



SIGNAL SUMMER

SUM001 / SUM002

Features

- ◆ Frequency Passband 10 Hz to 10 MHz
- ◆ Combines up to Four of Seven Inputs in a Composite Output
- ◆ Each Selected Input Adjustable From +3 dBm To -30 dBm
- ◆ Composite Output Attenuator - 0 to 7.5 dB, in 0.5 dB Increments
- ◆ VME 6U X 160 mm Module
- ◆ ISA Full Single Slot

General Description

The SUM001 (VME) and SUM002 (ISA) Summer cards host seven inputs and selects up to four to be summed in the composite output. ON/OFF and signal level control is provided for each of the four selected signals. The signal level of each selected input can be varied from +3 dBm to -30 dBm (75 Ohm load), in 0.1 dBm increments. The composite output is attenuated from 0 to 7.5 dB, in 0.5 dB increments. A fixed-level composite output test signal is also provided. A spare buffer amplifier stage is also provided.

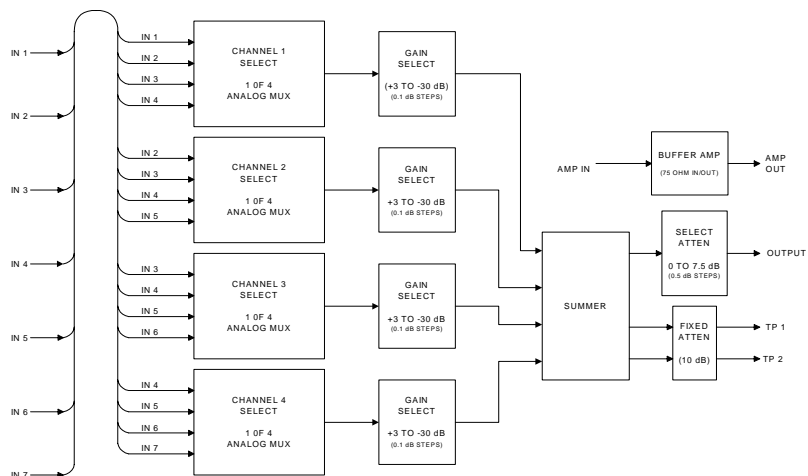
Signal selection, level control, On/Off and composite output attenuation are all software selectable via the control bus.

The SUM001 card is a single-slot 6U x 160 mm VME module and the SUM002 is a full length ISA module. Both architectures are supplied with a front card-edge panel containing SMA interface connectors.



Applications

The outputs from FSK / AM Modulators, PSK subcarrier Modulators, Range Tone Generators, and buffered external analog signals are typically connected to a SUMxxx Summer card. The linear summation of these signals is then used to modulate the carrier. One or more Summer cards are used to provide multiple composite ports for various applications.





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SPECIFICATIONS

Inputs:

Summed:
1 Vp-p into 75
Four selected from seven inputs

Fixed Buffer:
5 Vp-p into 75 , Unity Gain

Outputs:

Impedance: 75 Ohms (50 Ohms, optional)

Output Level, each sub-carrier: 1 Vp-p
(nominal), at +3dBm setting

Output Level Adjustments:
Each subcarrier: +3 dBm to -30 dBm, in
0.1 dBm steps

Composite: 0 to 7.5 dB Attenuation, in 0.5
dB steps

Test Ports: Fixed Attenuation (-10 dB
nominal) of Composite signal.

Fixed Buffer:
Impedance: 75 Ohms (50 Ohms,
optional)
Unity Gain

Performance:

Passband: 10 Hz to 10 MHz

Signal On/Off Switching Isolation:
60 dBc

Spurious: -45 dBc

Harmonics: -40 dBc
IM³: -45 dBc

Power:

+5 VDC @ 1.0A ,
±12 VDC @ 1A

Mechanical: SUM001—6U VME x 160
mm; SUM002—Full slot ISA

Environment, Operating:

Temperature: 0° C to +40° C

Relative Humidity: 5% to 95%, non-
condensing

Altitude: 0 to 10,000 ft.

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Ordering Information

SUM001 VME Standard Module
SUM002 ISA Standard Module

Recognizing that no standard product can meet all the needs of all users, GDP stands ready to provide units tailored to unique applications.

The statements in this data sheet are not intended to create any warranty, expressed or implied. Equipment specifications are subject to change without notice.

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