Calibration Laboratory of
Schmid & Partner
Engineering AG
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ilac-MRA

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Accreditation No.: SCS 0108

Client **Sporton**

Certificate No: **EUmmWV2-9388_Apr18**

CALIBRATION CERTIFICATE

Object	EUmmWV2 - SN:9388
Calibration procedure(s)	QA CAL-02.v8, QA CAL-25.v6, QA CAL-42.v2 Calibration procedure for E-field probes optimized for close near field evaluations in air
Calibration date:	April 10, 2018

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02672/02673)	Apr-19
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-19
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-19
Reference 20 dB Attenuator	SN: S5277 (20x)	04-Apr-18 (No. 217-02682)	Apr-19
Reference Probe ER3DV6	SN: 2328	10-Oct-17 (No. ER3-2328_Oct17)	Oct-18
DAE4	SN: 789	2-Aug-17 (No. DAE4-789_Aug17)	Aug-18
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-16)	In house check: Jun-18
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-16)	In house check: Jun-18
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-16)	In house check: Jun-18
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-16)	In house check: Jun-18
Network Analyzer HP 8753E	SN: US37390585	18-Oct-01 (in house check Oct-17)	In house check: Oct-18

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: April 28, 2018

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

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Glossary:

NORMx,y,z	sensitivity in free space
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system
Sensor Angles	sensor deviation from the probe axis, used to calculate the field orientation and polarization
k	is the wave propagation direction

Calibration is Performed According to the Following Standards:

a) IEEE Std 1309-2005, "IEEE Standard for calibration of electromagnetic field sensors and probes, excluding antennas, from 9 kHz to 40 GHz", December 2005

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization $\vartheta = 0$ for XY sensors and $\vartheta = 90$ for Z sensor (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). For frequencies > 6 GHz, the far field in front of waveguide horn antennas is measured for a set of frequencies in various waveguide bands up to 110 GHz.

- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.

- *PAR:* PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics

- The frequency sensor model parameters are determined prior to calibration based on a frequency sweep (sensor model involving resistors R, R_p, inductance L and capacitors C, C_p).

- *Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z:* A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.

- *Sensor Offset:* The sensor offset corresponds to the mechanical from the probe tip (on probe axis). No tolerance required.

- *Connector Angle:* The angle is assessed using the information gained by determining the *NORMx* (no uncertainty required).

- *Equivalent Sensor Angle:* The two probe sensors are mounted in the same plane at different angles. The angles are assessed using the information gained by determining the *NORMx* (no uncertainty required).

- *Spherical isotropy (3D deviation from isotropy):* in a locally homogeneous field realized using an open waveguide / horn setup.

Probe EUmmWV2

SN:9388

Manufactured: June 14, 2017
Calibrated: April 10, 2018

Calibrated for DASY Systems
(Note: non-compatible with DASY2 system!)

DASY - Parameters of Probe: EUmmWV2 - SN:9388

Basic Calibration Parameters (750 MHz – 3 GHz)

	Sensor X	Sensor Y	Unc (k=2)
Norm (μV/(V/m)^2)	0.01971	0.02321	± 10.1 %
DCP (mV)^B	105.0	105.0	
Equivalent Sensor Angle	-59.2	32.2	

Calibration results for Frequency Response (6 – 110 GHz)

Frequency GHz	Target E-Field V/m	Deviation Sensor X dB	Deviation Sensor Y dB	Unc (k=2) dB
6.6	40.04	-0.09	0.03	± 0.98 dB
8	48.41	-0.39	-0.36	± 0.98 dB
10	54.41	-0.11	-0.06	± 0.98 dB
15	75.04	-0.02	0.14	± 0.98 dB
18	85.30	0.29	0.17	± 0.98 dB
26.6	96.89	0.38	0.36	± 0.98 dB
30	92.55	0.32	0.29	± 0.98 dB
35	93.71	0.08	0.09	± 0.98 dB
40	91.46	-0.13	-0.21	± 0.98 dB
50	19.62	0.28	0.19	± 0.98 dB
55	22.38	0.30	0.24	± 0.98 dB
60	23.03	0.18	0.04	± 0.98 dB
65	27.40	-0.17	-0.16	± 0.98 dB
70	23.95	-0.23	-0.27	± 0.98 dB
75	19.61	-0.24	-0.29	± 0.98 dB
75	14.11	-0.15	-0.12	± 0.98 dB
80	21.51	-0.30	-0.07	± 0.98 dB
85	22.75	-0.07	0.06	± 0.98 dB
90	23.84	0.23	0.30	± 0.98 dB
92	23.93	0.06	0.00	± 0.98 dB
95	20.55	0.04	0.00	± 0.98 dB
97	24.41	0.15	0.03	± 0.98 dB
100	22.61	0.13	0.06	± 0.98 dB
105	22.75	0.00	0.02	± 0.98 dB
110	18.85	-0.38	-0.26	± 0.98 dB

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dB√μV	C	D dB	VR mV	Max dev.	Unc^E (k=2)
0	CW	X	0.0	0.0	1.0	0.00	50.4	+ 2.5 %	± 4.7 %
		Y	0.0	0.0	1.0		22.6		

Note: For details on UID parameters see Appendix

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^{a} Numerical linearization parameter: uncertainty not required.

^{E} Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

DASY - Parameters of Probe: EUmmWV2 - SN:9388

Sensor Frequency Model Parameters

	Sensor X	Sensor Y
R (Ω)	38.90	41.13
R_p (Ω)	95.86	92.34
L (nH)	0.03220	0.03158
C (pF)	0.2221	0.2600
C_p (pF)	0.1255	0.1212

Sensor Model Parameters

	C1 fF	C2 fF	α V^{-1}	T1 $ms.V^{-2}$	T2 $ms.V^{-1}$	T3 ms	T4 V^{-2}	T5 V^{-1}	T6
X	7.692	52.62	30.48	0.916	2.245	4.905	0	0.502	0.997
Y	5.836	42.35	33.63	0.916	2.257	4.941	0	0.824	0.999

Other Probe Parameters

Sensor Arrangement	Rectangular
Connector Angle (°)	44.0
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	320 mm
Probe Body Diameter	8 mm
Tip Length	23 mm
Tip Diameter	8.0 mm
Probe Tip to Sensor X Calibration Point	1.5 mm
Probe Tip to Sensor Y Calibration Point	1.5 mm

Deviation from Isotropy in Air
f = 30 GHz

30 GHz: 3D isotropy, E-field normal to probe axis

■ -1.00--0.80	■ -0.80--0.60	■ -0.60--0.40	■ -0.40--0.20	■ -0.20-0.00
□ 0.00-0.20	■ 0.20-0.40	□ 0.40-0.60	□ 0.60-0.80	■ 0.80-1.00

30 GHz: 3D isotropy, E-field parallel to probe axis

■ -1.00--0.80	■ -0.80--0.60	■ -0.60--0.40	■ -0.40--0.20	■ -0.20-0.00
□ 0.00-0.20	■ 0.20-0.40	□ 0.40-0.60	□ 0.60-0.80	■ 0.80-1.00
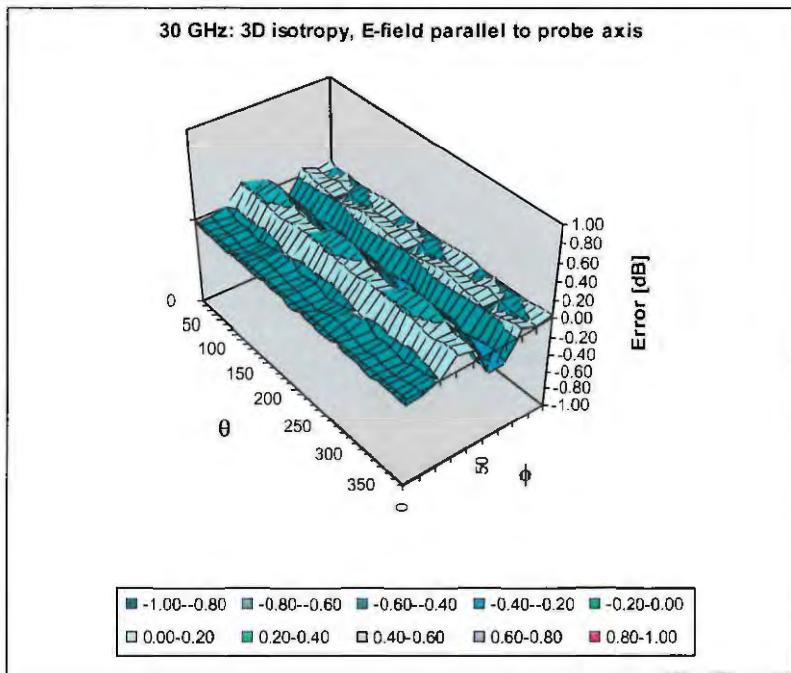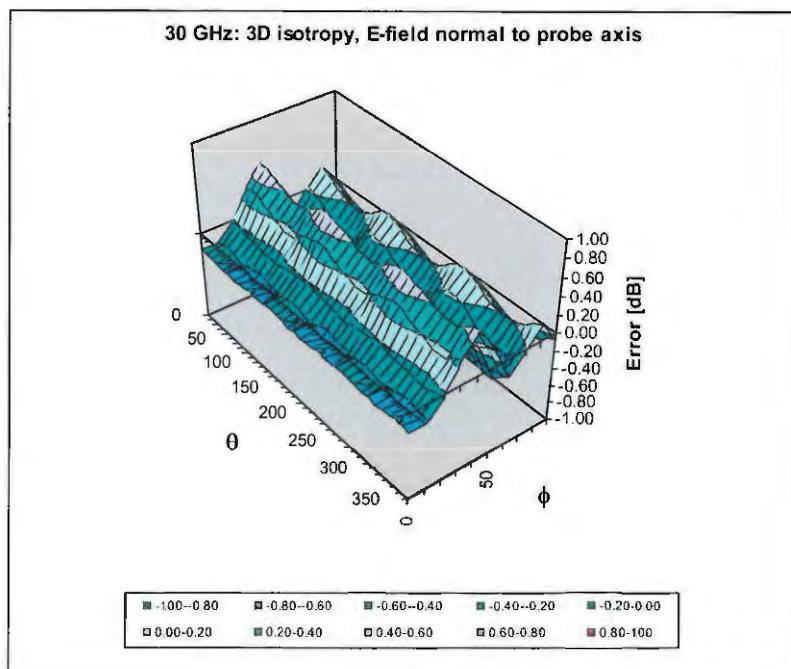
Probe isotropy for E_{tot}: probe rotated φ = 0° to 360°, tilted from field propagation direction $\bar{k}$
Parallel to the field propagation (ψ =0° - 90°): deviation within ± 0.29 dB
Normal to field orientation (ϑ =0° - 90°): deviation within ± 0.44 dB

