Press Release

For Immediate Release

Narda Expands SignalShark for the Direction-Finding and Localization of Interference Signals and SatCom Terminals Up to 26.5 GHz

- ***New: Direction Finding*** *with the SignalShark* ***from 7 to 26.5 GHz***
- ***Mobile Localization of SatCom Terminals*** *and Other SHF Signal Sources*
- ***A compact antenna*** *for SatCom, radar, interference detection, and spectrum monitoring*
- *Integrated* ***LNA*** *and* ***downconverter*** *reduce RF transmission losses*

Pfullingen, September 29, 2026 – Satellite communications are playing an increasingly important role in both civilian and military communication networks. As a result, the importance of a task considered extremely challenging from a metrological standpoint is also growing: not only detecting and analyzing a SatCom signal, but also reliably locating its terrestrial source. With the new DF downconverter antenna, Narda Safety Test Solutions is expanding the mobile SignalShark platform to the 7 to 26.5 GHz frequency range, thereby enabling the manual direction-finding and localization of interference signals and terminals in the SatCom sector and other high-frequency signal sources.

From the SatCom Signal to the Signal Source

Whether searching for an interference source in a satellite network, investigating an unknown or unwanted transmitter, or conducting military reconnaissance and surveillance missions: Simply detecting a signal does not answer the crucial question of where it comes from.

It is precisely this answer that the combination of SignalShark and the DF downconverter antenna provides. The antenna's high directivity makes it possible to determine the direction of arrival of a signal and thus narrow down the search for its origin in a targeted manner. For example, terrestrial SatCom terminals transmitting to a satellite can be tracked down and located in the field.

This opens up a wide range of applications. Satellite network operators and technical service organizations can specifically track down sources of uplink interference. Regulatory agencies and radio monitoring organizations gain a mobile tool for monitoring and locating transmissions in frequency bands that were previously not covered by SignalShark. Furthermore, the range of applications for government agencies, security organizations, and military users is expanded to include the mobile detection and localization of SatCom terminals and other SHF transmitters.

A System for 7 to 26.5 GHz

Since its market launch, the SignalShark has combined real-time spectrum analysis and direction finding in a compact, mobile measurement system for frequencies ranging from 8 kHz to 8 GHz. At the same time, more and more relevant radio applications are shifting to higher frequency ranges—including satellite communications, modern radar systems, microwave links, and other broadband communication systems.

With the new compact DF downconverter antenna—which, thanks to its extremely low weight, is ideally suited for mobile field operations from the outset—Narda is now opening up the 7 to 26.5 GHz range for manual direction finding. A single antenna covers the entire frequency range. This reduces the need to change antennas and thus minimizes equipment, weight, and time—a significant advantage in mobile operations. In addition to SatCom terminals, potential targets therefore include radar and microwave transmitters, sources of interference, and other unknown or unwanted emissions. Other areas of application include spectrum monitoring, frequency management, and, in the future, UAV-based applications.

RF Signal Processing Directly at the Antenna
The expansion into the SHF range places special demands on signal transmission. As frequency increases, losses in RF cables also increase. This can cause weak signals in particular to be further attenuated on their way from the antenna to the measuring instrument.

Narda therefore relocates a significant portion of the RF signal processing directly to the antenna. An integrated low-noise amplifier (LNA) amplifies the received signal before the downconverter converts it to a lower frequency range. Only this downconverted signal is transmitted to the SignalShark via the connection cable.
This reduces transmission losses and preserves the signal quality—which is critical for detection and direction-finding—even at high input frequencies. The high directivity and an antenna gain of up to 20 dBi further support the direction-finding of weak signal sources.

From spectrum analysis directly to direction finding
The DF Downconverter Antenna is specifically designed to work in conjunction with SignalShark. SignalShark automatically detects the connected antenna type and applies the appropriate frequency response corrections.

An integrated electronic compass, along with sensors for tilt and polarization angles, provide additional information about the antenna's spatial orientation. This means that during manual direction-finding, not only signal levels and spectrum data are available, but also the orientation information necessary for determining direction.

