The PDi-50121CM is a space saving, fixed channel modulator system. It consists of 12 individual, vertically mounted, fixed frequency modulators and an efficient switching type power supply module mounted in one 3-1/2" high housing. It is designed for 19" rack mounting. Each modulator is SAW filtered and is factory set to the desired channel and proper offset. Precise frequency is maintained with PLL circuitry. Recessed front panel controls are preset, at the factory, for 87.5% depth of modulation, ±25kHz audio deviation, and -15dBc video audio ratio. RF is set at maximum. It offers excellent video performance and high reliability in a 2U rack. Now available with internal stereo so that a separate module is no longer needed!
**SPECIFICATIONS:**

**RF**
- **Output Channels**: UP/DOWN Selectable 2 Through 134 including A-5 to A-1 (95-99).
- **Output Level**: +45dB Range
- **Output Level Adjustment**: 20dB Range
- **Spurious Output**: At least 60dB Below Video Carrier (@ +60dBmV Output With Aural Carrier 1.5dB Down)
- **Broadband Noise**: 80dB Below Video Carrier (@ +60dBmV Output)
- **Frequency Stability**: ±3kHz Maximum (±3kHz typical)
- **Vestigial Sideband Response**: -20dB at IF Channel Edge; -60dB at Adjacent Video and Aural Carrier Frequencies and Frequencies Further Removed

**VIDEO**
- **Input Type**: Composite Video, Negative Sync.
- **Input Level**: 0.5 Vp-p Min. for 87.5% Depth of Modulation
- **Frequency Response**: Mono ±0.75dB (30Hz to 20kHz)
- **Intercarrier Frequency**: 4.5MHz ±100Hz

**OPERATIONAL**
- **AC Line and Power**: 90 - 240 Vac, 50/60Hz, 48 Watts
- **Operational Temperature**: 0 to 50 Degrees C
- **Rear Panel Connections**: RF Output F Female
- **Video Input**: F Female
- **Audio Input**: RCA
- **Front Panel Controls**: UP/DOWN Channel Select, CTV/UHF/HRC Mode Select (SET), RF Output Level, Aural Carrier Level, Video Modulation Depth, Audio Deviation
- **Front Panel Indicators**: Power On LED, 2 Digit Channel Number, +100 Range LED

**CHARACTERISTICS:**
- +45dBmV RF output level
- Microprocessor Up/Down button channel selector
- Channel range of 2 to 134 (incl. A-5 to A-1)
- SAW filtering for true adjacent channel operation
- Heavy duty cast housing
- BTSC stereo compatible
- >-60dB spurious performance
- Compatible with competitors 12 in 1 modulator systems

**COMMENTS/GENERAL APPLICATION:**

The **PDI-50121AM** consists of 12 individual, vertically mounted, frequency agile modulators and an efficient switching type power supply module mounted in one 3-1/2” high housing. It is designed for 19” rack mounting. Each modulator is SAW filtered and is factory set to the desired channel and proper offset. Recessed front panel controls are preset, at the factory, for 87.5% depth of modulation, ±25kHz audio deviation, and -15dBc video audio ratio. RF is set at maximum. It offers excellent video performance and high reliability in a 2U rack. This exceptional unit is manufactured and tested to the highest standards and complies with all FCC requirements.

**TOLL FREE: 800.242.1606**
PDI COMMUNICATIONS, INC.

4 IN 1 MODULATOR HOUSING

PRODUCT PHOTO:

SPECIFICATIONS:
• 2 Agile Channels (PDI-50121AM)
• 2 Fixed Channels (PDI-50121CM)
• 19” 1U Chassis
• Uses 2U of Rack Space

COMMENTS/GENERAL APPLICATION:
The PDI-4IN1 is an excellent low cost, high quality way of integrating up to four additional modulators into an existing head end system while conserving space. This unit will accommodate up to 2 agile PDI-50121AM and 2 PDI-50121CM Multi-Mod™ units within its 19” 1U chassis.

