

# RF Solutions

## QCA9-33 Active Combiner



### Sales Support

*Need help finding integration solutions for your application? Our Sales Support staff will be happy to work with you, providing expert integration assistance and a complete systems proposal.*

### Tech Support

*Need tech help? Give us a call. Our tech support staff are experts in the integration industry, so we can research solutions in the proposal stage, advise on programming requirements, and resolve installation issues.*

*Our job is to make our solutions work seamlessly with your system, performing as promised.*

### Related Products

*QMOD HDTV Modulators*

The Contemporary Research QCA9-33 is an active RF combiner that features eight high-level inputs and one low-level input, combining with high isolation, and amplifying up to a 33 dBmV output level.

Designed for QMOD HDTV applications, the eight RF inputs typically receive 29 dBmV RF from QMOD HDTV modulators. The ninth input is for up to 19 dBmV RF signals, such as incoming cable feed, a control channel from an ICE-HE Head End control modulator, or another QMOD or QCA9-33.

The extremely low-noise wideband 860 MHz amplifier compensates for combining losses and adds 3 dBmV of gain, typically supplying a total output of up to 33 dBmV.

The compact QCA9-33 mounts two-across in a single rack space using CR RK1 and RK-2 rack kits, and can be mixed with QMOD HDTV modulators using the same rack kits. The units are wholly designed and manufactured in the USA.

### Features

- Combines 8 high-level inputs and one low-level input
- Compensates for combining losses and adds 3 dBmV gain
- Provides a maximum output level of up to 33 dBmV
- Wideband, extremely low noise amplifier
- Low power, draws less than 2 watts
- Compact metal enclosure, mounts 2 across in 1 RU using RK1 and RK2 rack kits

### Applications

- Combine 9 inputs to drive a medium-sized RF system
  - 9 QMOD Modulators
  - 8 QMOD Modulators plus ICE-HE Head End
  - 8 QMOD Modulators plus cable feed
- Feed output to a second CCA9-33 to combine up to 17 channels
- Feed 8 QCA9-33 units to one QCA9-33 to combine 64 or more channels without signal loss
- Feed combined output to a launch amplifier for larger systems

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## QCA9-33 Active Combiner

### Specifications



Features	
<b>Physical</b>	8.5" [216mm] wide x 1.75" [38mm] height (1RU) x 6.0" [153mm] deep 1.5 lbs [0.68kg] Durable metal enclosure, rack mountable
<b>Back Panel</b>	8 Input F Connectors 1 Low-level Input F connector 1 Amp Out F connector DC Power input Power LED
<b>Inputs</b>	8 High-level Inputs - Max input 30 dBmV 1 Low-level Input - Max input 19 dBmV
<b>Isolation</b>	38 dB typical, 30 dB minimum, 54 - 860 MHz
<b>Return Loss</b>	30 dB typical
<b>Output</b>	17 dBmV amplifier, extremely low noise, linear performance through 860 MHz
<b>Net Level</b>	Net + 3 db gain after combining
<b>Max Level</b>	Maximum level +33 dBmV
<b>CTB</b>	Composite Triple Beat -75 dBc, 132 channels at +30 dBmV per channel
<b>Noise</b>	Noise Figure 1.8 typical
<b>Return loss</b>	20 dB typical
<b>Power</b>	2.1mm coaxial jack (inside center conductor positive), 170 mA maximum, 11.5 to 15 VDC, 12 VDC typical (may be unregulated)
<b>Includes</b>	PS12-500 12 VDC, 500 mA power supply
<b>Options</b>	RK1 Rack Kit for single unit, 1 RU RK2 Rack Kit for dual units, 1 RU

### Warranty

All CR products feature a full two-year warranty.