

DBC0111F2V62-1

TWIN SAME BAND COMBINER 850 B-BAND

Designed to combine two 850MHz base stations within Band 5 B-band, the Kaelus DBC0111 provides a low loss combiner with excellent insertion loss and passive inter-modulation performance.

FEATURES

- Combines legacy CDMA with single 5MHz LTE carrier
- Extremely close (zero guardband) spacing
- Designed for low passive inter-modulation
- DC/AISG autosensing
- Low insertion loss



TECHNICAL SPECIFICATIONS

BAND NAME	R1 (CDMA)	R1 (LTE)
Passband	CH384, 425, 466 & 770	EARFCN 2585
Insertion loss	1.0dB typical	1.1dB typical
EVM	2% typical, 7% maximum	0.5% typical, 2% maximum
Group delay variation	270ns maximum	250ns maximum
Absolute group delay	300ns maximum (band-edge) 33ns typical (mid-band)	350ns maximum (band-edge) 75ns typical (mid-band)

ISOLATION COM PORT MUST BE TERMINATED IN 50OHMS

R1 (CDMA) TX frequency range	35dB typical, 30dB minimum
R1 (LTE) TX frequency range	35dB typical, 30dB minimum
R1 (CDMA) RX frequency range	35dB typical, 30dB minimum
R1 (LTE) RX frequency range	35dB typical, 30dB minimum

ELECTRICAL

Impedance	50Ohms
Return loss	20dB minimum, 24dB typical.
Intermodulation products	-153dBc maximum all ports with 2 x 20W carriers (out of band IM testing <3 minutes)
Maximum input power	CDMA Channel:160W (average) / 1.6kW (PEP) LTE Channel:80W (average) / 800W (PEP)

DC / AISG	
The DC/AISG path is automatically selected. In bottom of the tower applications (combiner mode), each RF channel port is sequentially checked for the presence of DC voltage. If more than one port has voltage, the port that has the highest (programmed) priority is passed to the common port. If a short circuit is detected on the common port DC/AISG is disabled. In top-of-tower applications (splitter mode), DC/AISG is passed to all ports that do not present a short circuit. If a short circuit is detected, the shorted RF port will be disabled for DC/AISG while other RF ports remain connected. To reduce current consumption at low supply voltage, LEDs are sequentially enabled.	
Input voltage range	7.5 – 30V DC
DC current rating	2.5A continuous
Compliance	3GPP, TS 25.461
Current consumption	15mA typical, 25mA maximum
Port priority (combiner mode)	R1 (LTE) first, R1 (CDMA) second
LEDs	1 bi-colour LED per RF port connector
LEDs, bottom of tower application:	
- DC/AISG not present	Off
- DC/AISG pass	Green
- DC/AISG present, not passed	Red
LEDs, top of tower application:	
- DC/AISG pass	Green
- All ports disabled	COM LED red