PDI PART #: PDI-4IN1

SOLD IN: UNITS OF 1

RACK MOUNTED COOLING FAN FOR THE PDI-50121 SYSTEM

PRODUCT PHOTO:

SPECIFICATIONS:
Power Requirements: 115Vac, 50/60Hz, 14W
Air Movement: 48 CFM
Continuous Operating Life: 40,000 hours
Maximum Operating Temperature: 140 degrees F
Dimensions: 19” x 1 3/4” x 6 1/4”
Weight: 4 lb. net

CHARACTERISTICS:
• Long narrow air flow path for efficient cooling
• Brushless ball bearing motor for long life
• Quiet operation
• Locked rotor protection
• Low power consumption
• Compact, only 1U high

COMMENTS/GENERAL APPLICATION:
The PDI-HEF-1 is a 19” rack mounted crossflow blower to be used with our 6 in 1, 12 in 1 or any other rack mounted modulator systems in non-air conditioned environments. The PDI-HEF-1 utilizes a 10-3/4” aluminum impeller to move air in a 90 degree direction, from the bottom to the top of the modulator system. It is extremely effective.

PDI PART #: PDI-HEF-1

SOLD IN: UNITS OF 1

TOLL FREE: 800.242.1606
**PRODUCT PHOTO:**

60MHz 60dBmV SAW Filtered Frequency Agile Modulator

**SPECIFICATIONS:**

**RF**
- **Output Channels:** UP/DOWN Selectable 2 Through 134; A-5 to A-1
- **Output Level:** +60dB Range
- **Output Level Adjustment:** At least 60dB Below Video Carrier
- **Spurious Output:** (@ +60dBmV Output With Aural Carrier 15dB Down)
- **Broadband Noise:** 80dB Below Video Carrier
- **Frequency Stability:** ±5kHz Maximum (±3kHz typical)
- **Video and Aural Carrier Frequencies and Frequencies Further Removed**

**VIDEO**
- **Input Type:** Composite Video, Negative Sync.
- **Input Level:** 0.5 Vp-p Min. for 87.5% Depth of Modulation
- **Frequency Response:** +0.75dB (10Hz to 4.2MHz)
- **Differential Gain:** 3% Typical at 87.5% Modulation
- **Differential Phase:** <3 Degrees Typical at 87.5% Modulation
- **Hum and Noise:** -60dB Min. at 87.5% Modulation
- **Tilt:** 1.1% Maximum on 60Hz, 50% Square Wave
- **Group Delay Response:** Meets FCC Distortion Requirements for Color Transmission

**AUDIO**
- **Input Type:** Unbalanced (Balanced optional)
- **Input Impedance:** 600 ohm high Z
- **Input Level:** 250mV Min. for 25kHz Deviation
- **Frequency Response:** Mono ±0.75dB (30Hz to 15kHz)
- **Intercarrier Frequency:** 4.5MHz ±100Hz
- **Stereo Specifications:**
  - **Frequency Response:** 20Hz to 14kHz ±1dB
  - **Separation:** 27dB 20Hz to 14kHz Typical
  - **Pilot Rejection:** 60dB
  - **Signal to Noise Ratio:** 10K ohms unbalanced / 600 ohm optional
  - **Audio Input Impedance:** 0dBm, Adjustable +10dB
  - **Distortion:** 0.5% Maximum THD

**SAP OPTION: Second Audio Program**
- **Input Impedance:** 22 ohms
- **FM Oscillator:** At 78.670 KHz is phased locked for stable output.
- **Carrier Output:** bandpass filter with traps at 63kHz and 94kHz
- **SAP CARRIER KILL:** SAP signal can be shut off with the SAP switch at the front of the unit.

**COMMENTS/GENERAL APPLICATION:**

The PDI-60M is a PLL synthesized, SAW filtered, frequency agile modulator. It offers 138 TV channels at an output of 60dBmV. This exceptional unit is manufactured and tested to the highest standards and complies with all FCC requirements. The PDI-60M covers all cable channels from 2 through 134 (54-860MHz) including A-5 to A-1 and HRC. Channel selection is accomplished with “user friendly” up/down controls on the front panel. The selected channel is then automatically locked into memory to insure correct operation after a power failure. For flexibility in operation the PDI-60M has three IF loops.

