

○ VMI Modules

The VMI Unit is a modular unit as previously described. Below are the modules that plug into the motherboard/combiner. These modules can be used to match the VMIU capability based upon system needs:

RF Distribution Module - contains the data receiver to demodulate the FSK data from the ITX and provides signal splitting and amplification for the four individual subscriber ports.

Control Module - contains the microcontroller that accepts the control data from the RF Distribution Module and commands and controls the jamming oscillators and subscriber services.

Jamming Module(s) - contains the frequency agile oscillators that jam the unauthorized channels as controlled by the control module. Each jammer module has specified bandwidths.

○ Ordering Information

Model	Stock No.	Description
VMI-CM4-G	9460 G	VMI Control Module, 4 Port, NOTE:Supports 2 Osc Jammer in Slot 1 - Up to 14 Oscs
VMI-JM421217	9461 2	VMI Jammer Module, 4 Port, 2 Oscillators, 120 to 170 MHz (Channels 14-22)
VMI-JM424351	9465C2V	VMI Jammer Module, 4 Port, 2 Oscillators, 432 to 512 MHz (Channels 59-72)
VMI-JM424959	9473 2	VMI Jammer Module, 4 Port, 2 Oscillators, 496 to 596 MHz (Channels 70-86)
VMI-JM440532	9471	VMI Combination Jammer Module, 4 Port, 4 Oscillators, 54 to 321 MHz (Channels 2-40)
VMI-JM443051	9472	VMI Jammer Module, 4 Port, 4 Oscillators, 306 to 513 MHz (Channels 38-72)
VMI-JM443551	9465C	VMI Jammer Module, 4 Port, 4 Oscillators, 354 to 512 MHz (Channels 46-72)
VMI-JM444965	9468	VMI Jammer Module, 4 Port, 4 Oscillators, 496 to 650 MHz (Channels 70-94)
VMIU-RD423-48	9432 48	VMIU RF Distribution Module, 4 Port, 2 Way, 54-860 MHz Forward, 5-42 MHz Return
VMIU-RD424-48	9442 48	VMIU RF Distribution Module, 4 Port, 2 Way, 54-860 MHz Forward, 5-42 MHz Return
VMIU-RD425-48	9452 48	VMIU RF Distribution Module, 4 Port, 2 Way, 54-860 MHz Forward, 5-42 MHz Return

Stock #	Frequency Range (MHz)	OSC1	OSC2	OSC3	OSC4
9461-2	120- 170	14- 22 Ch 120- 170MHz	14- 22 Ch 120- 170MHz	N/A	N/A
9463	216- 350	23- 33 Ch 216- 278MHz	27- 37 Ch 240- 302MHz	31- 41 Ch 264- 326MHz	35- 45 Ch 288- 350MHz
9465	354- 512	46- 56 Ch 354-416MHz	52- 62 Ch 390- 452MHz	59- 69 Ch 432- 494MHz	62- 72 Ch 450- 512MHz
9468	498- 650	70- 80 Ch 498- 560MHz	75- 85 Ch 528- 590MHz	80- 90 Ch 558- 620MHz	85- 94 & 100 Ch 588- 650MHz
9471	54- 321	2-6 Ch 54-85MHz	14- 22, 99, 7 Ch 114- 177MHz	8- 13 & 23- 28 Ch 179- 249MHz	29- 40 Ch 252- 321MHz
9472	324- 513	38- 49 Ch 324- 375MHz	46- 56 Ch 354-417MHz	52- 62 Ch 390- 453MHz	62- 72 Ch 450- 513MHz
9473-2	498- 596	70- 80 Ch 498- 561MHz	75- 86 Ch 528- 597MHz	N/A	N/A

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VMI

Video Mask Interdiction - Accessories

○ VMI Plug-Ins

The VMI Unit seizure board accepts plug-in circuitry based on system design criteria:

Seizure Board - taps RF and power from the feeder cable.

Directional Coupler - directs a portion of the RF signal to the RF distribution module and VideoMask's other components.

Equalizer - controls tilt of the subscriber output signal. Does not affect the feeder cable or reverse path.

Attenuator - works with the directional coupler to lower the signal reaching the subscriber output ports.

Trim Network - may be used instead of a forward path attenuator to compensate for non-linear system response and allow for forward path balancing.

The TVCB accepts many of the same plug-in circuitry, specifically the Equalizer, Attenuator, and Trim Network.

○ Ordering Information

Model	Stock No.	Description
VMI-CEQ7	9370	VMI Equalizer, Plug-In, Horizontal Profile 750 MHz
VMI-CEQ7V	9375	VMI Equalizer, Plug-In, Vertical Profile 750 MHz
VMI-DC	9310	VMI Directional Coupler, Plug-In 750 MHz
VMI-IEQ5	9351 4	VMI Inverse Equalizer, Plug-In, Horizontal Profile 550 MHz
VMI-IEQ7	9371 4	VMI Inverse Equalizer, Plug-In, Horizontal Profile 750 MHz
VMI-IEQ7	9376	VMI Inverse Equalizer, Plug-In, Vertical Profile 750 MHz
VMI-DC-860	9311	VMI Directional Coupler, Plug-In 860 MHz
VMI-AT	9320	VMI Attenuator, Plug-In 1000 MHz

