

TMA2061

TWIN TMA 1900

Designed to be used at co-located 700MHz/850MHz and 1900MHz sites, the Kaelus TMA2061 provides gain on the 1900 uplink path while diplexing the 700MHz band to avoid costly external diplexers. Separate feeders are no longer required, resulting in decreased hardware costs, environmental impact and tower licensing fees.

FEATURES

- Full band 1900 TMA with 698-960MHz bypass path
- Provides improved base station sensitivity through low noise figure and good linearity
- High reliability with full lightning protection and a fail-safe bypass mode
- Small twin unit, ideal for X-Pol dual band systems
- AISG 2.0 compatible with current window alarm backup mode
- High power handling



TECHNICAL SPECIFICATIONS

DOWNLINK (TX) PATH	
Passband	1930 - 1990MHz
Return loss	18dB minimum (VSWR <1.3:1)
Insertion loss	0.6dB typical
Maximum input power with no damage	300W (average) / 3kW (PEP)
UPLINK PCS (RX) PATH	
Passband	1850 - 1910MHz
Nominal gain	12dB
Gain variation over frequency, temperature	± 1dB maximum
Noise figure	1.3dB typical
Return loss	18dB minimum operating, 14dB minimum in bypass mode
Bypass loss	2.5dB typical
Output IP3	+25dBm minimum
Maximum input power with no damage	12dBm maximum
698 - 960MHz BYPASS PATH	
Passband	698 - 960MHz
Return loss	18dB minimum (VSWR <1.3:1)
Insertion loss	0.2dB typical
Maximum input power with no damage	500W (average) / 5kW (PEP)
Rejection to 1900MHz TMA bands	80dB typical
ELECTRICAL	
Impedance	50ohms
Intermodulation products	-153dBc maximum in RX band with 2 x 20W carriers
POWER SUPPLY AND ALARM (CURRENT WINDOW ALARM MODE, DEFAULT)	
Current Window Alarm Mode (CWA) is the default TMA operating mode and can be configured to specific customer requirements. The TMA2061F1V1-1 is configured so that both channels are independently powered and monitored via the respective BTS port. The BTS port sinks additional current to indicate an alarm state in its uplink path. Normal operating and alarm current values are configured independently and are alterable via a field-loadable personality file, contact Kaelus for more information.	
DC supply voltage via BTS-RF cable	+8V to +30V DC, case is DC ground Each BTS port powered individually (programmable)
DC supply current, normal mode	100mA typical, 120mA maximum
DC supply current, alarm mode	200mA typical per LNA

AISG MODE OF OPERATION (AUTO SELECTED ON VALID AISG 2.0 FRAMES)

AISG signals can be applied to either BTS port. The TMA unit switches to AISG mode when valid frames are detected on one of the ports. The TMA unit is DC powered only from the port supplying AISG frames.

DC supply voltage	+8V to +30V DC, negative ground
AISG version	2.0 (1.1 optional)
Supply current, AISG mode	55mA at 30V, 135mA at 12V
AISG connector, current rating	IEC60130-9, 8-pin female, < 4A peak, 2A continuous, pin 6
Field firmware upgradable	Yes

ENVIRONMENTAL

For further details of environmental compliance, please contact Kaelus.

Temperature range	-40° to +65°C -40° to +149°F
Ingress protection	IP67
Lightning protection	IEC61312-1, RF: ±5kA maximum (8/20us), AISG: ±2kA maximum (8/20us)
MTBF	>1,000,000 (hours)
Compliance	FCC part 15, ETSI EN 300 019 class 4.1, RoHS