**CHARACTERISTICS:**
- +60dBmV RF output level
- Microprocessor controlled Up/Down channel button
- >-60dB spurious performance
- FCC offset internally programmed
- Professional grade SAW filter
- Three loop-through connections
- 4.5MHz audio carrier input
- 5 year warranty
- ISO 9002 certified

**TOLL FREE: 800.242.1606**

PDi Communications, Inc. • 6353 West Rogers Circle #6 • Boca Raton, FL 33487 • Local 561.998.0600 • Fax 561.998.0608 • www.pdi-elt.com
860MHz 55dBmV SAW FILTERED FIXED FREQUENCY MODULATOR

PRODUCT PHOTO:

PDi PART #:  
PDI-55-SF  
PDI-55-SFS*  
* “S” designation: Stereo unit

SOLD IN: UNITS OF 1

SPECIFICATIONS:

- Frequency Range Channels 2-134 (54-860MHz)
- Video Input Level 0.7 to 1.5 Vp-p for 87.5% modulation
- Video C/N 60dB (4MHz BW)
- Output Level +55dBmV (±2dBmV audio RF level is adjustable from 13-20dB below video carrier)
- Frequency Stability ±5kHz Maximum
- Hum and Noise -60dB min. @ 87.5% modulation
- Audio Input Level 250mV min. for ±25kHz deviation
- Audio Input Impedance 600 ohms or High Z, unbalanced
- Spurious Output -60dBc typical (@ A/V ratio-15dB)
- Power Requirement 117 V AC, 60Hz 15 Watts
- Dimensions 19” W x 1 3/4” H x 6 1/2” D

37Stereo Specifications

55-SFS ONLY

- Frequency Response 20Hz to 14kHz + 1dB
- Separation 27dB 20Hz to 14kHz Typical
- Pilot Rejection 50dB
- Signal to Noise Ratio 60dB
- Audio Input Impedance 10K ohm s unbalanced
- Nominal Input Level (APL) 0dBm, Adjustable + 10dB
- Distortion 0.5% Maximum THD

COMMENTS/GENERAL APPLICATION:

The PDI-55-SF is a fixed channel, PLL controlled, video and audio modulator with SAW filtering. It is available for any cable channel between 2 through 134. Its video dynamic range insures 87.5% modulation depth over a wide video input range. The vestigial sideband selectivity allows maintenance free adjacent channel configuration. An efficient power supply enables cool and stable operation. The unit offers high performance, low cost and compact design. 2 year warranty

CHARACTERISTICS:

- +55dBmV RF output level
- Phase lock loop frequency control
- SAW filtering for true adjacent channel operation
- BTSC composite baseband stereo compatible
- Spurious output -60dBc
- Auxiliary AC outlet
- Cool operation
- Available In All PAL Configurations
- UL Listed Canada/U.S

TOLL FREE: 800.242.1606
12/24 UNIT 1GHz HIGH PERFORMANCE, HIGH ISOLATION HEADEND COMBINERS

PRODUCT PHOTO:

PDi COMMUNICATIONS, INC. head end

PROD UC T #:
PDI-HC12 & PDI-HC24

SOLD IN: UNITS OF 1

SPECIFICATIONS:

- Frequency Range 5-1000MHz
- Isolation 40 dB
- Return Loss 18 dB min.
- Insertion Loss 100 MHz 21 dB
  600 MHz 21 dB
  1000 MHz 21 dB
- Mounting 19” rack
- Dimensions 19” x 4 3/4” x 1 3/4”

COMMENTS/GENERAL APPLICATION:

The PDI-HC12 and PDI-HC24 are high quality, high isolation, passive headend combiners. They provide a simple method for combining 12 or 24 channel outputs from modulators or processors to a single output.

