



# MASTR<sup>®</sup> V IP SIMULCAST

## VHF, UHF, 700 MHz, 800 MHz

### A TRUE SIMULCAST DIFFERENTIATOR

The MASTR V IP Simulcast System provides an end-to-end all-digital system based on the proven MASTR V hardware platform. The system is composed of a MASTR V IP Control Point, MASTR V Transmit sites, and optional MASTR V Auxiliary Receiver sites. Since the system simultaneously repeats the same radio signal from multiple geographic locations, deploying an IP Simulcast System can significantly reduce the number of required physical sites.

#### FEATURES

Software upgradeable to P25 Phase 2 (TDMA).

Standardized MASTR V platform.

Reduction in equipment and required floor space.

Remote capability for timing, setup, and alignment verification.

Voice, Interoperability, Data, and Access (VIDA<sup>®</sup>) network-based Information Assurance support.

Fully operational over IP using VIDA network.

#### STANDARDIZED PLATFORM

- VIDA Network Sentry for status and alarming
- Mini-mobility Exchange (MME) data handling
- Redundant GPS time base receivers
- Optional Intrusion Detection System
- Redundant Ethernet Switches
- Router for connectivity to VIDA network
- MASTR V Control Shelf and Modules
- Power Supply Units (115 VAC or -48 VDC)
- Linear Mode Transmitters for improved RF system performance

#### WIDE-AREA COVERAGE

MASTR V Simulcast Systems provide a solution for wide-area coverage demands and enhance communications in situations where the size of the desired coverage area is too large for one centralized transmitter location and there is a need to provide coverage to multiple agencies in a common territory.

## GENERAL SPECIFICATIONS

Size (Base Station):  
4 channels per 5 Rack Unit Shelf

Open Rack Dimensions (H x W x D):  
86.0 x 20.5 x 19.295 in.  
(218 x 52 x 49 cm)

Cabinet Dimensions (H x W x D):  
86.0 x 23.0 x 31.5 in.  
(218 x 58 x 80 cm)

Power:  
90-230 VAC or -48 VDC

Ambient Temperature Range:  
-22 to +140°F (-30 to +60°C)

Humidity:  
90% @ 122°F (+50°C)

Altitude:  
- Operational: Up to 15,000 ft  
(4,572 m)  
- Shippable: Up to 50,000 ft  
(15,240 m)

### About Harris Corporation

Harris Corporation is a leading technology innovator that creates mission-critical solutions that connect, inform and protect the world. The company's advanced technology provides information and insight to customers operating in demanding environments from ocean to orbit and everywhere in between. Harris has approximately \$8 billion in annual revenue and supports customers in 125 countries through four customer-focused business segments: Communication Systems, Space and Intelligence Systems, Electronic Systems, and Critical Networks.

# PROVEN MASTR V PLATFORM

## TRANSMITTER

	VHF	UHF	700	800
Frequency Range (MHz):	150-174	380-400, 403-430, 450-470, 470-494, 494-520	764-776	851-870
Rated Power Output (W):	100	100	100	100
RF Output Impedance (ohm):	50	50	50	50
Conducted Spurious and Harmonic Emissions (dB):	<86	<86	<70	<70
Frequency Stability (ppm):	<0.1	<0.1	<0.1	<0.1
Channel Spacing (kHz):	12.5	12.5	12.5	12.5
Synthesizer Step Size (kHz):	1.25	1.25	6.25	6.25

## RECEIVER

	VHF	UHF	700	800
Frequency Range (MHz):	150-174	380-400, 403-430, 450-470, 470-494, 494-520	799-817	806-824
Sensitivity, TIA-P25 (dBm):	<-118	<-118	<-119	<-119
RF Input Impedance (ohm):	50	50	50	50
Intermodulation Rejection, TIA-P25 (dB):	>80	>80	>80	>80
Spurious and Image Rejection (dB):	≥90	≥90	≥90	≥90
Frequency Stability (ppm):	<0.1	<0.1	<0.1	<0.1
Channel Spacing (kHz):	12.5	12.5	12.5	12.5
Synthesizer Step Size (kHz):	1.25	1.25	6.25	6.25

## OPERATIONAL MODES

Mode	Modulation	Emission Designator
P25 Phase 1	C4FM	8K00F1D
P25 Linear Simulcast	WCQPSK	9K70D1W
P25 Phase 2	HDQPSK	9K80D7W

## REGULATORY DATA

Frequency Range (MHz)	Power Output (Adjustable) (W)	FCC Type Acceptance Number	Applicable FCC Rules	Industry Canada Certification Number	Applicable Industry Canada Rules	NTIA Certification Number
150-174	10-100	OWDTR-0065-E	22, 80, 90	3636B-0065	RSS-119	J/F 12/09628
380-400	10-100	NA	NA	NA	NA	J/F 12/09628
403-430	10-100	OWDTR-0129-E	90	3636B-0129	RSS-119	NA
450-470	10-100	OWDTR-0130-E	22, 80, 90	3636B-0130	RSS-119	NA
470-494	10-100	OWDTR-0100-E	90	NA	NA	NA
494-512	10-100	OWDTR-0101-E	90	NA	NA	NA
764-776	10-100	OWDTR-0057-E	90	3636B-0057	RSS-119	NA
851-869	10-100	OWDTR-0053-E	90	3636B-0053	RSS-119	NA

Technical specifications are subject to change without notice. Product sales are subject to applicable U.S. export control laws.

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INFORM AND PROTECT™