

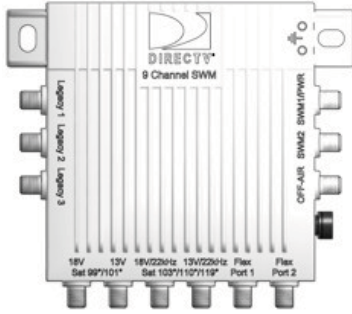


**DIRECTV® MFH2™**

from  
**PDI-SAT**



# SWM-8



## Single Wire Multi-Switch (8 Channel)

Model #	Description	Part #
SWM-8	Eight (8) channel Single Wire Multi-switch (SWM). Allows any transponder from any satellite input to be independently selected and distributed via one of eight designated SWM output frequency channels.	217502

**FEATURES:**

- Provides eight (8) independent channels for supporting up to 8 DIRECTV satellite tuners
- Provides two outputs to serve two customer dwellings (typical)
- Contains a built-in di-plexer for combining off-air signals with DIRECTV satellite signals onto a single home-run wire to the dwelling
- Provides AGC for the satellite input signal.
- Die-cast housing is suitable for both indoor and outdoor use.
- Supports six (6) LNB inputs, each triple-band stacked four ports (Ports 1 - 4) cover existing 99°/101°, 103°/110°/119° satellites, plus two Flex Ports (95° sat and 72.5° sat)

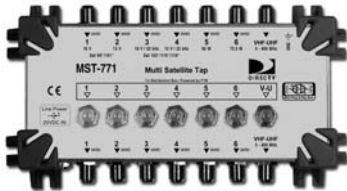
PARAMETER	UNIT	SWM-8
Input Frequency Range	MHz MHz MHz	250 – 2150 (Satellite) 54 – 806 (Terrestrial & SMATV) 5 – 40 (Return Path) — CMTS return path must use 33-40 MHz band
Number of Input Ports	Each Each	6 1
Input Signal Power Level	dBm	-45 to -15 dBm per transponder
Output Frequency Range	MHz	950 – 2150 (Satellite) 54 – 806 (Terrestrial & SMATV)
SWM Channel frequencies: Channel 1 through 9	MHz	950 – 1800
Number of SWM Module Output Ports	Each Each	6 per SWM Module 1 per SWM Module
Output Signal Power Level	dBm	-31 dBm (min) per SWM channel
DC Power Power Supply (24Vdc, 2.1A)	Each	Powered from FMC-6 Chassis via legacy 3 input port
Ground stud	qty	1
Dimensions LxWxH	mm	167x145x35
Weight	kg	0.5
Environmental Requirements Operating temperature range Humidity  Mechanical Housing	°C	-34 to +52 The component shall survive exposure to 95% relative humidity over operating temperature range Die-cast aluminum waterproof housing suitable for indoor and outdoor installation



## MFH2 Multi-Satellite Tap Unit

Model #	Description	Part #
MST-771	MFH2 Multi-Satellite Tap allows up to two (2) FMC-6 Chassis units to be connected to a common satellite distribution backbone.	212250

# MST-771



### FEATURES

- Enables up to two (2) FMC-6 Chassis units to be connected to a common satellite distribution backbone.
- Enables satellite and "off-air" feeds to be cascaded to additional wiring closets
- Allows for easy installation with minimal signal loss.

PARAMETER	UNIT	MST-771
Operating Frequency Range	MHz MHz	250-2150 (satellite) 5-806 (off-air)
<b>Number of Input Ports:</b>		
Satellite	Each	6
VHF/UHF	Each	1
<b>Number of Cascaded Output Ports:</b>		
Satellite	Each	6
VHF/UHF	Each	1
<b>Number of Tap Ports:</b>		
Satellite	Each	1 set of 6 satellite taps
VHF/UHF	Each	1 set of 1 VHF/UHF taps
<b>Trunk Line Insertion Loss - Input to Output:</b>		
VHF/UHF (Passive)	dB	-2 ±2
Satellite (Passive)	dB	-2 ±2
<b>Tap Line Insertion Loss - Input to Output:</b>		
VHF/UHF (Passive)	dB	-15 (max)
Satellite (Amplified)	dB	-2 ±2 @ 250 MHz +1±2 @ 2150 MHz
Return Path Loss	dB	-10 (typ)
Isolation between trunk lines	dB	> 35
Isolation between tap ports from different satellites	dB	> 35
<b>DC Power Path (20 VDC):</b>		
From Input to Output	mA	3,000 (max.)
Power Consumption	mA	300
From Input to Tap	mA	1,000 (max.)
DC Power Jack connector		2.5 mm
Short Circuit Protection		Yes, 1A Multi fuse
Dimensions (L x W x H)	mm	190 x 102 x 65
Grounding Stud		Yes
<b>Environmental Requirements:</b>		
Operating Temperature Range	°C	Indoor Use Only -34 to +60
Humidity		The components shall survive exposure to 95% relative humidity over operating temperature range.