Appendix: Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB√µV	C	D dB	VR mV	Max Unc^E (k=2)
0	CW	X	0.00	0.00	1.00	0.00	50.4	+ 2.5 %
		Y	0.00	0.00	1.00		22.6	
10010-CAA	SAR Validation (Square, 100ms, 10ms)	X	20.27	95.24	24.78	10.00	6.0	± 9.6 %
		Y	100.00	124.77	33.94		6.0	
10011-CAB	UMTS-FDD (WCDMA)	X	1.10	72.99	15.92	0.00	34.0	± 9.6 %
		Y	0.70	68.07	12.53		34.0	
10012-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	X	1.21	65.15	14.48	0.41	42.0	± 9.6 %
		Y	1.13	64.18	13.39		42.0	
10013-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	X	3.69	67.29	15.36	1.46	10.0	± 9.6 %
		Y	3.37	66.59	14.42		10.0	
10021-DAC	GSM-FDD (TDMA, GMSK)	X	59.31	114.97	31.64	9.39	7.0	± 9.6 %
		Y	100.00	129.67	36.88		7.0	
10023-DAC	GPRS-FDD (TDMA, GMSK, TN 0)	X	14.03	89.93	23.99	9.57	7.0	± 9.6 %
		Y	82.72	122.85	34.34		7.0	
10024-DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	X	73.26	119.29	31.17	6.56	13.0	± 9.6 %
		Y	100.00	131.10	35.75		13.0	
10025-DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	X	4.54	60.00	16.91	12.57	4.0	± 9.6 %
		Y	7.46	60.00	15.74		4.0	
10026-DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	X	5.66	75.57	24.67	9.56	7.0	± 9.6 %
		Y	5.54	75.63	25.50		7.0	
10027-DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	X	100.00	129.34	33.61	4.80	19.0	± 9.6 %
		Y	100.00	139.13	38.25		19.0	
10028-DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	X	100.00	138.02	36.53	3.55	25.0	± 9.6 %
		Y	100.00	150.52	42.32		25.0	
10029-DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	X	4.32	71.74	22.31	7.80	11.0	± 9.6 %
		Y	4.33	72.05	23.24		11.0	
10030-CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	X	4.03	77.35	17.77	5.30	17.0	± 9.6 %
		Y	4.70	80.93	19.84		17.0	
10031-CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	X	1.00	72.26	16.60	1.88	37.0	± 9.6 %
		Y	0.92	70.83	16.55		37.0	
10032-CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	X	0.53	67.97	15.82	1.17	43.0	± 9.6 %
		Y	0.51	66.37	15.25		43.0	
10033-CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	X	2.79	69.41	13.24	5.30	11.0	± 9.6 %
		Y	2.89	71.18	14.50		11.0	
10034-CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	X	0.50	60.47	6.29	1.88	23.0	± 9.6 %
		Y	0.43	60.00	6.14		23.0	
10035-CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	X	0.33	60.00	5.38	1.17	27.0	± 9.6 %
		Y	0.29	60.00	5.32		27.0	
10036-CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	X	2.95	70.13	13.57	5.30	11.0	± 9.6 %
		Y	3.24	72.63	15.12		11.0	

ID	Description							
10037-CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	X	0.49	60.16	5.97	1.88	22.0	± 9.6 %
		Y	0.43	60.00	5.98		22.0	
10038-CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	X	0.34	60.00	5.35	1.17	26.0	± 9.6 %
		Y	0.29	60.00	5.27		26.0	
10039-CAB	CDMA2000 (1xRTT, RC1)	X	24.07	169.55	27.68	0.00	25.0	± 9.6 %
		Y	0.12	244.41	32.94		25.0	
10042-CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate)	X	43.78	108.80	28.38	7.78	10.0	± 9.6 %
		Y	100.00	126.43	34.07		10.0	
10044-CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	X	0.17	60.00	15.98	0.00	55.0	± 9.6 %
		Y	0.19	60.00	14.72		55.0	
10048-CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	X	10.01	78.73	21.18	13.80	3.0	± 9.6 %
		Y	15.93	88.62	25.45		3.0	
10049-CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	X	10.53	83.30	21.84	10.79	5.0	± 9.6 %
		Y	21.17	97.33	27.36		5.0	
10056-CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	X	6.50	75.97	18.00	9.03	5.0	± 9.6 %
		Y	8.79	82.44	21.16		5.0	
10058-DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	X	3.64	69.74	20.97	6.55	14.0	± 9.6 %
		Y	3.70	70.20	21.94		14.0	
10059-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)	X	1.21	65.25	14.39	0.61	39.0	± 9.6 %
		Y	1.14	64.36	13.37		39.0	
10060-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	X	1.23	70.05	16.39	1.30	32.0	± 9.6 %
		Y	1.19	69.16	16.00		32.0	
10061-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	X	1.52	67.38	14.92	2.04	28.0	± 9.6 %
		Y	1.49	67.01	14.61		28.0	
10062-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	X	3.47	67.57	15.02	0.49	12.0	± 9.6 %
		Y	3.04	66.33	13.69		12.0	
10063-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	X	3.49	67.65	15.15	0.72	12.0	± 9.6 %
		Y	3.10	66.58	13.98		12.0	
10064-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	X	3.55	67.42	15.04	0.86	11.0	± 9.6 %
		Y	3.12	66.25	13.77		11.0	
10065-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	X	3.57	67.33	15.10	1.21	11.0	± 9.6 %
		Y	3.21	66.43	14.02		11.0	
10066-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	X	3.58	67.09	14.95	1.46	10.0	± 9.6 %
		Y	3.24	66.24	13.86		10.0	
10067-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	X	3.81	67.22	15.25	2.04	8.0	± 9.6 %
		Y	3.49	66.58	14.33		8.0	
10068-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	X	3.88	67.13	15.48	2.55	8.0	± 9.6 %
		Y	3.60	66.58	14.65		8.0	
10069-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	X	3.90	66.89	15.38	2.67	8.0	± 9.6 %
		Y	3.63	66.39	14.54		8.0	
10071-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	X	3.83	67.36	15.66	1.99	9.0	± 9.6 %
		Y	3.57	66.91	14.94		9.0	

10072-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	X	3.83	67.41	15.73	2.30	9.0	± 9.6 %
		Y	3.61	67.16	15.13		9.0	
10073-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	X	3.94	67.57	16.05	2.83	9.0	± 9.6 %
		Y	3.75	67.48	15.61		9.0	
10074-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	X	4.06	67.85	16.44	3.30	8.0	± 9.6 %
		Y	3.89	67.82	16.13		8.0	
10075-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	X	4.23	68.23	16.85	3.82	7.0	± 9.6 %
		Y	4.08	68.31	16.65		7.0	
10076-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps)	X	4.39	68.43	17.14	4.15	7.0	± 9.6 %
		Y	4.28	68.72	17.06		7.0	
10077-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	X	4.43	68.50	17.28	4.30	7.0	± 9.6 %
		Y	4.33	68.81	17.24		7.0	
10081-CAB	CDMA2000 (1xRTT, RC3)	X	5.25	60.76	1.67	0.00	27.0	± 9.6 %
		Y	0.68	106.82	3.28		27.0	
10082-CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate)	X	0.82	60.00	7.44	4.77	19.0	± 9.6 %
		Y	0.80	60.00	8.16		19.0	
10090-DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	X	62.80	116.91	30.60	6.56	13.0	± 9.6 %
		Y	100.00	130.96	35.71		13.0	
10097-CAB	UMTS-FDD (HSDPA)	X	0.97	66.55	10.91	0.00	28.0	± 9.6 %
		Y	0.42	60.00	5.94		28.0	
10098-CAB	UMTS-FDD (HSUPA, Subtest 2)	X	1.03	67.25	11.31	0.00	28.0	± 9.6 %
		Y	0.41	60.00	6.02		28.0	
10099-DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	X	5.67	75.58	24.66	9.56	7.0	± 9.6 %
		Y	5.56	75.65	25.50		7.0	
10100-CAD	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	X	2.26	69.68	16.78	0.00	21.0	± 9.6 %
		Y	1.97	67.95	15.71		21.0	
10101-CAD	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	X	2.55	68.21	15.66	0.00	18.0	± 9.6 %
		Y	2.28	67.06	14.65		18.0	
10102-CAD	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	X	2.66	68.54	15.84	0.00	17.0	± 9.6 %
		Y	2.36	67.31	14.76		17.0	
10103-CAD	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	X	2.07	60.00	12.67	3.98	9.0	± 9.6 %
		Y	3.74	60.00	11.49		9.0	
10104-CAD	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	X	4.38	69.16	16.68	3.98	8.0	± 9.6 %
		Y	4.13	68.78	16.33		8.0	
10105-CAD	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	X	2.42	60.00	12.69	3.98	8.0	± 9.6 %
		Y	4.11	60.00	11.41		8.0	
10108-CAE	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	X	1.90	70.26	16.27	0.00	20.0	± 9.6 %
		Y	1.50	67.46	14.15		20.0	
10109-CAE	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	X	2.08	68.43	14.35	0.00	18.0	± 9.6 %
		Y	1.52	64.91	11.51		18.0	
10110-CAE	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	X	1.24	67.50	12.66	0.00	20.0	± 9.6 %
		Y	0.69	61.72	8.17		20.0	