CHARACTERISTICS:

- 12 or 24 inputs
- Insertion Loss flat at 21dB from 5 to 1000MHz (HC12)
- Insertion Loss 19dB at 5 to 21dB at 1000MHz (HC24)
- High Isolation
- 2 year warranty

TOLL FREE: 800.242.1606
PDi COMMUNICATIONS, INC. head end

1GHz HIGH ISOLATION, 16 INPUT, ACTIVE CHANNEL COMBINER

PRODUCT PHOTO:

PDi PART #: PDI-HC16A
SOLD IN: UNITS OF 1

SPECIFICATIONS:

- Frequency Range: 54-1000 MHz
- Flatness: ±0.5dB
- Slope: ±0.75dB
- Gain: 4dB
- Ref Channel: 16
- Output Level: +45dBmV
- Intermod: > -60dB
- Gain Control: Variable
- Test Point: -20dB ± 0.5dB
- Return Loss: Output 16dB Input 18dB
- Isolation: 45 dB min.
- Dimensions: 19” x 4 3/4” x 1 3/4”
- Mounting: 19” rack
- Connectors: all “F” female
- Power Requirements: 117 VAC ±10%, 60 Hz, 15 W
- Temperature Range: 0˚ to 50˚ C

COMMENTS/GENERAL APPLICATION:

The PDI-HC16A is a high quality, high isolation, active headend combiner. The PDI-HC16A provides a simple method for combining 16 channels from modulators or processors into a single output with up to +4dB overall gain. A manual gain control is accessible through the front panel for precise settings.

CHARACTERISTICS:

- 16 inputs
- +4dB gain
- High isolation
- Directional coupler design
- Variable gain control
- -20dB test point
- 2 year warranty
- Hybrid amplifier design

TOLL FREE: 800.242.1606
HEAD END RACK

PRODUCT PHOTO:

PRODUCT INFORMATION:
- Black Static resistant powder coat finish
- Two post rack with base
- Standard 10-32 threading
- RACK 71 mounts up to 41 devices
- RACK 84 mounts up to 45 devices
- RACK 71-4 kit and RACK 81-4 kit
  - Converts RACK 71 & RACK 84 from 2 post to 4 post racks
  - Includes side stabilizing bars
  - Steel Construction
  - Black Static resistant powder coat finish

PDi PART #:
RACK 71, RACK 71-4 kit
RACK 84, RACK 84-4 kit

2 Post Expansion Kits for RACK 71 & RACK 84

SOLD IN: UNITS OF 1

RACK SHELF

PRODUCT PHOTO:

PRODUCT INFORMATION:
- Vented 2 space racking height shelf
- Fits components up to 17.375” wide
- 14.25” Tray Depth
- Load Capacity – 50 lbs.
- Tempered 16 ga. Steel
- Textured Black Powder Coat finish

PDi PART #:
PDI RACK SHELF

SOLD IN: UNITS OF 1

TOLL FREE: 800.242.1606
**SPECIFICATIONS:**

- Fully welded construction, solid sides
- 2,500 lb. weight capacity
- UL Listed in the US and Canada
- Seismic certified
- 1/2", 3/4", 1" and 1-1/2" electrical knockouts found on removable split rear plates, top knockout plate additionally includes UHF/VHF antenna knockouts
- 16-gauge steel tops, bottoms, & sides
- Laser-cut 1/8" thick internal steel braces for strength
- 1 pair fully-adjustable front rackrail
- Large cable entry in bottom
- Grounding and bonding stud installed in base
- Configurable top (44, 40, 35 sp.), solid top with fan KO’s (27, 21, 18 sp.)
- Laser KO’s in side panels for cable pass-through (44, 40, 35 sp. only)
- Finished in a durable black textured powder coat

**COMMENTS/GENERAL APPLICATION:**

These fully configurable enclosures provide installers with the essentials for getting started right out of the box, but also leave plenty of room for growth and customization to meet specific needs. Call your PDi sales representative for additional custom options.

**TOLL FREE: 800.242.1606**