## MFH2 Multi-Satellite Tap Unit

Model #	Description	Part #
MST-774	MFH2 Multi-Satellite Tap allows up to four (4) FMC-6 Chassis units to be connected to a common satellite distribution backbone.	212251

# MST-774



### FEATURES

- Enables up to four (4) FMC-6 Chassis units to be connected to a common satellite distribution backbone.
- Enables satellite and "off-air" feeds to be cascaded to additional wiring closets
- Allows for easy installation with minimal signal loss.

PARAMETER	UNIT	MST-774
Operating Frequency Range	MHz	250-2150 (satellite)
	MHz	5-806 (off-air)
<b>Number of Input Ports:</b>		
Satellite	Each	6
VHF/UHF	Each	1
<b>Number of Cascaded Output Ports:</b>		
Satellite	Each	6
VHF/UHF	Each	1
<b>Number of Tap Ports:</b>		
Satellite	Each	4 sets of 6 satellite taps
VHF/UHF	Each	4 sets of 1 VHF/UHF taps
<b>Trunk Line Insertion Loss - Input to Output:</b>		
VHF/UHF (Passive)	dB	-2 ±2
Satellite (Passive)	dB	-2 ±2
<b>Tap Line Insertion Loss - Input to Output:</b>		
VHF/UHF (Passive)	dB	-20 (max)
Satellite (Amplified)	dB	-2 ±2 @ 250 MHz +1±2 @ 2150 MHz
Return Path Loss	dB	-10 (typ)
Isolation between trunk lines	dB	> 35
Isolation between tap ports from different satellites	dB	> 35
<b>DC Power Path (20 VDC):</b>		
From Input to Output	mA	3,000 (max.)
Power Consumption	mA	300
From Input to Tap	mA	1,000 (max.)
DC Power Jack connector		2.5 mm
Short Circuit Protection		Yes, 1A Multi fuse
Dimensions (L x W x H)	mm	243 x 225 x 92
Grounding Stud		Yes
<b>Environmental Requirements:</b>		
Operating Temperature Range	°C	Indoor Use Only -34 to +60
Humidity		The components shall survive exposure to 95% relative humidity over operating temperature range.



PI-6S



## Power Inserter and Tone Generator Unit

Model #	Description	Part #
PI-6S	Provides satellite LNB polarization locking via built-in voltage regulators and 22 KHz tone generators in a single compact module.	107360

**FEATURES**

- Simplifies MDU installations by providing an integrated module for locking LNB polarizations and satellite selection
- Provides multi-color LED indicators to show LNB voltage regulator levels (Green LED: 13V Amber LED: 18V)
- Supports Slimline Ku and Ka-band ODU installations

PARAMETER	UNIT	PI-6S
Operating Frequency Range	MHz	250-2150
Insertion Loss	dB	1.0 (max)
Number of Input Ports	Each	6
Number of Output Ports	Each	6
Isolation Between Ports	dB	typical 35
Input/Output Return Loss	dB	> 10.0, typical 8.0
Output Return Loss for Each Tap Port	dB	> 10.0, typical 8.0
<b>DC Voltage Provided to the Inputs:</b>		
Port #1	VDC	13.0
Port #2	VDC	20.0
Port #3	VDC	13.0 +22kHz Tone Fixed
Port #4	VDC	20.0 +22kHz Tone Fixed
Port #5	VDC	13.0 +22kHz Tone
Port #6	VDC	20.0 +22kHz Tone
DC Voltage Indicator		Color LED
Number of LEDs	Each	6 (one per each port)
<b>LED Color Corresponding to:</b>		
Green	VDC	10.0 - 13.0
Amber	VDC	17.0 - 20.0
<b>22 kHz Tone to ODU:</b>		
Frequency	kHz	22.0
Duty Cycle	%	50
Amplitude	mVpp	800
DC Power Path	mA	1000 (max.) from DC jack to each input or output or from any output to any input
Switching Mode Power Supply		20V, 1.2A
Short Circuit Protection		Yes, 1A Multi Fuse
Dimensions (L x W x H)	mm	173 x 124 x 51
Grounding Stud		Yes
<b>Environmental Requirements:</b>		
Operating Temperature Range	°C	Indoor Use Only -34 to +60
Humidity		The components shall survive exposure to 95% relative humidity over operating temperature range.