10111-CAE	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	X	0.95	62.39	8.50	0.00	18.0	± 9.6 %
		Y	0.60	60.00	5.56		18.0	
10112-CAE	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	X	2.14	68.44	14.28	0.00	17.0	± 9.6 %
		Y	1.52	64.62	11.25		17.0	
10113-CAE	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	X	0.92	61.72	7.98	0.00	17.0	± 9.6 %
		Y	0.61	60.00	5.41		17.0	
10114-CAC	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	X	4.11	67.72	16.26	0.00	13.0	± 9.6 %
		Y	3.89	67.36	15.90		13.0	
10115-CAC	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	X	4.30	68.24	16.36	0.00	12.0	± 9.6 %
		Y	4.02	67.84	15.95		12.0	
10116-CAC	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	X	4.14	68.06	16.31	0.00	13.0	± 9.6 %
		Y	3.88	67.62	15.91		13.0	
10117-CAC	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	X	4.11	67.66	16.25	0.00	13.0	± 9.6 %
		Y	3.88	67.31	15.90		13.0	
10118-CAC	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	X	4.32	68.30	16.39	0.00	12.0	± 9.6 %
		Y	4.04	67.88	15.98		12.0	
10119-CAC	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	X	4.14	68.02	16.30	0.00	13.0	± 9.6 %
		Y	3.88	67.60	15.90		13.0	
10140-CAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	X	2.54	68.43	15.41	0.00	18.0	± 9.6 %
		Y	2.16	66.76	13.93		18.0	
10141-CAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	X	2.72	69.25	15.86	0.00	18.0	± 9.6 %
		Y	2.29	67.37	14.25		18.0	
10142-CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	X	0.44	60.00	5.86	0.00	20.0	± 9.6 %
		Y	0.34	60.00	3.95		20.0	
10143-CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	X	0.46	60.00	3.92	0.00	18.0	± 9.6 %
		Y	38.95	262.32	23.79		18.0	
10144-CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	X	17.49	60.99	1.81	0.00	17.0	± 9.6 %
		Y	50.67	60.06	1.12		17.0	
10145-CAE	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	X	0.00	134.77	71.45	0.00	19.0	± 9.6 %
		Y	0.00	121.98	68.41		19.0	
10146-CAE	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	X	0.00	60.00	0.00	0.00	17.0	± 9.6 %
		Y	0.92	222.30	14.62		17.0	
10147-CAE	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	X	0.00	60.00	0.00	0.00	16.0	± 9.6 %
		Y	0.00	195.29	84.87		16.0	
10149-CAD	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	X	2.10	68.64	14.47	0.00	18.0	± 9.6 %
		Y	1.53	65.04	11.60		18.0	
10150-CAD	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	X	2.16	68.64	14.40	0.00	17.0	± 9.6 %
		Y	1.54	64.74	11.34		17.0	
10151-CAD	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	X	3.62	70.22	16.29	3.98	9.0	± 9.6 %
		Y	3.27	69.32	15.59		9.0	
10152-CAD	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	X	3.46	67.07	14.01	3.98	8.0	± 9.6 %
		Y	3.03	65.79	12.80		8.0	

10153-CAD	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	X	3.75	68.22	14.88	3.98	8.0	± 9.6 %
		Y	3.28	66.82	13.59		8.0	
10154-CAE	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	X	1.29	67.97	12.91	0.00	20.0	± 9.6 %
		Y	0.70	61.87	8.28		20.0	
10155-CAE	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	X	0.96	62.50	8.58	0.00	18.0	± 9.6 %
		Y	0.60	60.00	5.57		18.0	
10156-CAE	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	X	0.34	60.00	4.55	0.00	20.0	± 9.6 %
		Y	11.66	61.12	1.84		20.0	
10157-CAE	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	X	42.52	178.27	12.00	0.00	17.0	± 9.6 %
		Y	0.00	277.63	11.16		17.0	
10158-CAE	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	X	0.93	61.80	8.04	0.00	17.0	± 9.6 %
		Y	0.62	60.00	5.42		17.0	
10159-CAE	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	X	47.28	318.79	45.18	0.00	17.0	± 9.6 %
		Y	0.31	211.85	21.02		17.0	
10160-CAD	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	X	1.91	69.79	14.78	0.00	20.0	± 9.6 %
		Y	2.22	69.80	12.83		20.0	
10161-CAD	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	X	1.71	66.35	12.19	0.00	18.0	± 9.6 %
		Y	1.01	61.23	8.01		18.0	
10162-CAD	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	X	1.73	66.30	12.10	0.00	17.0	± 9.6 %
		Y	1.00	60.98	7.76		17.0	
10166-CAE	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	X	2.40	64.88	16.65	3.01	20.0	± 9.6 %
		Y	2.61	65.24	16.93		20.0	
10167-CAE	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	X	2.51	66.15	16.53	3.01	17.0	± 9.6 %
		Y	2.89	66.93	16.94		17.0	
10168-CAE	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	X	2.74	68.42	18.21	3.01	16.0	± 9.6 %
		Y	3.14	69.10	18.51		16.0	
10169-CAD	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	X	2.61	65.84	16.83	3.01	19.0	± 9.6 %
		Y	3.02	66.78	17.30		19.0	
10170-CAD	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	X	3.16	69.83	18.65	3.01	16.0	± 9.6 %
		Y	3.85	70.89	19.04		16.0	
10171-AAD	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	X	2.67	66.40	16.01	3.01	16.0	± 9.6 %
		Y	3.29	67.62	16.60		16.0	
10172-CAD	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	X	2.09	60.00	13.26	6.02	9.0	± 9.6 %
		Y	3.53	60.00	12.65		9.0	
10173-CAD	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	X	3.50	70.13	17.30	6.02	8.0	± 9.6 %
		Y	4.26	71.93	18.57		8.0	
10174-CAD	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	X	2.69	60.00	11.27	6.02	7.0	± 9.6 %
		Y	8.25	60.00	10.42		7.0	
10175-CAE	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	X	2.58	65.59	16.60	3.01	19.0	± 9.6 %
		Y	2.99	66.53	17.09		19.0	
10176-CAE	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	X	3.17	69.84	18.65	3.01	16.0	± 9.6 %
		Y	3.85	70.90	19.04		16.0	