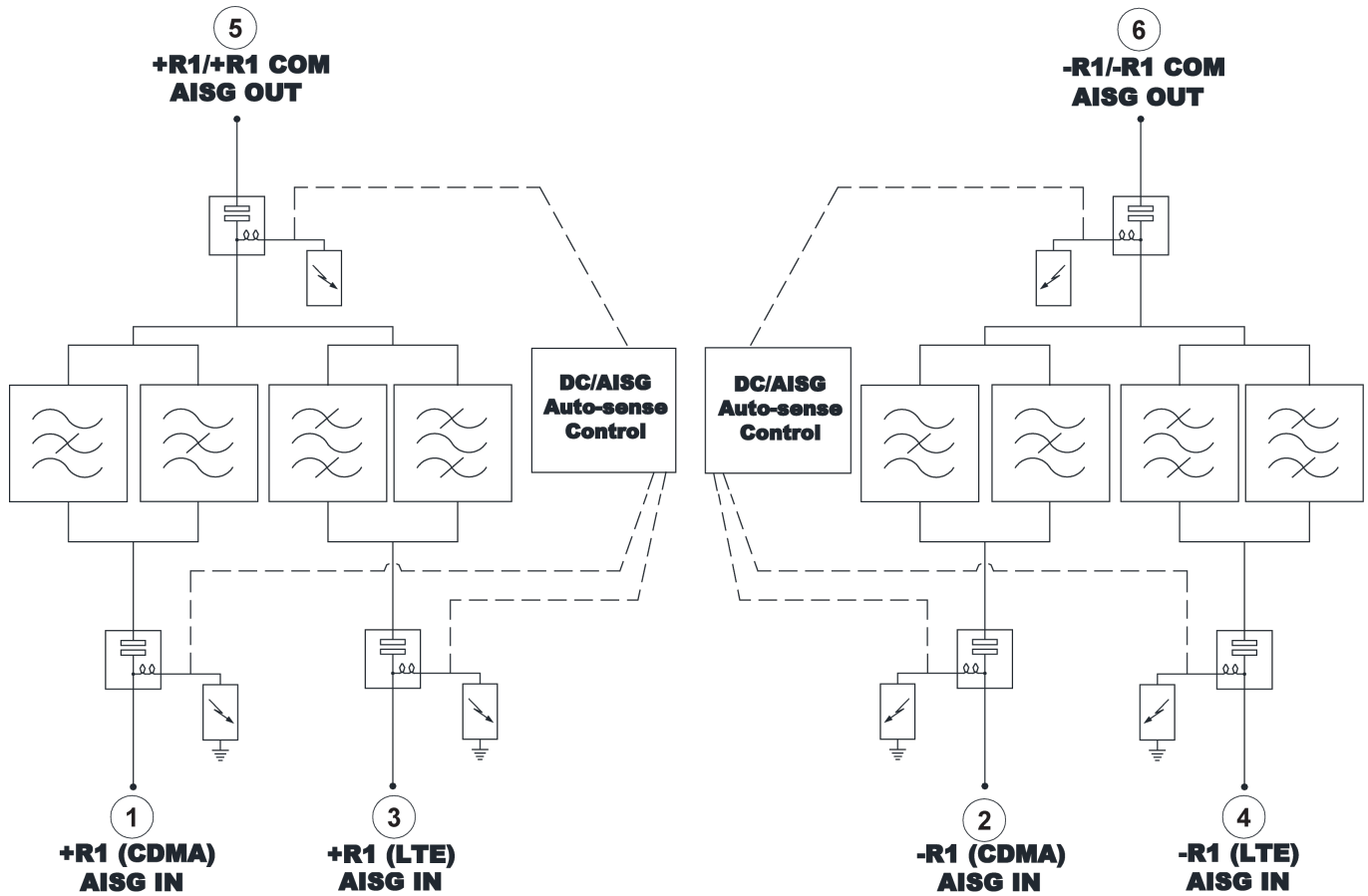
ENVIRONMENTAL	
For further details of environmental compliance, please contact Kaelus.	
Temperature range	-20°C to +65°C +4°F to +149°F
Ingress protection	IP67
Altitude	3,000m 10,000ft maximum
Lightning protection	RF: ±5kA maximum (8/20us)
MTBF	>1,000,000 hours
Compliance	ETSI EN 300 019 class 4.1, RoHS

MECHANICAL	
Dimensions H x D x W	319 x 257 x 266mm 12.56 x 10.13 x 10.47in
Weight	20.9kg 46.1lbs
Finish	Painted, light grey (RAL7035)
Connectors	DIN 7-16 (F) x 6 long neck
Wind Load	Front 426N, Side 468N At 74m/s (AS/NZS 1170-2-2011 Structural design - Wind actions - Cyclone areas)
Mounting	Pole/wall bracket supplied with two metal clamps for 45-178 mm diameter poles

ORDERING INFORMATION

PART NUMBER	R1 (CDMA)	R1 (LTE)	DESCRIPTION
DBC0111F2V62-1	CH 384, 425, 466, 770	EARFCN 2585	Twin SBC, B-band DC AUTO R1 (LTE)

ELECTRICAL BLOCK DIAGRAM



MECHANICAL BLOCK DIAGRAM