○ VMI Plug-In Tables

VMI-CEQ7V 750 MHz Equalizers					
EQ Value	Tilt Comp @ 550 MHz	Tilt Comp @ 750 MHz	Loss @ 50 MHz	Loss @ 550 MHz	Loss @ 750 MHz
-4	-1.6	-3.0	1.0	2.6	4.0
-3	-1.3	-2.2	0.8	2.1	3.0
-2	-0.9	-1.4	0.6	1.5	2.0
-1	-0.5	-1.0	0.0	0.5	1.0
0	0.0	0.0	0.0	0.0	0.0
1	0.6	0.9	1.5	0.9	0.6
2	1.3	1.7	2.3	1.0	0.6
3	1.6	2.0	2.6	1.0	0.6
4	2.3	2.7	3.3	1.0	0.6
5	2.9	3.4	4.0	1.1	0.6
6	3.4	4.2	4.8	1.4	0.6
7	3.8	4.9	5.5	1.7	0.6
8	4.7	6.2	6.8	2.1	0.6
9	5.1	7.1	7.7	2.6	0.6
10	5.6	7.7	8.3	2.7	0.6
11	6.5	8.7	9.3	2.8	0.6
12	6.5	8.9	9.5	3.0	0.6
13	6.9	9.4	10.0	3.1	0.6
14	7.8	10.4	11.0	3.2	0.6
15	8.4	11.1	11.7	3.3	0.6
16	8.9	11.7	12.3	3.4	0.6
17	9.4	12.4	13.0	3.6	0.6
18	10.0	13.2	13.8	3.8	0.6
19	10.6	13.8	14.4	3.8	0.6
20	11.5	14.7	15.3	3.8	0.6

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VMI-CEQ8V 860 MHz Equalizers					
EQ Value	Tilt Comp @ 860 MHz	Loss @ 54 MHz	Loss @ 550 MHz	Loss @ 750 MHz	Loss @ 860 MHz
-4	-2.56	-1.12	2.37	-3.19	-3.7
-3	-1.87	-0.97	1.96	-2.50	-2.8
-2	-1.23	-0.65	1.15	-1.54	-1.9
-1	-0.87	-0.03	0.31	-0.67	-0.9
0	0.00	0.00	0.00	0.00	0.0
1	1.07	-1.52	-1.23	-0.60	-0.5
2	1.89	-2.23	-1.24	-0.16	-0.4
3	2.88	-3.05	-1.38	-0.10	-0.2
4	3.47	-3.81	-2.01	-0.79	-0.4
5	3.86	-4.35	-2.13	-0.94	-0.5
6	4.45	-4.85	-2.32	-0.80	-0.4
7	5.42	-5.67	-2.42	-0.62	-0.3
8	5.99	-6.37	-2.00	-0.79	-0.4
9	7.08	-7.21	-2.68	-0.68	-0.1
10	7.47	-7.89	-2.94	-0.90	-0.4
11	8.21	-8.55	-3.24	-0.96	-0.3
12	9.01	-9.25	-1.60	-0.51	-0.2
13	9.85	-10.27	-4.00	-1.32	-0.4
14	10.76	-10.89	-1.37	-0.36	-0.1
15	11.18	-11.30	-1.40	-0.36	-0.1
16	12.04	-12.29	-1.63	-0.55	-0.2
17	12.69	-12.87	-1.50	-0.48	-0.2
18	13.64	-13.84	-1.86	-0.56	-0.2
19	14.36	-14.52	-1.75	-0.50	-0.2
20	14.94	-15.15	-1.92	-0.58	-0.2

VMI Directional Coupler (DC) Table

0, 4, 8, 11, 14, 17 dB								
Insertion Loss	0	4	6	8	11	14	17	
5 MHz:	NA	4.0	3.0	2.1	1.3	1.7	1.1	dB
54 MHz:	NA	3.3	2.9	1.2	0.8	.08	.06	dB
550 MHz:	NA	4.3	4.2	2.3	1.4	1.3	1.0	dB
750 MHz:	NA	4.8	4.5	2.7	1.7	1.7	1.1	dB
860 MHz:	NA	4.7	4.5	2.9	2.0	1.8	1.4	dB

Attenuators Values in dB

0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18

○ Mounting

VMI's can be mounted several ways: on the strand, in a pedestal, and on a wall. Mounting brackets and enclosures supporting these various mounting schemes can be purchased directly from Blonder Tongue.

Shrouds and brackets are available for mounting up to 5 VMIU's (20 ports) in a wall mount enclosure, suitable for both indoor and outdoor use. They come in either a Vertical or Horizontal configuration. Bracket kits are available for 4, 8, 12, 16, and 20 port configurations. In addition, a wall mounting bracket is available to mount a single VMIU (VMIU-WB4).

○ Ordering Information

Model	Stock No.	Description
VMIU-WB4	9381	VMIU Wall Mounting Bracket
VMIU-SBV16-4	9366 4V	VMIU Shroud Bracket 16 Port, Vertical (Holds 3 or 4 VMIU's)
VMIU-SBV08-2	9368 2V	VMIU Shroud Bracket 8 Port (Holds 1 or 2 VMIU's)
VMIU-SBH20-5	9362 5H	VMIU Shroud Bracket 20 Port, Horizontal (Holds 4 or 5 VMIU's)
VMIU-SBH16-4	9366 4H	VMIU Shroud Bracket 16 Port, Horizontal (Holds 3 or 4 VMIU's)



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