10177-CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	X	2.58	65.62	16.62	3.01	19.0	± 9.6 %
		Y	2.99	66.55	17.11		19.0	
10178-CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	X	3.16	69.81	18.64	3.01	16.0	± 9.6 %
		Y	3.85	70.89	19.03		16.0	
10179-CAE	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	X	2.87	67.88	17.15	3.01	16.0	± 9.6 %
		Y	3.51	69.03	17.65		16.0	
10180-CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	X	2.68	66.41	16.01	3.01	16.0	± 9.6 %
		Y	3.29	67.63	16.61		16.0	
10181-CAD	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	X	2.58	65.62	16.62	3.01	19.0	± 9.6 %
		Y	2.99	66.55	17.11		19.0	
10182-CAD	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	X	3.16	69.79	18.62	3.01	16.0	± 9.6 %
		Y	3.84	70.87	19.02		16.0	
10183-AAC	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	X	2.67	66.39	16.00	3.01	16.0	± 9.6 %
		Y	3.29	67.61	16.60		16.0	
10184-CAD	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	X	2.59	65.63	16.63	3.01	19.0	± 9.6 %
		Y	2.99	66.57	17.12		19.0	
10185-CAD	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	X	3.17	69.85	18.66	3.01	16.0	± 9.6 %
		Y	3.85	70.92	19.05		16.0	
10186-AAD	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	X	2.68	66.42	16.02	3.01	16.0	± 9.6 %
		Y	3.29	67.64	16.62		16.0	
10187-CAE	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	X	2.60	65.79	16.77	3.01	19.0	± 9.6 %
		Y	3.02	66.73	17.26		19.0	
10188-CAE	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	X	3.23	70.30	18.96	3.01	16.0	± 9.6 %
		Y	3.92	71.34	19.33		16.0	
10189-AAE	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	X	2.71	66.66	16.21	3.01	16.0	± 9.6 %
		Y	3.33	67.86	16.79		16.0	
10193-CAC	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	X	3.37	68.20	15.29	0.00	13.0	± 9.6 %
		Y	2.87	66.54	13.75		13.0	
10194-CAC	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	X	3.48	68.39	15.50	0.00	13.0	± 9.6 %
		Y	3.01	66.98	14.11		13.0	
10195-CAC	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	X	3.50	68.37	15.50	0.00	13.0	± 9.6 %
		Y	3.01	66.88	14.06		13.0	
10196-CAC	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	X	3.38	68.27	15.31	0.00	13.0	± 9.6 %
		Y	2.88	66.64	13.79		13.0	
10197-CAC	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	X	3.48	68.36	15.50	0.00	13.0	± 9.6 %
		Y	3.01	66.95	14.10		13.0	
10198-CAC	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	X	3.47	68.28	15.46	0.00	13.0	± 9.6 %
		Y	2.99	66.78	14.01		13.0	
10219-CAC	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	X	3.32	68.29	15.34	0.00	13.0	± 9.6 %
		Y	2.83	66.61	13.80		13.0	
10220-CAC	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	X	3.48	68.38	15.50	0.00	13.0	± 9.6 %
		Y	3.01	66.95	14.09		13.0	

10221-CAC	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	X	3.50	68.33	15.48	0.00	13.0	± 9.6 %
		Y	3.00	66.79	14.02		13.0	
10222-CAC	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	X	4.10	67.71	16.25	0.00	13.0	± 9.6 %
		Y	3.88	67.35	15.90		13.0	
10223-CAC	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	X	4.24	68.15	16.30	0.00	12.0	± 9.6 %
		Y	3.97	67.78	15.89		12.0	
10224-CAC	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	X	4.11	67.97	16.28	0.00	13.0	± 9.6 %
		Y	3.86	67.54	15.88		13.0	
10225-CAB	UMTS-FDD (HSPA+)	X	0.87	60.00	5.80	0.00	20.0	± 9.6 %
		Y	0.69	60.00	3.83		20.0	
10226-CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	X	3.55	70.48	17.51	6.02	8.0	± 9.6 %
		Y	4.33	72.29	18.79		8.0	
10227-CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	X	3.39	69.71	16.79	6.02	7.0	± 9.6 %
		Y	4.15	71.54	18.12		7.0	
10228-CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	X	3.12	69.47	18.34	6.02	9.0	± 9.6 %
		Y	3.54	70.73	19.36		9.0	
10229-CAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	X	3.50	70.17	17.31	6.02	8.0	± 9.6 %
		Y	4.27	71.97	18.59		8.0	
10230-CAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	X	3.34	69.40	16.60	6.02	7.0	± 9.6 %
		Y	4.09	71.22	17.93		7.0	
10231-CAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	X	3.08	69.18	18.13	6.02	9.0	± 9.6 %
		Y	3.50	70.43	19.16		9.0	
10232-CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	X	3.50	70.16	17.31	6.02	8.0	± 9.6 %
		Y	4.27	71.96	18.59		8.0	
10233-CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	X	3.34	69.40	16.61	6.02	7.0	± 9.6 %
		Y	4.09	71.22	17.93		7.0	
10234-CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	X	3.04	68.89	17.91	6.02	9.0	± 9.6 %
		Y	3.45	70.13	18.93		9.0	
10235-CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	X	3.50	70.16	17.31	6.02	8.0	± 9.6 %
		Y	4.27	71.95	18.59		8.0	
10236-CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	X	3.35	69.43	16.62	6.02	7.0	± 9.6 %
		Y	4.10	71.24	17.94		7.0	
10237-CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	X	3.08	69.14	18.12	6.02	9.0	± 9.6 %
		Y	3.50	70.39	19.14		9.0	
10238-CAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	X	3.50	70.16	17.31	6.02	8.0	± 9.6 %
		Y	4.27	71.95	18.58		8.0	
10239-CAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	X	3.34	69.39	16.60	6.02	7.0	± 9.6 %
		Y	4.09	71.21	17.93		7.0	
10240-CAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	X	3.08	69.14	18.12	6.02	9.0	± 9.6 %
		Y	3.50	70.39	19.14		9.0	
10241-CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	X	3.97	69.71	19.40	6.98	8.0	± 9.6 %
		Y	4.38	70.62	20.22		8.0	

10242-CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	X	2.52	60.00	14.26	6.98	8.0	± 9.6 %
		Y	3.51	60.00	13.86		8.0	
10243-CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	X	2.63	60.00	14.78	6.98	8.0	± 9.6 %
		Y	3.52	60.00	14.37		8.0	
10244-CAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	X	1.44	56.49	1.91	3.98	8.0	± 9.6 %
		Y	0.96	60.00	4.64		8.0	
10245-CAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	X	75.53	60.68	1.34	3.98	8.0	± 9.6 %
		Y	0.96	60.00	4.50		8.0	
10246-CAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	X	1.00	60.00	5.69	3.98	9.0	± 9.6 %
		Y	0.84	60.00	5.48		9.0	
10247-CAD	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	X	1.25	60.00	5.61	3.98	8.0	± 9.6 %
		Y	1.33	56.37	2.14		8.0	
10248-CAD	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	X	1.12	57.93	3.89	3.98	8.0	± 9.6 %
		Y	1.07	56.62	2.42		8.0	
10249-CAD	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	X	1.42	61.40	7.63	3.98	9.0	± 9.6 %
		Y	1.09	60.00	6.30		9.0	
10250-CAD	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	X	2.51	64.47	10.92	3.98	8.0	± 9.6 %
		Y	1.95	62.20	8.85		8.0	
10251-CAD	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	X	2.29	62.90	9.57	3.98	8.0	± 9.6 %
		Y	1.77	60.85	7.54		8.0	
10252-CAD	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	X	2.59	66.76	12.95	3.98	9.0	± 9.6 %
		Y	2.17	65.03	11.45		9.0	
10253-CAD	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	X	3.09	65.52	12.34	3.98	8.0	± 9.6 %
		Y	2.54	63.64	10.56		8.0	
10254-CAD	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	X	3.29	66.35	12.97	3.98	8.0	± 9.6 %
		Y	2.70	64.29	11.10		8.0	
10255-CAD	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	X	3.29	68.73	14.90	3.98	9.0	± 9.6 %
		Y	2.84	67.17	13.62		9.0	
10256-CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	X	0.77	56.72	1.98	3.98	8.0	± 9.6 %
		Y	0.58	57.42	2.60		8.0	
10257-CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	X	0.69	56.88	2.00	3.98	8.0	± 9.6 %
		Y	0.92	60.00	3.43		8.0	
10258-CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	X	0.83	60.00	4.94	3.98	9.0	± 9.6 %
		Y	0.69	60.00	4.82		9.0	
10259-CAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	X	1.46	60.05	6.32	3.98	8.0	± 9.6 %
		Y	1.21	60.00	5.71		8.0	
10260-CAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	X	1.47	60.00	6.23	3.98	8.0	± 9.6 %
		Y	1.21	60.00	5.64		8.0	
10261-CAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	X	1.71	62.58	8.94	3.98	9.0	± 9.6 %
		Y	1.35	60.98	7.40		9.0	
10262-CAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	X	2.49	64.40	10.86	3.98	8.0	± 9.6 %
		Y	1.94	62.15	8.80		8.0	

