At IBC2014, WORK Microwave will showcase a wide range of advanced satellite communications technologies that support the new DVB-S2X standard. WORK Microwave’s DVB-S2X equipment provides satellite operators with increased flexibility, bandwidth, and margins while reducing their amplifier power, operating costs, and antenna sizes.

WORK Microwave will also demonstrate improvements to its Fifth-Generation Frequency Converter Series, including Q-band support.

WORK Microwave platforms span a range of applications within the broadcast, satellite, and telco markets, including SNG, local cable distribution, direct-to-home, IP trunking and backhaul, teleport, remote location, and more.

**Key Products and Technology Demonstrations**

**DVB-S2X Technology Introduction**
At IBC2014, WORK Microwave will demonstrate DVB-S2X support for its IP-Modem SK-IP, Broadcast Modulator, and wideband devices.

The DVB-S2X extension offers a variety of advanced features and benefits, including smaller roll-offs, advanced filtering, higher modulation schemes, and wideband support beyond 72 Mbaud, enabling operators to achieve sizeable efficiency gains exceeding the results offered by proprietary systems on the market today.

The following DVB-S2X features and benefits have been implemented:

- **Higher modulation schemes:** By adding higher modulation schemes — up to 64APSK — to its equipment, WORK Microwave enables operators to support professional applications with improved link budgets, which will become increasingly necessary as they deploy bigger antennas.

- **Increased granularity in MODCODs:** WORK Microwave’s DVB-S2X equipment can support significantly more MODCODs than was ever possible with the DVB-S2 standard — 112 compared with 28 — bringing efficiency as close to the theoretical Shannon limit as possible. This allows operators to achieve the highest resolution for optimal modulation in all circumstances. When used in combination with Adaptive Coding and Modulation (ACM), where the highest MODCOD is selected automatically, full efficiency can be gained.

**More...**
• **Linear and nonlinear MODCODs**: With WORK Microwave’s DVB-S2X equipment, MODCODs can be divided into two different classes, linear and non-linear, and optimized under different user conditions. The MODCODs and FECs offer improvements over the DVB-S2 standard, allowing operators to achieve better efficiency levels.

• **Smaller roll-off factors**: WORK Microwave’s DVB-S2X equipment offers smaller roll-off factors and improved filtering, enabling operators to achieve up to a 15 percent gain in bandwidth.

• **Wideband support beyond 72 Mbaud**: The wideband implementation in DVB-S2X typically addresses satellite transponders with bandwidths from 72 MHz (e.g., C-band) up to several hundred MHz (e.g., Ka-band, HTS). WORK Microwave’s wideband devices will transmit the complete wideband signal of 72 Mbaud and beyond, resulting in a very high data rate.

**Fifth-Generation Frequency Converter Series**
At IBC2014, WORK Microwave will also demonstrate its Fifth-Generation Frequency Converter Series, designed to support applications that require low phase noise, ranging from S-band to Q-band. Utilizing a sophisticated synthesizer, the frequency converters can deliver phase noise at a level that significantly exceeds the respected industry standard according to Intelsat’s Phase Noise Specification, IESS-308/309.

The converter series also includes a new Ethernet port that simplifies remote configuration and monitoring of the device.

WORK Microwave’s Fifth-Generation Frequency Converter Series is based on a compact, multichannel module design that allows operators to support up to four channels within 19-inch housing, lowering operational expenses and saving valuable space.

**Company Overview:**

**About WORK Microwave (www.work-microwave.de)**
Headquartered in Holzkirchen (near Munich), Germany, and comprised of four operating divisions — Satellite Technologies, Navigation Simulators, Defence Electronics, and Sensors and Measurement — WORK Microwave leverages more than 28 years of experience to anticipate market needs and apply an innovative and creative approach to the development of frequency converters, DVB-S2 equipment, and other digital signal processing technologies while maintaining the highest standards for quality, reliability, and performance.

WORK Microwave's Satellite Technologies division develops and manufactures high-performance, advanced satellite communications equipment for telecommunications companies, broadcasters, integrators, and government organizations that are operating satellite earth stations, satellite news gathering vehicles, fly-aways, and other mobile or portable satellite communication solutions.

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