

Geniş Bant Sayısal Almaç

Wideband Digital Receiver



Geniş Bant Sayısal Almaç radar sinyallerinin parametrelerini yüksek doğruluk ve hassasiyette ölçen bir birimdir. Almaçın geniş bant ve dar bant olmak üzere iki adet IF sinyal girişi vardır. Geniş bant girişin merkez frekansı 1800 MHz, işlenen bant genişliği 1000 MHz'dir. Dar bant girişin merkez frekansı 160 MHz, işlenen bant genişliği 10/20/40/80 MHz olarak seçilebilmektedir. Geniş Bant Sayısal Almaç geniş ve dar bant IF sinyalleri aynı anda işleyerek sayısal Darbe Tanımlayıcı Kelimeleri (DTK) üretir. Bu birim, RF ön kat birimi (front-end) olarak SDT'nin Geniş Bant Mikrodalga Almaç'ı ile senkronize edilebilmektedir. Aynı anda işlenebilen dar bant kanal sayısı opsiyonlu olarak üçe kadar çıkarılabilir.

Öz Nitelikler

- Eşzamanlı Geniş-Bant ve Dar-Bant Sinyal Tespiti ve DTK üretimi
- 1800 MHz Merkez Frekansta Geniş Bant IF giriş
- Geniş Bantta 1000 MHz Anlık İşlenen Bant Genişliği
- 160 MHz'de Merkez Frekansta Dar Bant IF giriş
- Dar Bantta 80 MHz'e kadar Anlık İşlenen Bant Genişliği
- Otomatik ve Manual Sinyal Tespiti Eşik Değeri Belirleme
- Süpürme (Sweep) ve Tarama (Scan) Modları - RF Ön Kat Senkronizasyonu ile
- Cihaz İçi Test
- Ethernet 1000 Base-T
- 6 U, 19" Rak

Uygulama Alanları

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

Wideband Digital Receiver measures parameters of radar signals with high precision and accuracy. The receiver accepts IF inputs centered at 1800 MHz with 1GHz bandwidth for wide-band channel, at 160MHz with 10/20/40/80 MHz selectable bandwidth for narrow-band channel and generates digital Pulse Descriptor Words (PDW) for radar signal analysis and identification. This unit can be synchronized with Wide Band Microwave Receiver- the RF front-end provided by SDT. Number of concurrently processed narrow-band channels can be optionally increased up to three.

Features

- Concurrent PDW Generation from Wide-Band & Narrow-Band channels
- Accepts Wide-band Channel IF Input at 1800 MHz
- 1000 MHz Processed Instantaneous Bandwidth at Wide-Band
- Accepts Narrow-Band Channel IF Inputs at 160MHz
- Up to 80 MHz Processed Instantaneous Bandwidth at Narrow-Band
- Automatic & Manual Detection Threshold Control
- Sweep and Scan Tuning Modes - with RF Front-End Synchronization
- Built-In-Test Capability
- Ethernet 1000 Base-T
- 6 U, 19" Rack

Application Areas

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

PDW GENERATION

Structure

Channel	Wide-band, Narrow-band
Frequency	0.1-18 GHz - Referred to RF front-end input
Pulse Width	50ns-500us
Time of Arrival	ns resolution
Modulation Flags	Intrapulse Modulation detection
Amplitude	dBm - Referred to RF front-end input
CW flag	CW / Pulsed signal flag
Status	ADC overload indication

PDW GENERATION

Continuous Auto Scan (With RF Front -End Synchronization)	Sweeps frequencies from F1 to F2 at selected frequency step, time delay, IF outputs and gain.
Discrete Auto Scan (With RF Front - End Synchronization)	Sweeps frequencies from F1 to F2 at selected frequency step, time delay, IF outputs and gain.
Data Interface PDW RF Front-End Synchronization	Over 1000 Base-T Ethernet Over Discrete I/O

WIDE-BAND PROCESSING

IF Input Center Frequency	1800 MHz
IF Input Maximum Level	-8 dBm
Instantaneous Dynamic Range	50 dB max.
Processed Band-width	1000 MHz
Concurrent Signal Detection & PDW Generation	Max. 32 pulsed RF signals at distinct frequencies

NARROW-BAND PROCESSING

IF Input Center Frequency	160 MHz
IF Input Maximum Level	15 dBm
Instantaneous Dynamic Range	60 dB max.
Processed Bandwidth	10/20/40/80 MHzselectable
Concurrent Signal Detection & PDW Generation	Max. 32 pulsed RF signals at distinct frequencies

BUILT IN TEST (BIT)

BIT Capability	Continuously monitoring status of internal sub-units, temperature and power supplies
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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	25 Kg

OPTIONS

Additional narrow - band processing channels	Up to three
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