10263-CAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	X	2.28	62.89	9.56	3.98	8.0	± 9.6 %
		Y	1.77	60.84	7.53		8.0	
10264-CAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	X	2.57	66.64	12.86	3.98	9.0	± 9.6 %
		Y	2.16	64.93	11.37		9.0	
10265-CAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	X	3.46	67.08	14.02	3.98	8.0	± 9.6 %
		Y	3.03	65.80	12.80		8.0	
10266-CAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	X	3.74	68.20	14.86	3.98	8.0	± 9.6 %
		Y	3.27	66.80	13.57		8.0	
10267-CAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	X	3.61	70.18	16.27	3.98	9.0	± 9.6 %
		Y	3.26	69.29	15.57		9.0	
10268-CAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	X	4.42	69.31	16.47	3.98	8.0	± 9.6 %
		Y	4.10	68.75	15.87		8.0	
10269-CAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	X	4.44	69.15	16.32	3.98	8.0	± 9.6 %
		Y	4.10	68.53	15.65		8.0	
10270-CAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	X	4.31	71.14	17.51	3.98	9.0	± 9.6 %
		Y	4.03	70.86	17.30		9.0	
10274-CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	X	0.76	60.00	6.09	0.00	24.0	± 9.6 %
		Y	0.56	60.00	4.40		24.0	
10275-CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	X	1.13	69.57	13.18	0.00	28.0	± 9.6 %
		Y	0.51	62.22	8.17		28.0	
10277-CAA	PHS (QPSK)	X	3.14	64.58	10.35	9.03	5.0	± 9.6 %
		Y	3.21	65.57	11.20		5.0	
10278-CAA	PHS (QPSK, BW 884MHz, Rolloff 0.5)	X	3.57	65.27	10.68	9.03	5.0	± 9.6 %
		Y	3.61	66.41	11.57		5.0	
10279-CAA	PHS (QPSK, BW 884MHz, Rolloff 0.38)	X	3.54	65.07	10.53	9.03	4.0	± 9.6 %
		Y	3.55	66.08	11.34		4.0	
10290-AAB	CDMA2000, RC1, SO55, Full Rate	X	1.51	232.02	34.44	0.00	28.0	± 9.6 %
		Y	0.58	158.02	20.73		28.0	
10291-AAB	CDMA2000, RC3, SO55, Full Rate	X	2.21	198.72	29.93	0.00	30.0	± 9.6 %
		Y	0.52	98.82	4.49		30.0	
10292-AAB	CDMA2000, RC3, SO32, Full Rate	X	0.12	60.00	3.37	0.00	31.0	± 9.6 %
		Y	3.24	60.07	1.40		31.0	
10293-AAB	CDMA2000, RC3, SO3, Full Rate	X	0.10	60.00	4.48	0.00	30.0	± 9.6 %
		Y	21.82	276.18	37.05		30.0	
10295-AAB	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	X	100.00	108.25	26.24	9.03	4.0	± 9.6 %
		Y	2719.37	144.77	32.93		4.0	
10297-AAC	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	X	1.93	70.53	16.43	0.00	20.0	± 9.6 %
		Y	1.52	67.66	14.28		20.0	
10298-AAC	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	X	3.07	317.83	5.26	0.00	20.0	± 9.6 %
		Y	0.74	184.73	2.94		20.0	
10299-AAC	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	X	12.00	255.40	19.94	0.00	17.0	± 9.6 %
		Y	5.80	186.44	5.03		17.0	

ID	Description							
10300-AAC	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	X	0.00	60.00	0.00	0.00	16.0	± 9.6 %
		Y	0.00	60.00	0.00		16.0	
10301-AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	X	4.25	60.00	9.66	4.17	5.0	± 9.6 %
		Y	0.02	123.22	4.85		5.0	
10302-AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols)	X	5.27	70.48	16.21	4.96	5.0	± 9.6 %
		Y	4.07	66.23	12.91		5.0	
10303-AAA	IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	X	5.45	70.76	15.65	4.96	5.0	± 9.6 %
		Y	3.71	64.92	11.49		5.0	
10304-AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	X	4.65	69.23	14.69	4.17	6.0	± 9.6 %
		Y	3.06	63.41	10.48		6.0	
10305-AAA	IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)	X	1.27	56.56	5.98	6.02	3.0	± 9.6 %
		Y	1.47	53.89	2.04		3.0	
10306-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)	X	4.41	65.86	11.54	6.02	3.0	± 9.6 %
		Y	1.34	56.31	5.67		3.0	
10307-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)	X	4.47	65.96	11.42	6.02	3.0	± 9.6 %
		Y	1.28	56.17	5.48		3.0	
10308-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	X	4.63	66.53	11.76	6.02	3.0	± 9.6 %
		Y	1.28	56.25	5.65		3.0	
10309-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols)	X	4.62	66.58	12.05	6.02	3.0	± 9.6 %
		Y	1.37	56.51	6.00		3.0	
10310-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)	X	4.70	66.73	12.02	6.02	3.0	± 9.6 %
		Y	1.35	56.47	5.93		3.0	
10311-AAC	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	X	2.18	69.00	16.33	0.00	19.0	± 9.6 %
		Y	1.81	66.88	14.89		19.0	
10313-AAA	iDEN 1:3	X	6.09	83.34	22.52	6.99	6.0	± 9.6 %
		Y	100.00	137.43	39.47		6.0	
10314-AAA	iDEN 1:6	X	68.50	126.40	37.26	10.00	3.0	± 9.6 %
		Y	100.00	142.33	43.44		3.0	
10315-AAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)	X	1.16	65.83	14.86	0.17	43.0	± 9.6 %
		Y	1.06	64.47	13.46		43.0	
10316-AAB	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)	X	3.34	67.50	14.82	0.17	12.0	± 9.6 %
		Y	2.89	66.12	13.39		12.0	
10317-AAC	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)	X	3.34	67.50	14.82	0.17	12.0	± 9.6 %
		Y	2.89	66.12	13.39		12.0	
10400-AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)	X	3.33	67.78	15.06	0.00	12.0	± 9.6 %
		Y	2.86	66.29	13.58		12.0	
10401-AAD	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)	X	4.17	67.51	15.96	0.00	12.0	± 9.6 %
		Y	3.90	67.04	15.52		12.0	
10402-AAD	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)	X	4.57	67.42	16.11	0.00	12.0	± 9.6 %
		Y	4.36	66.94	15.82		12.0	
10403-AAB	CDMA2000 (1xEV-DO, Rev. 0)	X	1.51	232.02	34.44	0.00	29.0	± 9.6 %
		Y	0.58	158.02	20.73		29.0	

10404-AAB	CDMA2000 (1xEV-DO, Rev. A)	X	1.51	232.02	34.44	0.00	29.0	± 9.6 %
		Y	0.58	158.02	20.73		29.0	
10406-AAB	CDMA2000, RC3, SO32, SCH0, Full Rate	X	7.15	86.36	18.45	0.00	22.0	± 9.6 %
		Y	3.96	77.85	16.59		22.0	
10410-AAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4)	X	1.55	66.29	13.15	3.23	12.0	± 9.6 %
		Y	1.99	68.12	14.59		12.0	
10415-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	X	1.11	65.72	14.84	0.00	45.0	± 9.6 %
		Y	1.00	64.21	13.30		45.0	
10416-AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)	X	3.40	68.22	15.30	0.00	13.0	± 9.6 %
		Y	2.89	66.58	13.72		13.0	
10417-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)	X	3.40	68.22	15.30	0.00	13.0	± 9.6 %
		Y	2.89	66.58	13.72		13.0	
10418-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preambule)	X	3.33	68.25	15.34	0.00	13.0	± 9.6 %
		Y	2.83	66.58	13.74		13.0	
10419-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preambule)	X	3.36	68.24	15.31	0.00	13.0	± 9.6 %
		Y	2.85	66.56	13.70		13.0	
10422-AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	X	3.47	68.22	15.43	0.00	13.0	± 9.6 %
		Y	3.00	66.77	13.99		13.0	
10423-AAB	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	X	3.47	68.26	15.39	0.00	12.0	± 9.6 %
		Y	2.97	66.69	13.89		12.0	
10424-AAB	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	X	3.46	68.24	15.41	0.00	12.0	± 9.6 %
		Y	2.97	66.74	13.94		12.0	
10425-AAB	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	X	4.22	68.05	16.30	0.00	12.0	± 9.6 %
		Y	3.98	67.69	15.90		12.0	
10426-AAB	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	X	4.21	68.06	16.30	0.00	12.0	± 9.6 %
		Y	3.95	67.64	15.87		12.0	
10427-AAB	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	X	4.24	68.08	16.31	0.00	12.0	± 9.6 %
		Y	3.98	67.69	15.90		12.0	
10430-AAB	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	X	0.95	60.00	6.07	0.00	12.0	± 9.6 %
		Y	0.71	60.00	4.34		12.0	
10431-AAB	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	X	2.22	65.08	11.64	0.00	12.0	± 9.6 %
		Y	1.48	61.23	8.14		12.0	
10432-AAB	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	X	3.06	67.73	14.47	0.00	12.0	± 9.6 %
		Y	2.42	65.18	12.19		12.0	
10433-AAB	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	X	3.48	68.30	15.47	0.00	12.0	± 9.6 %
		Y	3.00	66.80	14.01		12.0	
10434-AAA	W-CDMA (BS Test Model 1, 64 DPCH)	X	0.77	60.00	4.96	0.00	11.0	± 9.6 %
		Y	99.97	61.78	1.86		11.0	
10435-AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.54	66.20	13.08	3.23	12.0	± 9.6 %
		Y	1.98	68.01	14.52		12.0	

