



SOLUTIONS FOR 5G WIRELESS TESTING

5700 SERIES SELECTION GUIDE

BEYOND MEASURE.™

 **ETS·LINDGREN**[®]
An ESCO Technologies Company

THE EXPERIENCED PARTNER YOU CAN TRUST

AS THE LEADER IN COMMERCIAL TEST AND MEASUREMENT, ETS-LINDGREN HAS THE SOLUTIONS TO MEET ALL OF YOUR 5G TESTING NEEDS

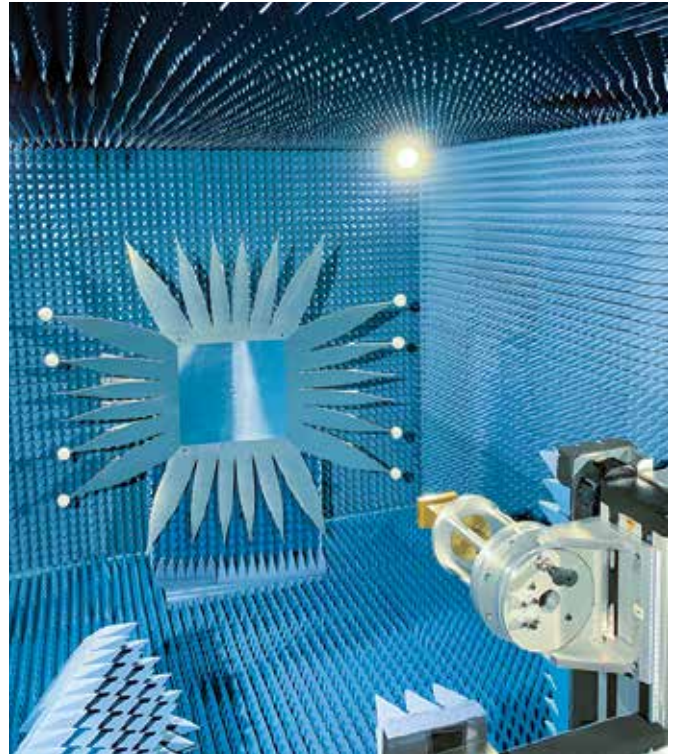
As we move towards fifth generation (5G) wireless networks, the use of advanced adaptive antenna system (AAS) techniques including beam forming, as well as the expected move to millimeter wave (mmWave) frequencies, will have an unprecedented impact on existing RF testing of wireless devices. As the leader in RF, EMC, and OTA test and measurement solutions, ETS-Lindgren is uniquely qualified to address the emerging 5G and mmWave test requirements. Not only do we have the proven technical depth expected of an industry leader, but we also have the capability to work with our customers to provide the optimal test and measurement solution for their specific product application. We have developed the following guide to assist you in selecting the appropriate standardized 5G product. Considering that each wireless device manufacturer or carrier will have its own specific performance metrics, ETS-Lindgren also offers customized solutions to meet these unique requirements. To further discuss your solution requirements, please contact your local ETS-Lindgren representative.

	AMS-5700	AMS-5701	AMS-5702	AMS-5703
Target/Optimum Application	Manufacturing QA, Receiver/Transmitter Calibration, 2D or Fixed Beam Applications	5G Conformance and Performance Testing (EIRP, TRP, EIS, TIS), Radio Interoperability	5G Conformance and Performance Testing (EIRP, TRP, EIS, TIS), Radio Interoperability. Flexible System with Variable Path Length to Adjust for Wide Range of Array Sizes and Optimized Dynamic Range	5G Conformance and Performance Testing (EIRP, TRP, EIS, TIS), Radio Interoperability
Description	Azimuth Axis Antenna Measurement System	Distributed Axis Antenna Measurement System	Combined Axis Antenna Measurement System	Compact Range (CATR), Combined Axis Antenna Measurement System
Typical Test Device Type	Module, Phone	Module, Phone	Module, Phone	Phone, Tablet, Small Cells, CPE, Laptop, gNB Base Station
Compliance Standard/Technology	R & D	3GPP	3GPP	3GPP
Frequency Range	5G FR2 / 24 GHz to 44 GHz	5G FR2 / 24 GHz to 44 GHz	5G FR2 / 24 GHz to 44 GHz	5G FR2 / 24 GHz to 44 GHz
Physical Format	Tabletop	Mobile/Wheels	Mobile/Wheels	Chamber/Non-mobile
Testing Methodology	Direct Far-Field (DFF)	Direct Far-Field (DFF)	Direct Far-Field (DFF)	Indirect Far-Field (IFF)
Rotation Axis	Single Axis Turntable	Single Axis Turntable with Theta Arm (Spherical)	Dual Axis Positioner (Spherical) with Variable Range Length Linear Slide	Dual Axis Positioner (Spherical)
Maximum Antenna Array Size	24 GHz = 7.8 cm 28 GHz = 7.2 cm 39 GHz = 6.2 cm 44 GHz = 5.8 cm	24 GHz = 6.8 cm 28 GHz = 6.2 cm 39 GHz = 5.2 cm 44 GHz = 5.0 cm	24 GHz = 5.6 cm - 9.6 cm 28 GHz = 5.0 cm - 8.8 cm 39 GHz = 4.4 cm - 7.6 cm 44 GHz = 4.0 cm - 7.0 cm	24 GHz = 60.0 cm 28 GHz = 60.0 cm 39 GHz = 60.0 cm 44 GHz = 60.0 cm
Exterior Chamber Nominal Size	1.5 m x 0.7 m x 0.9 m (4.9 ft x 2.3 ft x 3.0 ft)	2.1 m x 1.4 m x 2.2 m (6.9 ft x 4.6 ft x 7.2 ft)	2.5 m x 1.4 m x 1.8 m (8.2 ft x 4.6 ft x 5.9 ft)	4.6 m x 2.7 m x 2.4 m (15.0 ft x 9.0 ft x 8.0 ft)

