News Release

WHRO Orders a 68kW PARAULAX® (PARALLAX) UHF DTV Transmitter from Hitachi Kokusai Electric Comark

SOUTHWICK, MA, October 20, 2020 – Hitachi Kokusai Electric Comark LLC (hereinafter "COMARK"), a manufacturer and supplier of DTV transmitters, encoding systems, and associated field services for over 45 years, has announced that WHRO ordered a new COMARK 68kW PARALLAX UHF transmitter. Hampton Roads Educational Telecommunications Association (WHRO-TV) is the PBS member television station serving the Norfolk and Portsmouth, VA area.

WHRO's HPTV-PRLX-U42 68kW transmitter consists of 3 rack cabinets each equipped with 14 UHF Asymmetric Broadband Doherty power amplifiers. The PARALLAX transmitter has been delivered complete with dual EXACT-V2 ATSC exciters (in main/standby configuration) and the liquid cooling system. In addition, COMRARK supplied the complete RF system that incorporates Constant Impedance Filter (CIF) technology and the high-power external hybrid's for combining each of the transmitter's PA cabinets.

COMARK managed the shipment, offloading, and placement of the new equipment in the transmitter facility. Mechanical installation of the new transmitter system was completed by late March to support the stations phase 9 repack deadline. However, due to COVID-19, the actual transition to the station's new RF channel was moved to July 3rd, 2020 and COMARK helped the station turn on the new transmitter, performing the complete proof-of-performance testing in late June.

COMARK debuted the PARALLAX high efficiency transmitter at NAB 2016, where it won NewBay Media's Best of Show Award, presented by TV Technology. PARALLAX uses broadband Doherty performance with a future proof design. PARALLAX offers all broadcasters:

- Highest power, liquid cooled, solid state transmitter available; up to 27.5kW TPO per rack cabinet, multiple cabinets for up to 100kW
- Highest efficiency with wideband Doherty technology
- Unique vertical high-gain power amplifiers providing 2kW per PA module for UHF
- Asymmetrical Doherty; same power in 8VSB and OFDM
- Unique DualCast ATSC 1.0 / 3.0 upgradeable; preserves investment
- Hot-swap AC to DC rectifiers with >96% efficiency
- Made in the USA; serviced and supported out of Southwick, MA

"COMARK worked with the management of WHRO to provide a complete solution for their repack requirements", states Joe Turbolski, VP of Sales and Marketing for COMARK. "The new transmitter installation was a tight fit into the existing facility, so we performed a detailed site survey and system design to ensure there were no surprises during the mechanical installation." "WHRO was extremely pleased to be working with Comark once again to provide a current and future proof solution for their transmitter needs", states Chris Gunnufsen, VP of Technology for WHRO. Working with seasoned professionals such and Jack McAnulty and Joe Turbolski made choosing Comark the best choice for WHRO. The Three cabinet 68kW ATSC 3.0 ready solution will keep WHRO ready for any future broadcasting options. "It's all about the best solution at the best price with a Company that I have always respected", states Chris. Integrity, customer service, reliability and price are what we at WHRO expect from our valued broadcasting partners. Comark is a five star company and we really enjoyed working with them on this project.

PARAJIAX^{*} is a registered trademark of Hitachi Kokusai Electric Comark LLC

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About Hitachi Kokusai Electric Comark LLC:

For over 45 years COMARK has been synonymous with broadcast expertise and innovation. A trusted partner to the world's leading broadcasters, COMARK has pioneered many developments that have shaped the industry, leading innovation in IOT & MSDC-IOT technology, transistorized solid-state technology, Digital Adaptive Pre-correction (DAP), and also winning multiple Emmy[®] Awards; and gaining numerous patents in technologies that have become fundamental to broadcasting. COMARK is now building on this great heritage with the release of an entirely new range of transmission products for terrestrial television broadcasting, and state-of-the-art products for scientific/industrial RF applications. With thousands of active COMARK transmission systems deployed worldwide and a global support presence, COMARK plans to continue to develop technologies for the future, with efficient performance initiatives that improve coverage and save power.

Information about products from Hitachi-Comark is available at <u>www.comarktv.com</u> .	Contact:
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