iDirect® SkyMonitor™

iVantage™ Spectrum Analyzer Option

Fully integrated, always-connected, high-performance spectrum analyzer for easy and complete monitoring and troubleshooting of iDirect network carriers.

SkyMonitor is the industry's first fully-integrated spectrum analyzer of multiple carriers, providing instant access to real-time spectral data of inbound and outbound carriers. Network Operators can dramatically reduce the time and cost required to diagnose performance issues from RF interference or other carrier-related anomalies, increasing customer satisfaction, avoiding network quality deterioration and SLA-related revenue loss.

Fast and accurate spectrum measurements

With SkyMonitor's state-of-the-art digital technology and Fast Fourier Transformation (FFT), the Network Operator can make quick and accurate measurements of all iDirect carriers as well as monitor peak power, spurious signals, carrier spacing, and rogue carriers. The spectrum analyzer is equipped with eight auto-switching ports allowing fast connection to monitor multiple transmit and receive IF carriers at once.

Easy-to-use integrated solution

The rack-mounted SkyMonitor is fully integrated with iDirect's award-winning iVantage NMS providing local or remote access. With full integration into a single, familiar GUI interface, SkyMonitor enables Network Operators to eliminate the need for lengthy training and set-up. Through iVantage the operator can easily drill down on any hub line card to monitor real-time spectrum of its transmit or receive carriers. Stored configurations auto-tune to the correct frequency for instant analysis.

Powerful and intuitive analysis tools

SkyMonitor is a cost effective solution that bridges the gap between typical layer 2 and above network analysis and layer 1 RF spectrum and power analysis in a single GUI. When used in conjunction with iVantage's standard features, SkyMonitor allows for simultaneous analysis of RF and IP layers resulting in improved troubleshooting capabilities.

With the capability to retrieve and view stored displays and compare real-time traces with historical data, SkyMonitor enables network operators to perform powerful analysis even with minimal detailed knowledge of standard spectrum analyzers or RF engineering.

Features

- Low-cost spectrum analyzer, fully integrated with iVantage™ NMS
- Instant access to real-time monitoring and troubleshooting of eight input ports at once
- Wide input range accepting L-band signals from 950 to 2,150 MHz and power levels from -110 to +5 dBm
- High performance with state-of-the-art technology and Fast Fourier Transformations
- Local or remote access of stored configurations that auto-tune to correct frequencies
- Access to saved historical data to compare to real-time display
- 10 MHz external frequency reference input
- Standard 19" 1U rack mountable

iDirect SkyMonitor
Model 1880

Physical Interface

RF Inputs	4, 8
Input Frequency Range	Type – F, 950 – 2150 MHz
Input Power (per input)	-110 dBm to +5 dBm (aggregate)
Input Isolation (port to port)	48 dB (min)
Input Return Loss	12 dB (min)
Control	RJ-45
Reference	BNC, 50 ohms 10 MHz, -2 dBm to +16 dBm

Power Specifications

AC Power	IEC 60320
Input Voltage	~120/240 VAC, 30 VA max power consumption
Input Frequency	47-63 Hz, 20W

Measurements

Amplitude Accuracy	+/- 1.0 dB (at 25° C)* +/- 1.5 dB (5 to 40° C)
Frequency Accuracy	+/- 2.6 ppm (internal) +/- 10 Hz (external)
Frequency Resolution	4 Hz
Resolution Bandwidth	4 Hz to 508.928 kHz**
Spurious:	
DC Offset	< -55 dBc (typical)
Images	< -55 dBc (typical)
Aliasing	< -45 dBc (typical)
Single Measurement Span	16 kHz to 52 MHz
Multiple Measurement Span	52 MHz to 1200 MHz
Averaging	User selectable, up to 100 averages
Measurement Speed:	
8192 Point FFT, 52 MHz span	2.11 seconds
1024 Point FFT, 3.5 MHz span	0.190 seconds

Mechanical and Enviornmental

Size	W 19 in (48.26 cm) x D 10 in (25.4 cm) x H 1.75 in (4.45 cm) (1U)
Operational Temperature	41º to 104ºF (5 to 40ºC)
Operational Humidity	0-50% non-condensing (maximum 80% for temperatures up to 31°C, decreasing linearly to 50% at 40°C)
Safety Standards	Complies with EN 61010-1, UL 61010-1, CSA22.2 No. 61010-1
Emission Standard	Complies with EN 61000-6-2, EN 61000-6-4, FCC Title 47, Part 15 Class A, ICES-003
Interoperability	Directly integrated into iVantage NMS iDS software version 8.3 or higher

** Measurement conditions: 10 averages, input level between -8 dBm and -68 dBm, 3 sigma*

*** Resolution bandwidths auto or manual adjustable. Available bandwidth limited by span, decimation rate and window type.*

All specifications at 25°C unless otherwise noted and are subject to change without notice.