This creates a seamless mobile workflow for users: detect signals, analyze them, determine their direction, and locate the source.

With the new DF downconverter antenna, Narda STS states that it is not simply expanding the SignalShark's frequency range. The Pfullingen-based company also enables users, for example, to track a SatCom signal all the way to its origin on the ground. This is crucial both for detecting interference in civilian satellite networks and for security-related and military applications. At the same time, the system remains compact and mobile.

Designed for mobile use
The new DF downconverter antenna is designed for mobile direction-finding tasks in the field. The rugged IP54 housing and interchangeable connection cables support operation under demanding environmental conditions. Power is supplied directly via the SignalShark, eliminating the need for additional batteries or external power supplies.

Multiple ¼-inch threads also allow for flexible mounting, for example on tripods, drones, or other suitable platforms.

With the DF downconverter antenna, Narda expands the SignalShark's range of applications from traditional spectrum analysis and jammer detection to the mobile localization of high-

frequency signal sources. Its practical benefits are particularly evident in SatCom: a signal in the spectrum becomes a direction—and a direction becomes a localizable signal source.

[6,568 characters]

You can also find this text and press photos at
www.narda-sts.com under the section: Company > Press

[Image 01 Narda STS Downconverter Antenna_260910.jpg]

Figure 01: Whether you're troubleshooting a satellite network, investigating an unknown or unwanted transmitter, or conducting military reconnaissance and surveillance missions, the combination of SignalShark and the new DF downconverter antenna goes beyond simply detecting the signal to pinpoint its source.

[Image 02 Narda STS Downconverter Antenna_260910.jpg]

Image 02: The SignalShark DF downconverter antenna offers high sensitivity and excellent direction-finding accuracy for the precise localization of SatCom signals and interference sources in the SHF band.

[Image 03 Narda STS Downconverter Antenna_260910.jpg]

Image 03: With the new Direction Finding Downconverter Antenna, Narda is expanding into the 7 to 26.5 GHz frequency range for manual use.

Narda Safety Test Solutions GmbH is an internationally active manufacturer of measurement technology for electromagnetic fields and radio signals. The company develops solutions for **spectrum monitoring, interference detection, direction finding, and signal intelligence,** as well as for the standards-compliant assessment of electromagnetic fields (EMF).

In the field of **spectrum monitoring and safety-critical applications,** Narda positions itself as a specialized provider for demanding operational scenarios. The systems enable the **detection, analysis, and localization of radio signals in real time** and are used, among others, by regulatory agencies, security organizations, and in applications such as **event security, critical infrastructure protection, border protection, and electronic warfare (EW)**. The goal is to deliver reliable results quickly, even in complex and heavily congested frequency environments.

In the field of **EMF Safety & Environmental Monitoring**, Narda ranks among the established global market leaders. Its solutions support the **measurement and evaluation of electromagnetic fields in accordance with international standards** such as ICNIRP or FCC and help ensure the protection of people in the workplace as well as compliance with legal limits.

The portfolio is complemented by measurement technology for **electromagnetic compatibility (EMC)** under the PMM brand.

Narda develops and manufactures products at locations in Germany and Italy and is represented worldwide through a network of sales partners. **ISO/IEC 17025**-accredited calibration laboratories and an **ISO 9001**-certified quality management system ensure the high accuracy and reliability of the systems.

With a focus on precise measurement results, practical solutions, and specialized applications, Narda helps make electromagnetic environments transparent, safe, and manageable.

For more information:

Texterei Jungmann
[Press Contact]
Thomas Jungmann
Am Steinberg 33
D-96450 Coburg
Phone: +49 - 172.6827066
Email: info@texterei-jungmann.de
http://texterei-jungmann.de

Narda Safety Test Solutions GmbH
Sandwiesenstr. 7
D-72793 Pfullingen
Phone: +49 - 7121 / 97 32 - 0
Fax: +49 - 7121 / 97 32 - 790
Email: info@narda-sts.com
www.narda-sts.com