# SA-6AL



## Satellite Active Components - Trunk Amplifiers

Model #	Description	Part #
SA-6AL	Provides adjustable in-line trunk amplification with LED signal level indicators	203163

### FEATURES

- Simplifies MDU installations by providing an adjustable in-line trunk amplifier with signal level LED indicators for proper operation.
- Supports Ku and Ka-band ODU installations
- Low power consumption and wide dynamic range

PARAMETER	UNIT	SA-6AL
Operating Frequency Range	MHz	250-2150
Number of Input Ports	Each	6
Number of Output Ports	Each	6
Gain @ 250-2150 MHz	dB	19 - 24 with Fixed Slope
@ 250 MHz	dB	19
@ 750 MHz	dB	20
@ 950 MHz	dB	21
@ 1450 MHz	dB	22
@ 2150 MHz	dB	24
Input Level (Colored LED Indicator)	dB	Input Signal @ -25 to -15 dBm Input Signal >-15 dBm Input Signal <-25 dBm
Green LED: Signal inside AGC window		
Red LED: Signal above AGC window		
Red Blinking LED: Signal below AGC window		
Isolation: Satellite to Satellite	dB	>26
Number of Satellite Input Ports	Each	6
Number of Satellite Output Ports	Each	6
Power:		
DC Power Pass (any Output to any Input)	mA	1000 (max.)
Input DC Voltage	VDC	10 (min.), 20 (max.) from any Output or 20VDC from SMPS Power Adapter
Max. Power Consumption	mA	600 (max)
Dimensions (L x W x H)	mm	174 x 140 x 50
Environmental Requirements:		Indoor Use Only
Operating Temperature Range	°C	-34 to +60
Humidity		The components shall survive exposure to 95% relative humidity over operating temperature range.



# FMC-6



## FMC-6 Distribution Chassis

Model #	Description	Part #
FMC-6	MFH2 Six (6) slot distribution chassis. Supports up to six (6) SWM-8 modules per chassis.	217510
3A501DA24	24 VDC Power Supply for FMC-6 Chassis. Fully configured FMC-6 requires two power supplies; a third can be added for redundancy.	107333

### FEATURES

- Enables easy expansion of MFH2 services on a dwelling by dwelling basis.
- Can be cascaded for easy expansion.
- Supports up to 12 customer dwellings (typical) for each fully configured FMC-6 chassis unit.
- Easy installation. LED indicators confirm presence of signals and DC line power.

PARAMETER	UNIT	FMC-6
Operating Frequency Range	MHz MHz MHz	250 – 2150 (Satellite) 54 – 806 (Terrestrial & SMATV) 5 – 40 (Return Path) — CMTS return path must use 33-40 MHz band
# of Input Ports Satellite Off-air Terrestrial & SMATV /CMTS	Each Each	6 1
# of Terminated Cascadable Output Ports Satellite Terrestrial & SMATV/CMTS & Return Path	Each Each	6 0
# of SWM Module Output Ports Satellite Off-air Terrestrial & SMATV & Return Path DC Powering	Each Each Each	36 (6 per SWM Module) 6 (1 per SWM Module) 6 (1 per SWM Module)
Input to Cascadeable Output Insertion Loss Satellite	dB	0 Typ
Input to SWM Module Insertion Loss Satellite (Active) Off-air Terrestrial & SMATV (Active) Return Path (Passive)	dB dB dB	-5 Typ +10 Typ -10 Typ
Input Signal Level (Input satellite transponder levels controlled by colored LED on each satellite signal input) Green LED Red blinking LED Red LED	dBm dBm dBm	@ -45 to -20 @ < -45 @ > -20
DC Power DC Power Jack Type Number of DC Jacks Power Supply (24Vdc, 2.1A)  DC power on 6 Satellite Trunk Lines  SWM DC Powering LED Indicators	mm Each Each   Each	2.1 3 3 (2 p/s for standard operation, 1 additional p/s for redundancy) SWM-8 provides DC and 22 kHz Tone via bottom slot Module (primary) or 2 <sup>nd</sup> from bottom Module (backup) Amber LED
Ground studs	Each	2
Dimensions LxWxH	mm	212x256x445
Weight (without cables and SWM modules)	kg	5.5
Environmental Requirements Operating temperature range Humidity	°C	Indoor use only -34 to +52 Shall survive exposure to 95% relative humidity over operating temp. range