10447-AAB	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	X	0.87	60.00	5.37	0.00	14.0	± 9.6 %
		Y	42.73	61.95	2.11		14.0	
10448-AAB	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%)	X	2.21	65.19	11.74	0.00	15.0	± 9.6 %
		Y	1.48	61.32	8.24		15.0	
10449-AAB	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 44%)	X	3.04	67.87	14.59	0.00	15.0	± 9.6 %
		Y	2.42	65.37	12.36		15.0	
10450-AAB	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	X	3.41	68.21	15.44	0.00	15.0	± 9.6 %
		Y	2.96	66.80	14.05		15.0	
10451-AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	X	0.71	60.00	4.12	0.00	14.0	± 9.6 %
		Y	16.64	360.80	43.75		14.0	
10456-AAB	IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)	X	5.25	67.48	16.26	0.00	12.0	± 9.6 %
		Y	5.08	67.02	16.08		12.0	
10457-AAA	UMTS-FDD (DC-HSDPA)	X	2.94	67.04	14.51	0.00	18.0	± 9.6 %
		Y	2.35	64.42	11.96		18.0	
10458-AAA	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	X	23.44	448.75	33.16	0.00	17.0	± 9.6 %
		Y	0.00	60.00	0.00		17.0	
10459-AAA	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	X	0.00	67.06	60.06	0.00	13.0	± 9.6 %
		Y	7.05	152.25	7.55		13.0	
10460-AAA	UMTS-FDD (WCDMA, AMR)	X	1.54	80.22	19.68	0.00	37.0	± 9.6 %
		Y	0.88	72.84	15.62		37.0	
10461-AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.04	61.66	11.48	3.29	12.0	± 9.6 %
		Y	1.34	63.34	12.90		12.0	
10462-AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.95	60.00	8.36	3.23	11.0	± 9.6 %
		Y	1.24	60.67	9.54		11.0	
10463-AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.93	60.00	7.90	3.23	10.0	± 9.6 %
		Y	1.15	60.00	8.79		10.0	
10464-AAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	0.96	61.04	10.79	3.23	12.0	± 9.6 %
		Y	1.25	62.70	12.23		12.0	
10465-AAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.95	60.00	8.31	3.23	11.0	± 9.6 %
		Y	1.21	60.39	9.33		11.0	
10466-AAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.93	60.00	7.85	3.23	10.0	± 9.6 %
		Y	1.15	60.00	8.74		10.0	
10467-AAC	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	0.96	61.13	10.88	3.23	12.0	± 9.6 %
		Y	1.26	62.80	12.33		12.0	
10468-AAC	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.95	60.00	8.34	3.23	11.0	± 9.6 %
		Y	1.22	60.49	9.42		11.0	
10469-AAC	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.93	60.00	7.87	3.23	10.0	± 9.6 %
		Y	1.15	60.00	8.75		10.0	
10470-AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	0.96	61.12	10.88	3.23	12.0	± 9.6 %
		Y	1.26	62.79	12.32		12.0	
10471-AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.95	60.00	8.34	3.23	11.0	± 9.6 %
		Y	1.22	60.50	9.43		11.0	

10472-AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.93	60.00	7.87	3.23	10.0	± 9.6 %
		Y	1.15	60.00	8.76		10.0	
10473-AAC	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	0.96	61.12	10.87	3.23	12.0	± 9.6 %
		Y	1.26	62.78	12.32		12.0	
10474-AAC	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.95	60.00	8.35	3.23	11.0	± 9.6 %
		Y	1.22	60.50	9.43		11.0	
10475-AAC	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.93	60.00	7.88	3.23	10.0	± 9.6 %
		Y	1.15	60.00	8.76		10.0	
10477-AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.95	60.00	8.33	3.23	11.0	± 9.6 %
		Y	1.22	60.45	9.38		11.0	
10478-AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.93	60.00	7.87	3.23	10.0	± 9.6 %
		Y	1.15	60.00	8.75		10.0	
10479-AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	0.97	61.52	11.62	3.23	12.0	± 9.6 %
		Y	1.16	62.75	12.80		12.0	
10480-AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.88	60.00	8.77	3.23	11.0	± 9.6 %
		Y	1.12	60.85	9.93		11.0	
10481-AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.87	60.00	8.34	3.23	11.0	± 9.6 %
		Y	1.03	60.00	9.08		11.0	
10482-AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	23.73	179.22	6.79	2.23	13.0	± 9.6 %
		Y	14.38	183.76	1.59		13.0	
10483-AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	26.89	166.19	12.98	2.23	11.0	± 9.6 %
		Y	11.06	148.82	14.79		11.0	
10484-AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	28.34	173.93	13.21	2.23	11.0	± 9.6 %
		Y	2.73	145.37	3.31		11.0	
10485-AAC	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	0.75	60.00	6.08	2.23	13.0	± 9.6 %
		Y	0.37	57.19	3.77		13.0	
10486-AAC	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	42.95	60.00	2.30	2.23	11.0	± 9.6 %
		Y	23.51	176.80	14.08		11.0	
10487-AAC	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	45.26	60.00	2.29	2.23	11.0	± 9.6 %
		Y	22.67	172.07	17.84		11.0	
10488-AAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.22	61.78	10.22	2.23	13.0	± 9.6 %
		Y	0.95	60.00	8.40		13.0	
10489-AAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	1.17	60.00	7.97	2.23	12.0	± 9.6 %
		Y	1.04	60.00	6.79		12.0	
10490-AAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.19	60.00	7.84	2.23	11.0	± 9.6 %
		Y	1.07	60.00	6.63		11.0	
10491-AAC	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.72	63.76	12.39	2.23	13.0	± 9.6 %
		Y	1.39	61.94	10.73		13.0	
10492-AAC	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	1.71	61.78	10.44	2.23	11.0	± 9.6 %
		Y	1.33	60.00	8.50		11.0	

10493-AAC	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.70	61.49	10.18	2.23	11.0	± 9.6 %
		Y	1.34	60.00	8.38		11.0	
10494-AAC	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.94	65.06	13.82	2.23	13.0	± 9.6 %
		Y	1.72	64.18	12.96		13.0	
10495-AAC	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.12	64.03	12.57	2.23	12.0	± 9.6 %
		Y	1.72	62.16	10.91		12.0	
10496-AAC	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.15	63.85	12.42	2.23	11.0	± 9.6 %
		Y	1.72	61.85	10.65		11.0	
10497-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	7.78	206.80	11.08	2.23	13.0	± 9.6 %
		Y	0.63	136.02	1.72		13.0	
10498-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.00	60.00	0.00	2.23	11.0	± 9.6 %
		Y	0.00	120.60	62.48		11.0	
10499-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.00	128.14	63.66	2.23	10.0	± 9.6 %
		Y	0.00	60.00	0.00		10.0	
10500-AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	0.83	60.00	7.08	2.23	13.0	± 9.6 %
		Y	0.75	60.00	6.01		13.0	
10501-AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	1.09	60.00	5.04	2.23	11.0	± 9.6 %
		Y	36.32	60.01	2.33		11.0	
10502-AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.15	60.00	4.86	2.23	11.0	± 9.6 %
		Y	36.65	60.02	2.33		11.0	
10503-AAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.21	61.66	10.13	2.23	13.0	± 9.6 %
		Y	0.94	60.00	8.37		13.0	
10504-AAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	1.17	60.00	7.94	2.23	12.0	± 9.6 %
		Y	1.04	60.00	6.76		12.0	
10505-AAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.19	60.00	7.82	2.23	11.0	± 9.6 %
		Y	1.07	60.00	6.60		11.0	
10506-AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.92	64.95	13.74	2.23	13.0	± 9.6 %
		Y	1.71	64.07	12.89		13.0	
10507-AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.11	63.94	12.51	2.23	12.0	± 9.6 %
		Y	1.71	62.08	10.85		12.0	
10508-AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.14	63.75	12.35	2.23	11.0	± 9.6 %
		Y	1.71	61.77	10.58		11.0	
10509-AAC	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.43	65.71	14.82	2.23	12.0	± 9.6 %
		Y	2.21	65.11	14.37		12.0	
10510-AAC	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.76	65.25	14.27	2.23	11.0	± 9.6 %
		Y	2.47	64.46	13.48		11.0	
10511-AAC	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.80	65.21	14.20	2.23	11.0	± 9.6 %
		Y	2.50	64.32	13.32		11.0	

10512-AAC	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.45	65.83	15.03	2.23	13.0	± 9.6 %
		Y	2.28	65.41	14.83		13.0	
10513-AAC	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.80	65.27	14.61	2.23	12.0	± 9.6 %
		Y	2.61	64.90	14.20		12.0	
10514-AAC	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.87	65.28	14.59	2.23	11.0	± 9.6 %
		Y	2.67	64.86	14.13		11.0	
10515-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	X	1.07	65.90	14.92	0.00	45.0	± 9.6 %
		Y	0.96	64.29	13.29		45.0	
10516-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	X	0.71	69.56	17.68	0.00	43.0	± 9.6 %
		Y	0.64	66.54	15.55		43.0	
10517-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)	X	0.93	67.34	15.82	0.00	44.0	± 9.6 %
		Y	0.83	65.31	14.08		44.0	
10518-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	X	3.37	68.39	15.38	0.00	13.0	± 9.6 %
		Y	2.86	66.67	13.78		13.0	
10519-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)	X	3.38	68.22	15.28	0.00	12.0	± 9.6 %
		Y	2.85	66.45	13.62		12.0	
10520-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	X	3.34	68.34	15.33	0.00	13.0	± 9.6 %
		Y	2.83	66.62	13.71		13.0	
10521-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	X	3.32	68.28	15.25	0.00	13.0	± 9.6 %
		Y	2.81	66.60	13.63		13.0	
10522-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	X	3.36	68.49	15.35	0.00	12.0	± 9.6 %
		Y	2.83	66.70	13.71		12.0	
10523-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)	X	3.27	68.37	15.33	0.00	13.0	± 9.6 %
		Y	2.77	66.63	13.69		13.0	
10524-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	X	3.24	67.99	15.18	0.00	13.0	± 9.6 %
		Y	2.78	66.47	13.64		13.0	
10525-AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)	X	3.39	67.76	15.25	0.00	12.0	± 9.6 %
		Y	2.86	66.06	13.69		12.0	
10526-AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)	X	3.42	67.89	15.31	0.00	12.0	± 9.6 %
		Y	2.88	66.14	13.74		12.0	
10527-AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)	X	3.35	67.77	15.22	0.00	13.0	± 9.6 %
		Y	2.82	66.02	13.63		13.0	
10528-AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)	X	3.37	67.78	15.21	0.00	12.0	± 9.6 %
		Y	2.84	66.03	13.63		12.0	
10529-AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)	X	3.37	67.78	15.21	0.00	12.0	± 9.6 %
		Y	2.84	66.03	13.63		12.0	
10531-AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)	X	3.35	67.85	15.24	0.00	12.0	± 9.6 %
		Y	2.84	66.15	13.69		12.0	
10532-AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)	X	3.28	67.64	15.13	0.00	13.0	± 9.6 %
		Y	2.79	66.01	13.60		13.0	

