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DFP 5135

Direction-finding receiver

MF

HF

0.5 MHz – 30 MHz

The DFP 5135 is a digital wideband direction-finding receiver covering 0.5 to 30 MHz using direct sampling. The receiver provides a coherent bandwidth of 29.5 MHz. With exceptional technical specifications, the DFP 5135 allows simultaneously interception of the entire band and the continuous calculation of bearings using the Watson-Watt method. The DFP 5135 is the perfect answer to the ever-growing need for fully automated HF COMINT systems and simply the best direction-finding receiver for this frequency range.

TECHNICAL HIGHLIGHTS

- 5 direction-finding receivers in one device
- coherent bandwidth of 29.5 MHz using direct sampling
- 40 flexible digital subchannels
- DF accuracy $\leq 0.5^\circ$ RMS
- exceptional SFDR ≥ 125 dB
- high blocking free dynamic range 140dB/Hz
- minimum detectable signal -139 dBm @ 125 Hz
- 120 tuneable narrowband DDC channels (10, 20 or 40 kHz)

CUSTOMER ADVANTAGES

- optimized and instantaneous bearings of all signals of interest within the entire frequency range by combining 5 direction-finding receivers in one device
- perfect adaption to the different frequency conditions in HF frequency
- exceptional technical specifications lead to fast, precise and reliable bearings
- full COMINT system in one device by combining a direction-finding receiver with 120 DDC channels for signal monitoring

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RECEIVER

MONITORING
RECEIVER

DIRECTION-FINDING
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CONTROL &
ANALYSIS SOFTWARE

DFP 5135	
Frequency range	0.5 MHz – 30 MHz
Coherent analogue bandwidth	29.5 MHz
Coherent digital bandwidth	29.5 MHz
Number of subbands	40
Preselection	5x7 LP / 5x7 HP
Frequency resolution	125 Hz (31.25 Hz optional)
Gain control	AGC, MGC, AGC+M
Scanning speed	starring 30 MHz
Processing speed	>30,000,000 channels/s
Maximum input level	+30 dBm
Noise figure	≤ 12 dB
Full dynamic range	169 dB
SFDR2 (in-band) / IMFDR	125 dB (individually DF sections 105 dB)
MDS (minimum detectable signal)	-139 dBm (@125 Hz frequency resolution)
Image frequency rejection	n/a (direct sampling)
Intermediate frequency rejection	not measurable
IP2	≥ 80 dBm
IP3	≥ 43 dBm
DF method	Watson-Watt
Number of channels	5x3
DF data resolution	0.1°
DF accuracy	≤ 0.5° RMS
Monitoring options	available
Number of channels	100
Bandwidth of channels	10 / 20 / 40 kHz
Audio demodulation	CW, AM, FM, USB, LSB, ISB (provided by WIN DF)
Audio bandwidth	-
Frequency stability internal reference	±10 ⁻⁷
Frequency drift	< ±5 x 10 ⁻⁷
Nominal impedance	50 Ω
BITE	@ module level
Standards	DIN EN60950-1 (VDE 0805-1):2014-08 / EN61000-6-2:2002 / EN61000-6-3:2002
Operating temperature	0° C to +40° C
Storage temperature	-40° C to +75° C
Humidity	≤ 85% (non-condensing)
Protection class	IP 20
Power consumption	140 V – 264 V AC 50 / 60 Hz, 1200 VA
Network interface	6x LAN 1000 Base-T (UDP) + 2x LAN 1000 Base-T (TCP/IP)
Weight	40 kg
Size (width / height / depth)	19" / 4 RU / 605 mm