



Intraplex® VF-25 – VF-27 Voice Modules

E & M Voice Frequency Modules



The Intraplex® voice modules provide digital transport of voice-grade audio for telephone, intercom, fax, and modem circuits, and can transport FSK data for remote control, two-way radio, EAS audio and other audio monitoring applications.

E & M voice frequency modules are available with PCM coding (64 Kb/s per channel) or ADPCM coding (32 Kb/s per channel).

Coding	E & M modules for T1 systems	E & M modules for E1 systems
PCM	VF-25	VF-25E
ADPCM	VF-27	VF-27E

A choice of interfaces is available by selection of module adapters:

- 4-Wire with one 50-pin telco-type connector – MA-305 and MA-305C
- 4-Wire with four RJ-45 connectors – MA-306C
- 4-Wire with eight RJ-45 connectors – MA-308C
- 2-Wire with one 50-pin telco-type connector – MA-309C
- 2-Wire with four RJ-45 Connectors – MA-310

These modules plug into Intraplex access products, allowing voice channels to be combined with other types of payload channels for transport over T1 (1.5 Mb/s), E1 (2 Mb/s), Ethernet (NetXpress), or other high-speed digital lines.

Product Features

- Four independent voice channels per module; saves space, power and cost
- One-, two-, three-, or four-channel operation for bandwidth efficiency
- Selectable E & M signaling: Types I, II, III, V, or transmission only (TO) operation for application flexibility
- Support for fax or modem transmission at up to 9600 b/s (VF-25/VF-25E) or 2400 b/s (VF-27/VF-27E)
- Local and remote loopbacks for ease of testing

Specifications

Specifications and designs are subject to change without notice

General			
Modules	<ul style="list-style-type: none"> VF-25/VF-25E: four-channel PCM E & M or TO VF-27/VF-27E: four-channel ADPCM E & M or TO 		
System Compatibility	<ul style="list-style-type: none"> The VF-25 and VF-27 are compatible with Intraplex T1 or Ethernet multiplexers The VF-25E and VF-27E are compatible with Intraplex E1 or Ethernet multiplexers E & M signaling for ADPCM modules (VF-27 and VF-27E) is not supported in Digital CrossConnect, NetXpress or NetXpress LX products 		
Voice Frequency			
Frequency Response	300 to 3000 Hz, ± 0.5 dB		
Input/Output Level (Nominal)	0 dBm in, 0 dBm out		
Input/Output Level Range (4-Wire)	<ul style="list-style-type: none"> VF-25/VF-27/VF-27E input: -16.0 to + 3.0 dBm VF-25/VF-27/VF-27E output: -10.0 to + 10.0 dBm VF-25E input: 0 dBm or -16 dBm VF-25E output: 0 dBm or +7.0 dBm 		
Input/Output Level Range (2-Wire)	Additional 0, 3 or 10 dBm output attenuation on MA-309C		
Attenuation for Tandem Applications (MA-308, MA-308B, MA-308C)	Additional 23 dB attenuation can be implemented in transmit and/or receive circuits		
Input/Output Impedance	600 Ω		
Idle Channel Noise	Less than 23 dBmC0		
Signal to Distortion	1004 Hz input, 0 to 30 dBm: less than 33 dB in C message weighting		
2-Wire Echo Return Loss	ERL minimum: 28 dB; SRL high minimum: 20 dB \square SRL low minimum: 20 dB		
4-Wire Trans Hybrid Loss	ERL minimum: 28 dB; SRL high minimum: 20 dB \square SRL low minimum: 20 dB		
4-Wire RX Level Terminated From 2-Wire	-28.5 dB		
Signaling			
Signaling Type (Selectable)	E & M Type I,II, III, V, or transmission only (TO)		
M-Lead Input	Busy	-20 to -60 V	Type I, II, III
		Ground	Type V*
	Idle	Open	Type I, II, III, V
*For Type V circuits where the MA sources current on the M-lead, use MA-305 or MA-308			
E-Lead Output	Busy	Ground	Type I, II, III, IV
	Idle	Open	Type I, II, III, V
Input/Output Modules			
Connectors	<ul style="list-style-type: none"> 50-pin telco-type female connector on MA-305, MA-305B, MA-305C, MA-309, MA-309C module adapters RJ-45 jacks on MA-306, MA-306C, MA-308, MA-308B, MA-308C, MA-310 module adapters Dual RJ-45 jacks provided on MA-308, MA308B, MA-308C for monitoring 		
Network Interface			
Coding and Data Rate	<ul style="list-style-type: none"> VF-25: μ-law PCM, 64 Kb/s per channel VF-25E: A-law PCM, 64 Kb/s per channel VF-27: μ-law ADPCM, 32 Kb/s per channel VF-27E: A-law ADPCM, 32 Kb/s per channel 		
Signaling Format	<ul style="list-style-type: none"> VF-25/VF-27/VF-27-E: Robbed Bit A, B VF-25E: CAS 		
Time Slot (DS0) Assignment	<ul style="list-style-type: none"> VF-25/VF-25E: One to four sequential time slots (one per active channel); starting time slot selectable VF-27/VF-27E: One or two sequential time slots (one for each two active channels); starting time slot selectable 		

Status and Diagnostics	
LED Indicators	Green LED for Service On
Loopbacks	Local and remote analog loopbacks
Monitor Jacks	Provided on MA-308, MA-308B, MA-308C
Physical and Environmental	
Nominal Power Consumption	2.0 W
Temperature	32 to 122° F (0 to 50° C) operating
Humidity	0% to 90% non-condensing