10533-AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)	X	3.31	67.71	15.15	0.00	12.0	± 9.6 %
		Y	2.78	65.93	13.55		12.0	
10534-AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)	X	4.10	67.45	16.01	0.00	12.0	± 9.6 %
		Y	3.81	66.92	15.53		12.0	
10535-AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)	X	4.09	67.44	16.01	0.00	12.0	± 9.6 %
		Y	3.80	66.91	15.53		12.0	
10536-AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)	X	4.01	67.39	15.98	0.00	13.0	± 9.6 %
		Y	3.73	66.82	15.48		13.0	
10537-AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)	X	4.07	67.45	16.03	0.00	12.0	± 9.6 %
		Y	3.77	66.85	15.54		12.0	
10538-AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)	X	4.11	67.42	16.01	0.00	12.0	± 9.6 %
		Y	3.81	66.85	15.51		12.0	
10540-AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)	X	4.08	67.39	16.04	0.00	12.0	± 9.6 %
		Y	3.79	66.83	15.56		12.0	
10541-AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)	X	4.10	67.45	16.02	0.00	12.0	± 9.6 %
		Y	3.82	66.97	15.58		12.0	
10542-AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)	X	4.19	67.59	16.11	0.00	12.0	± 9.6 %
		Y	3.89	67.04	15.64		12.0	
10543-AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)	X	4.22	67.52	16.11	0.00	12.0	± 9.6 %
		Y	3.94	67.05	15.67		12.0	
10544-AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)	X	4.53	66.68	15.82	0.00	12.0	± 9.6 %
		Y	4.30	66.13	15.50		12.0	
10545-AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)	X	4.53	66.70	15.81	0.00	12.0	± 9.6 %
		Y	4.31	66.19	15.51		12.0	
10546-AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)	X	4.53	66.75	15.83	0.00	13.0	± 9.6 %
		Y	4.30	66.21	15.52		13.0	
10547-AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)	X	4.53	66.68	15.80	0.00	12.0	± 9.6 %
		Y	4.31	66.18	15.50		12.0	
10548-AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)	X	4.51	66.82	15.84	0.00	13.0	± 9.6 %
		Y	4.32	66.42	15.59		13.0	
10550-AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)	X	4.46	66.64	15.78	0.00	13.0	± 9.6 %
		Y	4.24	66.10	15.44		13.0	
10551-AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)	X	4.51	66.77	15.83	0.00	12.0	± 9.6 %
		Y	4.29	66.27	15.54		12.0	
10552-AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)	X	4.46	66.72	15.76	0.00	12.0	± 9.6 %
		Y	4.23	66.18	15.43		12.0	
10553-AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)	X	4.52	66.86	15.84	0.00	12.0	± 9.6 %
		Y	4.28	66.29	15.49		12.0	
10554-AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle)	X	5.01	66.62	15.80	0.00	12.0	± 9.6 %
		Y	4.84	66.10	15.59		12.0	
10555-AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle)	X	5.02	66.66	15.82	0.00	12.0	± 9.6 %
		Y	4.85	66.12	15.60		12.0	

10556-AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle)	X	5.02	66.68	15.82	0.00	12.0	± 9.6 %
		Y	4.84	66.13	15.60		12.0	
10557-AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle)	X	5.01	66.67	15.83	0.00	12.0	± 9.6 %
		Y	4.82	66.09	15.59		12.0	
10558-AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)	X	5.01	66.69	15.85	0.00	12.0	± 9.6 %
		Y	4.85	66.18	15.64		12.0	
10560-AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)	X	5.04	66.66	15.85	0.00	12.0	± 9.6 %
		Y	4.86	66.12	15.63		12.0	
10561-AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)	X	4.98	66.62	15.84	0.00	12.0	± 9.6 %
		Y	4.80	66.07	15.60		12.0	
10562-AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)	X	5.01	66.70	15.88	0.00	12.0	± 9.6 %
		Y	4.83	66.14	15.64		12.0	
10563-AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)	X	5.15	66.99	16.01	0.00	12.0	± 9.6 %
		Y	4.98	66.52	15.82		12.0	
10564-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)	X	3.61	67.99	15.48	0.46	13.0	± 9.6 %
		Y	3.18	66.86	14.35		13.0	
10565-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle)	X	3.75	68.55	15.91	0.46	12.0	± 9.6 %
		Y	3.30	67.40	14.75		12.0	
10566-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle)	X	3.63	68.23	15.66	0.46	13.0	± 9.6 %
		Y	3.20	67.13	14.53		13.0	
10567-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle)	X	3.89	69.64	16.59	0.46	13.0	± 9.6 %
		Y	3.46	68.60	15.51		13.0	
10568-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle)	X	3.44	67.33	14.91	0.46	12.0	± 9.6 %
		Y	3.03	66.24	13.79		12.0	
10569-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle)	X	3.90	70.04	16.89	0.46	13.0	± 9.6 %
		Y	3.48	68.98	15.82		13.0	
10570-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle)	X	3.75	69.06	16.33	0.46	13.0	± 9.6 %
		Y	3.37	68.15	15.31		13.0	
10571-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	X	1.18	65.10	14.28	0.46	41.0	± 9.6 %
		Y	1.10	64.09	13.14		41.0	
10572-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	X	1.19	65.70	14.72	0.46	41.0	± 9.6 %
		Y	1.11	64.62	13.55		41.0	
10573-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)	X	0.95	70.68	17.76	0.46	39.0	± 9.6 %
		Y	0.87	68.32	16.33		39.0	
10574-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)	X	1.33	71.05	18.03	0.46	40.0	± 9.6 %
		Y	1.20	68.86	16.49		40.0	
10575-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)	X	3.38	67.34	14.85	0.46	12.0	± 9.6 %
		Y	2.94	66.04	13.47		12.0	
10576-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)	X	3.44	67.84	15.19	0.46	12.0	± 9.6 %
		Y	2.99	66.52	13.85		12.0	
10577-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)	X	3.48	67.89	15.24	0.46	12.0	± 9.6 %
		Y	3.01	66.48	13.82		12.0	

10578-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)	X	3.56	68.63	15.73	0.46	12.0	± 9.6 %
		Y	3.10	67.27	14.37		12.0	
10579-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)	X	3.12	66.31	13.99	0.46	12.0	± 9.6 %
		Y	2.72	65.11	12.65		12.0	
10580-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)	X	3.12	66.28	13.92	0.46	11.0	± 9.6 %
		Y	2.71	65.04	12.58		11.0	
10581-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)	X	3.46	68.48	15.60	0.46	12.0	± 9.6 %
		Y	3.02	67.13	14.23		12.0	
10582-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)	X	2.94	65.42	13.39	0.46	11.0	± 9.6 %
		Y	2.59	64.36	12.12		11.0	
10583-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	X	3.38	67.34	14.85	0.46	12.0	± 9.6 %
		Y	2.94	66.04	13.47		12.0	
10584-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	X	3.44	67.84	15.19	0.46	12.0	± 9.6 %
		Y	2.99	66.52	13.85		12.0	
10585-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)	X	3.48	67.89	15.24	0.46	12.0	± 9.6 %
		Y	3.01	66.48	13.82		12.0	
10586-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)	X	3.56	68.63	15.73	0.46	12.0	± 9.6 %
		Y	3.10	67.27	14.37		12.0	
10587-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)	X	3.12	66.31	13.99	0.46	12.0	± 9.6 %
		Y	2.72	65.11	12.65		12.0	
10588-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)	X	3.12	66.28	13.92	0.46	11.0	± 9.6 %
		Y	2.71	65.04	12.58		11.0	
10589-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)	X	3.46	68.48	15.60	0.46	12.0	± 9.6 %
		Y	3.02	67.13	14.23		12.0	
10590-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)	X	2.94	65.42	13.39	0.46	11.0	± 9.6 %
		Y	2.59	64.36	12.12		11.0	
10591-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle)	X	3.58	67.76	15.31	0.46	12.0	± 9.6 %
		Y	3.16	66.65	14.09		12.0	
10592-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle)	X	3.61	67.90	15.40	0.46	11.0	± 9.6 %
		Y	3.18	66.75	14.17		11.0	
10593-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle)	X	3.49	67.54	15.12	0.46	12.0	± 9.6 %
		Y	3.07	66.37	13.87		12.0	
10594-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle)	X	3.60	67.94	15.42	0.46	11.0	± 9.6 %
		Y	3.18	66.81	14.20		11.0	
10595-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle)	X	3.52	67.78	15.25	0.46	11.0	± 9.6 %
		Y	3.11	66.68	14.05		11.0	
10596-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle)	X	3.44	67.43	15.05	0.46	11.0	± 9.6 %
		Y	3.03	66.29	13.80		11.0	
10597-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle)	X	3.42	67.45	14.99	0.46	11.0	± 9.6 %
		Y	3.00	66.28	13.76		11.0	
10598-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle)	X	3.56	68.23	15.60	0.46	12.0	± 9.6 %
		Y	3.16	67.15	14.41		12.0	

