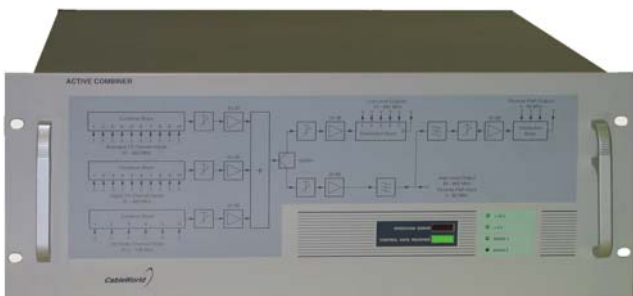


CW-4076
ACTIVE COMBINER



The CW-4076 ACTIVE COMBINER combines the channel output signals of the headend, thus it delivers a complex frequency multiplex signal, providing the subscribers with a great number of services. In the analogue age, these services contained radio and television programs only, but in the digital age they are continuously broadening with new kinds of services starting with Internet access.

Along with external channel filter type 8-input selective pre-combiners, the CW-4076 ACTIVE COMBINER can process even 80 analogue TV channels, 80 digital TV packets and 48 FM radio channels. Thus, the number of TV channels can amount to over 1,000.

The combiner is equipped also with RF outputs for driving optical lines, permitting the unit to be used in optical distribution networks, too.

For increased reliability, the combiner is built with GaAs hybrid output stages, throughout gold plated F connectors and is equipped with a built-in reserve power supply.

The supply voltages and the temperatures of each hybrid stages are continuously measured by the unit's microcontroller and the measured data can be queried through the CW Bus.

Main features:

- Frequency range 47-862 MHz
- GaAs hybrid end stages
- Inputs for analogue TV, digital TV and FM radio, for a total of over 1,000 TV and radio channels
- Reverse path outputs
- Optical line driver outputs
- Gold plated F connectors
- 19" x 4 HU equipment frame
- Built-in reserve mains power supply
- Bus control facility

TECHNICAL DATA

INPUT AND OUTPUT DATA

Transmission characteristics

Operational frequency ranges

Analogue TV input – high level output	85-862 MHz
Analogue TV input – low level output	47-862 MHz
Amplitude response	less than ± 1 dB
Amplitude response within one channel (8 MHz)	less than ± 0.3 dB
Digital TV input – high level output	85-862 MHz
Digital TV input – low level output	47-862 MHz
Amplitude response	less than ± 1 dB
Amplitude response within one channel (8 MHz)	less than ± 0.3 dB
FM radio input – high level output	87.5-108 MHz
FM radio input – low level output	87.5-108 MHz
Amplitude response	less than ± 0.3 dB

Analogue TV inputs

Number of inputs	10
Nominal input level	100 dB μ V
Nominal input impedance	75 Ω
Input return loss	at least 15 dB
Separation between the inputs	typically better than 40 dB
Variable gain	0 ... -18 dB

Digital TV inputs

Number of inputs	10
Nominal input level	95 dB μ V
Nominal input impedance	75 Ω
Input return loss	at least 15 dB
Separation between the inputs	typically better than 40 dB
Variable gain	0 ... -18 dB

FM radio inputs

Number of inputs	6
Nominal input level	90 dB μ V
Nominal input impedance	75 Ω
Input return loss	at least 15 dB
Separation between the inputs	typically better than 40 dB
Variable gain	0 ... -18 dB

Output data

High level output

	with 80 TV channels
Nominal output voltage	max. 112 dB μ V
Variable range	0 ... -18 dB
Output return loss	at least 15 dB
Stop-band attenuation between 5 and 65 MHz	at least 40 dB

Control output

Nominal output level	92 dB μ V (-20 dB)
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Low level outputs

	with 80 TV channels
Nominal output level at main output OUT	max. 108 dB μ V
Nominal output level at directional coupled taps OUT1 ... OUT5	max. 98-100 dB μ V
Variable range	0 ... -18 dB
Output impedance	75 Ω
Output return loss	at least 15 dB

Reverse path outputs

Frequency range	5 - 65 MHz
Nominal gain at main output OUT	18 dB
Nominal gain at directional coupled taps OUT1 ... OUT3	10 dB
Variable range	0 ... -18 dB
Output impedance	75 Ω
Output return loss	at least 15 dB
Stop-band attenuation between 85 and 862 MHz	at least 40 dB

Linearity data

at 110 dB μ V output level with 110 channels	
composite triple beat	60 dB
cross modulation	55 dB
second order beat	63 dB
noise factor at 862 MHz	6.5 dB

AUXILIARY DATA

Bus control facility through CW Bus

GENERAL DATA

Main power supply	Power Supply1
Reserve power supply	Power Supply2
Service period	continuous
Mains voltage	230 V, ± 15 %, 50/60 Hz
Power consumption	75 VA
Type of connectors	F socket (gold plated)
Physical dimensions	
- Width	445 mm
- Height	177 mm (4 height unit)
- Depth	430 mm
Mass	11.5 kg
Operational temperature range	
- to fulfil the specifications	+10 ... +35 $^{\circ}$ C
- to maintain operation	0 ... +40 $^{\circ}$ C
Storage temperature	-25 ... +45 $^{\circ}$ C

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