

# Geniş Bant Mikrodalga Almaç

## Wideband Microwave Receiver



Geniş Bant Mikrodalga Almaç, yüksek performanslı, super-heterodyne mimaride tasarlanmış bir RF ön kat birimidir. Girişindeki 0.1 GHz to 18 GHz frekans aralığındaki RF sinyalleri, geniş bant kanalda merkezi sabit 1800 MHz ve bant genişliği 1GHz olan geniş bant sinyale, dar bant kanalda ise merkezi sabit 160MHz ve seçilebilir 10/20/40/80 MHz bant genişlikleri olan dar bant sinyale çevirir. Giriş frekans aralığı, opsiyonlu harici bir down-converter birimi ile 40 GHz'e kadar artırılabilir.

### Öz Nitelikler

- 0.1 - 18 GHz Giriş Frekans Aralığı
- 1 GHz Bant Genişliğinde Geniş Bant IF çıkış
- Seçilebilir 10/20/40/80 MHz Bant Genişliklerinde Dar Bant IF çıkışları
- Yüksek Dinamik Alan
- Düşük spurious & faz gürültüsü tepkileri
- Süpürme (Sweep) ve Tarama (Scan) Frekans Ayar Modları
- Manual Kazanç Kontrolü
- Cihaz İçi Test & Öz-Kalibrasyon Kabiliyeti
- Ethernet 1000 Base-T
- 6 U, 19" Rak

### Uygulama Alanları

- Elektronik İstihbarat (ELINT)
- Muhabere İstihbarat (COMINT)
- Radar İkaz Alıcıları (RIA)

*Wideband Microwave Receiver is a high performance, super-heterodyne, RF front-end unit that converts the incoming RF signals with frequencies between 0.1 GHz to 18 GHz to signals with fixed IF frequency of 1800 MHz with 1GHz bandwidth for wide-band channel and 160MHz with 10/20/40/80 MHz selectable bandwidth for narrow-band channel. Frequency coverage can be extended up to 40 GHz using optional external down-converter unit.*

### Features

- 0.1 - 18 GHz Input Frequency Range
- 1 GHz Bandwidth Wide-Band IF Output
- 10/20/40/80 MHz Bandwidth Selectable Narrow-Band IF Output
- High dynamic range
- Low spurious & phase noise response
- Sweep and Scan Tuning Modes
- Manual Gain Control
- Built-In-Test & Self-Calibration Capability
- Ethernet 1000 Base-T
- 6 U, 19" Rack

### Application Areas

- Electronic Intelligence (ELINT)
- Communication Intelligence (COMINT)
- Radar Warning Receivers (RWR)

## FREQUENCY

Range	0.1 – 18 GHz
<b>Tuning Step:</b> <ul style="list-style-type: none"><li>Wide-band Channel</li><li>Narrow-band Channel</li></ul>	100 MHz 1 KHz
<b>Tuning Time:</b> Freq. Step $\geq$ 1GHz Freq. Step < 1GHz	< 10 ms < 10 us
External Reference Input	10 MHz at 0 +/- 3 dBm, Auto locking
<b>Tuning Time:</b> Offset 100 Hz Offset 1 KHz Offset 10 KHz Offset 100 KHz Offset 1 MHz	-75 dBc / Hz -95 dBc / Hz -105 dBc / Hz -115 dBc / Hz -120 dBc / Hz

## SCAN AND SWEEP

Continuous Auto Scan	Sweeps frequencies from F1 to F2 selected frequency step, time delay, IF outputs and gain
Discrete Auto Scan	Scan up to 1024 frequencies @ selected time delay, IF output and gain

## RF SECTION

Noise Figure	< 13 dB at max. gain
RF Input Maximum Level	20 dBm
Conversion Sense	Non-inverted

## DYNAMIC RANGE

Spurious Free Dynamic Range (SFDR)	> 60 dB at -30 dBm input signal 30 dB gain
Residual Spurious Signal Level	< -80 dBm at -30 dB gain
Image Rejection	> 70 dB
LO Radiation at RF Input	< -70 dBm
Input IP3	> 10 dBm at 15 dB gain > -3 dB at 30 dB gain
Input 1 dB Compression	> 0 dBm at 15 dB gain

## IF OUTPUTS

	WIDE-BAND	NARROW BAND
Center Frequency	1800 MHz	160 MHz
Bandwidth	1 GHz	10/20/40/80 mHz selectable
Gain Flatness Over IF BW	$\pm 3$ dB	$\pm 3$ dB
Gain Regulation Range	15 - 30 dB, 1 dB Step	15 - 40 dB, 1 dB Step
Control IF Output	Yes	Yes
Log Video Output	Yes	Yes

## BUILT IN TEST (BIT)

BIT Capability	Continuously monitoring status of internal sub-units, temperature and power supplies
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## CALIBRATION

Type	Gain
Accuracy	$\pm 1.5$ dB
Trigger	<ul style="list-style-type: none"><li>Automatic Power - on Calibration</li><li>Calibration Necessity Indication &amp; on - Demand start of calibration</li></ul>

## CONTROL

Remote Programming	Ethernet 1000 Base-T
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## ENVIRONMENTAL

Operating Temperature Range	0 ... +50 °C
EMI/EMC:	Designed to Meet MIL-STD-461

## MECHANICAL

Dimensions	19", 6U
Weight	40 Kg

## OPTIONS

Extended frequency coverage	40 GHz Extension Module
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