AMS-5700



AMS-5703



AMS-5705



AMS-5704	AMS-5705	AMS-5706	AMS-5707	AMS-5708
60 GHz Device/Antenna Performance Testing	5G Conformance and Performance Testing (EIRP, TRP, EIS, TIS), Radio Interoperability	5G Conformance and Performance Testing (EIRP, TRP, EIS, TIS), Radio Interoperability	5G Conformance and Performance Testing (EIRP, TRP, EIS, TIS), Radio Interoperability	5G Conformance and Performance Testing (EIRP, TRP, EIS, TIS), Radio Interoperability
Distributed Axis Antenna Measurement System	Compact Range (CATR), Combined Axis Antenna Measurement System	Compact Range (CATR), Combined Axis Antenna Measurement System	Compact Range (CATR), Combined Axis Antenna Measurement System	Compact Range (CATR), Combined Axis Antenna Measurement System
Module, Phone, Computer Peripherals	Module, Phone, Tablet, Small Cells	Phone, Tablet, Small Cells, Laptop	Phone, Tablet, Small Cells, CPE, Laptop, gNB Base Station	Phone, Tablet, Small Cells, CPE, Laptop, gNB Base Station
WiGig, 802.11ad, 802.11ay	3GPP	3GPP/CTIA	3GPP/CTIA	3GPP/CTIA
50 GHz to 75 GHz	5G FR2 / 24 GHz to 44 GHz	5G FR2 / 24 GHz to 44 GHz	5G FR2 / 24 GHz to 44 GHz	5G FR2 / 24 GHz to 44 GHz
Mobile/Wheels	Mobile/Wheels	Mobile/Wheels	Chamber/Non-mobile	Chamber/Non-mobile
Direct Far-Field (DFF)	Indirect Far-Field (IFF)	Indirect Far-Field (IFF)	Indirect Far-Field (IFF)	Indirect Far-Field (IFF)
Single Axis Turntable with Theta Arm (Spherical)	Dual Axis Positioner (Spherical)	Dual Axis Positioner (Spherical)	Dual Axis Positioner (Spherical)	Dual Axis Positioner (Spherical)
50 GHz = 4.7 cm 60 GHz = 4.3 cm 70 GHz = 4.0 cm 75 GHz = 3.8 cm	24 GHz = 30.0 cm 28 GHz = 30.0 cm 39 GHz = 30.0 cm 44 GHz = 30.0 cm	24 GHz = 45.0 cm 28 GHz = 45.0 cm 39 GHz = 45.0 cm 44 GHz = 45.0 cm	24 GHz = 100.0 cm 28 GHz = 100.0 cm 39 GHz = 100.0 cm 44 GHz = 100.0 cm	24 GHz = 150.0 cm 28 GHz = 150.0 cm 39 GHz = 150.0 cm 44 GHz = 150.0 cm
2.1 m x 1.4 m x 2.2 m (6.9 ft x 4.6 ft x 7.2 ft)	2.7 m x 1.5 m x 2.0 m (8.8 ft x 5.0 ft x 6.5 ft)	3.0 m x 1.9 m x 2.4 m (10.0 ft x 6.2 ft x 7.9 ft)	8.5 m x 4.9 m x 4.0 m (28.0 ft x 16.0 ft x 13.0 ft)	10.7 m x 5.5 m x 5.5 m (35.0 ft x 18.0 ft x 18.0 ft)

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