power outputs vary with injection level, frequency, VSWR, MP operating mode, and symmetrical vs. asymmetrical sidebands. Please contact your Nautel representative to discuss your specific HD power requirement.

**Upgradeable** GV2 Series Transmitters are future ready, providing an easy upgrade path to the next highest nameplate power level.

To achieve similar analog TPO as provided by HD PowerBoost, customers implementing Software-Based Air Chain with PAR2 can expect 1 dB lower digital injection levels.

## Worry Free Transmission

Nautel has emerged as the world's largest FM/AM manufacturer of radio broadcast transmitters with more than 20,000 deployments in 177 countries.

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