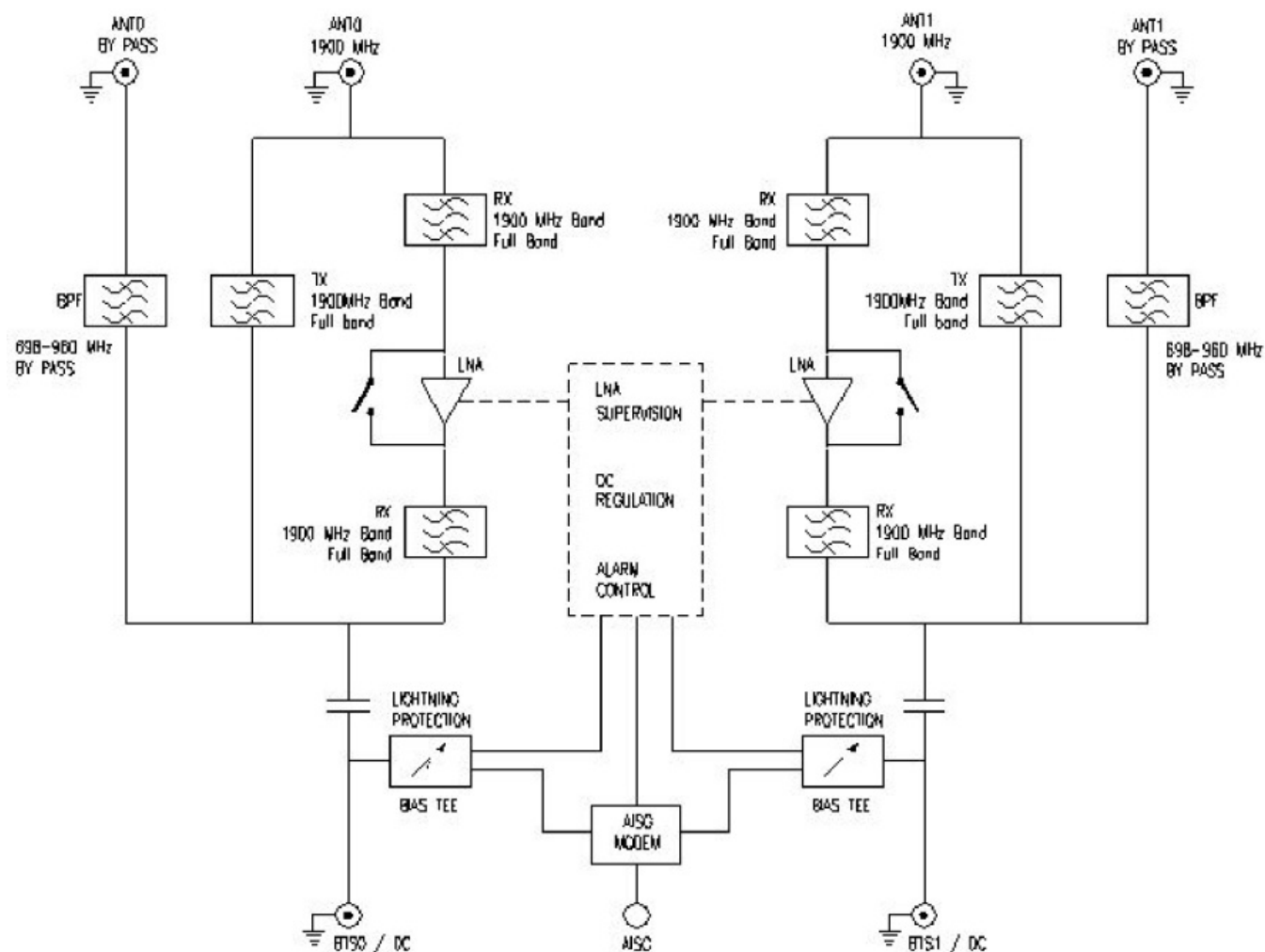
MECHANICAL

Dimensions H x D x W	270 x 200 x 118mm 10.62 x 7.87 x 4.64in (excluding brackets and connectors)
Weight	9kg 19.8lbs
Finish	Painted, light grey (RAL7035)
Connectors	DIN 7-16 (F) x 6 long shank, AISG (F) x 1
Mounting	Pole/wall bracket supplied with two metal clamps 45-178mm diameter poles

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
TMA2061F1V1-1	Twin TMA, 1900 full band, 700-900 bypass

ELECTRICAL BLOCK DIAGRAM



MECHANICAL BLOCK DIAGRAM

