



High performance, reliable UHF cavity combining system for 380-470MHz UHF band.

19" Rack mounting design; 11U for 2-channel, 15U for 3-channel and 18U for 4-channel cavity combiner.

250mm diameter aluminium cavities.

High isolation of over 75dB between output ports with dual isolators (@ >450kHz spacing).

150 Watt RF input capability.

N-Type input and output connectors, other types available on request.

Mavitek blue or customer RAL code electrostatic powder painted to match your cabinet design.

## ▲ Aluminium Cavities

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## ▲ N-Type Connectors

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## ▲ 19" Rack Mounting Design

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## 2 - 8 CHANNEL 250 mm CAVITY COMBINER MCCU10 Series

| Specifications                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                      |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| Frequency Range                               | 380-470MHz (in 20MHz sub-bands)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                      |
| Number of Channels                            | Up to 8 channels                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                      |
| Cavity Diameter                               | 250mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                      |
| Isolation<br>Tx-Tx Spacing >450kHz            | >75dB ( >80dB with triple isolators)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                      |
| Nominal Impedance                             | 50 Ohms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                      |
| VSWR                                          | <1.5:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                      |
| Maximum Input Power                           | 150 Watt                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                      |
| Minimum Channel Spacing                       | >250kHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                      |
| Insertion Loss<br>(at 450kHz channel spacing) | 2 Channel: <2.3dB<br>3 Channel: <2.7dB<br>4 Channel: <3.1dB<br>5 Channel: <3.6dB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 6 Channel: <3.7dB<br>7 Channel: <3.8dB<br>8 Channel: <3.9dB          |
| Frequency Stability                           | 1ppm per degree °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                      |
| RF Connectors                                 | Female N-Type as standard (other types available optionally)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                      |
| Mounting                                      | 19" Rack<br>2 Channel: 11U<br>3 Channel: 15U<br>4 Channel: 18U                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 5 Channel: 28U<br>6 Channel: 30U<br>7 Channel: 34U<br>8 Channel: 38U |
| Weight (approx.)                              | 2 Channel: 12kg<br>3 Channel: 15kg<br>4 Channel: 18kg<br>5 Channel: 28kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 6 Channel: 31kg<br>7 Channel: 34kg<br>8 Channel: 38kg                |
| Operating Temperature Range                   | -30°+60°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                      |
| Order Designations                            | 2 Channel 380-400MHz: MCCU10-1-2<br>2 Channel 395-415MHz: MCCU10-2-2<br>2 Channel 410-430MHz: MCCU10-3-2<br>2 Channel 425-440MHz: MCCU10-4-2<br>2 Channel 435-455MHz: MCCU10-5-2<br>2 Channel 450-470MHz: MCCU10-6-2<br>3 Channel 380-400MHz: MCCU10-1-3<br>3 Channel 395-415MHz: MCCU10-2-3<br>3 Channel 410-430MHz: MCCU10-3-3<br>3 Channel 425-440MHz: MCCU10-4-3<br>3 Channel 435-455MHz: MCCU10-5-3<br>3 Channel 450-470MHz: MCCU10-6-3<br>4 Channel 380-400MHz: MCCU10-1-4<br>4 Channel 395-415MHz: MCCU10-2-4<br>4 Channel 410-430MHz: MCCU10-3-4<br>4 Channel 425-440MHz: MCCU10-4-4<br>4 Channel 435-455MHz: MCCU10-5-4<br>4 Channel 450-470MHz: MCCU10-6-4<br>5 Channel 380-400MHz: MCCU10-1-5<br>5 Channel 395-415MHz: MCCU10-2-5<br>5 Channel 410-430MHz: MCCU10-3-5<br>5 Channel 425-440MHz: MCCU10-4-5<br>5 Channel 435-455MHz: MCCU10-5-5<br>5 Channel 450-470MHz: MCCU10-6-5<br>6 Channel 380-400MHz: MCCU10-1-6<br>6 Channel 395-415MHz: MCCU10-2-6<br>6 Channel 410-430MHz: MCCU10-3-6<br>6 Channel 425-440MHz: MCCU10-4-6<br>6 Channel 435-455MHz: MCCU10-5-6<br>6 Channel 450-470MHz: MCCU10-6-6<br>7 Channel 380-400MHz: MCCU10-1-7<br>7 Channel 395-415MHz: MCCU10-2-7<br>7 Channel 410-430MHz: MCCU10-3-7<br>7 Channel 425-440MHz: MCCU10-4-7<br>7 Channel 435-455MHz: MCCU10-5-7<br>7 Channel 450-470MHz: MCCU10-6-7<br>8 Channel 380-400MHz: MCCU10-1-8<br>8 Channel 395-415MHz: MCCU10-2-8<br>8 Channel 410-430MHz: MCCU10-3-8<br>8 Channel 425-440MHz: MCCU10-4-8<br>8 Channel 435-455MHz: MCCU10-5-8<br>8 Channel 450-470MHz: MCCU10-6-8 |                                                                      |

**Notes:** 1. All tests are performed at +25°C.

2. Due to the nature of magnets enclosed inside the isolators, insertion loss and isolation values deteriorate at extreme temperatures.

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