10599-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle)	X	4.39	67.98	16.36	0.46	11.0	± 9.6 %
		Y	4.22	67.95	16.15		11.0	
10600-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle)	X	4.29	67.61	16.13	0.46	11.0	± 9.6 %
		Y	4.07	67.37	15.82		11.0	
10601-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle)	X	4.26	67.60	16.18	0.46	11.0	± 9.6 %
		Y	4.05	67.41	15.91		11.0	
10602-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle)	X	4.24	67.28	15.93	0.46	11.0	± 9.6 %
		Y	4.07	67.22	15.72		11.0	
10603-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle)	X	4.36	67.87	16.41	0.46	11.0	± 9.6 %
		Y	4.21	67.91	16.24		11.0	
10604-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle)	X	4.32	67.56	16.20	0.46	12.0	± 9.6 %
		Y	4.10	67.35	15.93		12.0	
10605-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle)	X	4.24	67.26	16.03	0.46	11.0	± 9.6 %
		Y	4.06	67.10	15.76		11.0	
10606-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle)	X	4.13	66.85	15.63	0.46	11.0	± 9.6 %
		Y	3.96	66.72	15.39		11.0	
10607-AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle)	X	3.43	67.12	15.01	0.46	12.0	± 9.6 %
		Y	2.98	65.83	13.71		12.0	
10608-AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle)	X	3.47	67.31	15.12	0.46	11.0	± 9.6 %
		Y	3.01	65.98	13.80		11.0	
10609-AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle)	X	3.33	66.80	14.75	0.46	12.0	± 9.6 %
		Y	2.88	65.47	13.42		12.0	
10610-AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle)	X	3.44	67.27	15.07	0.46	11.0	± 9.6 %
		Y	2.98	65.93	13.74		11.0	
10611-AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle)	X	3.34	66.93	14.83	0.46	11.0	± 9.6 %
		Y	2.91	65.67	13.55		11.0	
10612-AAB	IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)	X	3.26	66.63	14.59	0.46	11.0	± 9.6 %
		Y	2.82	65.29	13.25		11.0	
10613-AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle)	X	3.26	66.48	14.49	0.46	11.0	± 9.6 %
		Y	2.84	65.24	13.21		11.0	
10614-AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle)	X	3.39	67.35	15.14	0.46	12.0	± 9.6 %
		Y	2.97	66.11	13.86		12.0	
10615-AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle)	X	3.15	65.97	14.12	0.46	11.0	± 9.6 %
		Y	2.73	64.68	12.80		11.0	
10616-AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)	X	4.17	67.05	15.93	0.46	11.0	± 9.6 %
		Y	3.92	66.73	15.59		11.0	
10617-AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle)	X	4.13	66.92	15.83	0.46	11.0	± 9.6 %
		Y	3.89	66.60	15.49		11.0	
10618-AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle)	X	4.10	67.08	15.96	0.46	12.0	± 9.6 %
		Y	3.86	66.72	15.61		12.0	
10619-AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle)	X	4.07	66.75	15.72	0.46	11.0	± 9.6 %
		Y	3.83	66.36	15.35		11.0	

10620-AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle)	X	4.13	66.78	15.73	0.46	11.0	± 9.6 %
		Y	3.88	66.43	15.37		11.0	
10621-AAB	IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle)	X	4.26	67.39	16.24	0.46	12.0	± 9.6 %
		Y	4.02	67.09	15.93		12.0	
10622-AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle)	X	4.22	67.32	16.21	0.46	12.0	± 9.6 %
		Y	3.98	67.01	15.89		12.0	
10623-AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)	X	4.09	66.69	15.65	0.46	11.0	± 9.6 %
		Y	3.87	66.42	15.34		11.0	
10624-AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)	X	4.24	67.10	15.96	0.46	11.0	± 9.6 %
		Y	4.00	66.80	15.63		11.0	
10625-AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)	X	4.33	67.28	16.13	0.46	11.0	± 9.6 %
		Y	4.12	67.11	15.87		11.0	
10626-AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)	X	4.61	66.39	15.80	0.46	11.0	± 9.6 %
		Y	4.42	65.99	15.59		11.0	
10627-AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)	X	4.63	66.49	15.84	0.46	11.0	± 9.6 %
		Y	4.45	66.14	15.66		11.0	
10628-AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)	X	4.55	66.18	15.57	0.46	12.0	± 9.6 %
		Y	4.37	65.83	15.38		12.0	
10629-AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)	X	4.55	66.13	15.55	0.46	11.0	± 9.6 %
		Y	4.39	65.85	15.39		11.0	
10630-AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)	X	4.57	66.40	15.70	0.46	12.0	± 9.6 %
		Y	4.44	66.24	15.60		12.0	
10631-AAB	IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)	X	4.71	67.20	16.38	0.46	11.0	± 9.6 %
		Y	4.53	66.84	16.18		11.0	
10632-AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)	X	4.67	66.91	16.21	0.46	12.0	± 9.6 %
		Y	4.48	66.55	16.00		12.0	
10633-AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)	X	4.58	66.45	15.78	0.46	11.0	± 9.6 %
		Y	4.42	66.16	15.62		11.0	
10634-AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)	X	4.58	66.60	15.90	0.46	11.0	± 9.6 %
		Y	4.39	66.21	15.67		11.0	
10635-AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)	X	4.38	65.56	14.95	0.46	11.0	± 9.6 %
		Y	4.19	65.20	14.73		11.0	
10636-AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle)	X	5.10	66.39	15.82	0.46	11.0	± 9.6 %
		Y	4.97	66.02	15.71		11.0	
10637-AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle)	X	5.12	66.45	15.86	0.46	12.0	± 9.6 %
		Y	4.99	66.08	15.75		12.0	
10638-AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle)	X	5.10	66.39	15.79	0.46	11.0	± 9.6 %
		Y	4.96	66.01	15.68		11.0	
10639-AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)	X	5.10	66.46	15.88	0.46	11.0	± 9.6 %
		Y	4.95	66.04	15.74		11.0	
10640-AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)	X	5.06	66.28	15.70	0.46	11.0	± 9.6 %
		Y	4.94	65.96	15.61		11.0	

10641-AAC	IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)	X	5.13	66.33	15.74	0.46	11.0	± 9.6 %
		Y	5.05	66.17	15.72		11.0	
10642-AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)	X	5.20	66.74	16.15	0.46	11.0	± 9.6 %
		Y	5.06	66.35	16.03		11.0	
10643-AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)	X	5.03	66.20	15.70	0.46	11.0	± 9.6 %
		Y	4.89	65.81	15.57		11.0	
10644-AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)	X	5.08	66.36	15.81	0.46	11.0	± 9.6 %
		Y	4.93	65.95	15.67		11.0	
10645-AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	X	5.25	66.78	16.00	0.46	11.0	± 9.6 %
		Y	5.12	66.47	15.91		11.0	
10646-AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	X	4.34	72.47	21.46	9.30	5.0	± 9.6 %
		Y	4.51	72.94	22.24		5.0	
10647-AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)	X	4.05	71.64	21.19	9.30	5.0	± 9.6 %
		Y	4.21	72.06	21.95		5.0	
10648-AAA	CDMA2000 (1x Advanced)	X	3.28	187.93	23.62	0.00	30.0	± 9.6 %
		Y	0.07	83.91	4.28		30.0	
10652-AAB	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	X	1.44	60.53	9.02	2.23	80.0	± 9.6 %
		Y	1.19	60.00	7.73		80.0	
10653-AAB	LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	X	2.71	64.67	13.24	2.23	80.0	± 9.6 %
		Y	2.20	62.79	11.55		80.0	
10654-AAB	LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	X	3.14	65.46	14.54	2.23	80.0	± 9.6 %
		Y	2.82	64.68	13.68		80.0	
10655-AAB	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	X	3.39	65.51	15.07	2.23	80.0	± 9.6 %
		Y	3.17	65.15	14.62		80.0	
10658-AAA	Pulse Waveform (200Hz, 10%)	X	6.96	76.26	18.34	10.00	6.0	± 9.6 %
		Y	8.11	79.88	20.30		6.0	
10659-AAA	Pulse Waveform (200Hz, 20%)	X	5.54	77.53	17.89	6.99	12.0	± 9.6 %
		Y	6.98	82.18	20.25		12.0	
10660-AAA	Pulse Waveform (200Hz, 40%)	X	3.47	78.34	17.74	3.98	23.0	± 9.6 %
		Y	3.80	80.84	19.40		23.0	
10661-AAA	Pulse Waveform (200Hz, 60%)	X	1.64	76.27	17.60	2.22	27.0	± 9.6 %
		Y	1.63	76.28	18.17		27.0	
10662-AAA	Pulse Waveform (200Hz, 80%)	X	0.50	68.67	16.31	0.97	44.0	± 9.6 %
		Y	0.49	66.96	15.54		44.0	

[E] Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

Calibration Laboratory of
Schmid & Partner
  Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

Client   **Sporton**

CALIBRATION CERTIFICATE

Object	5G Verification Source 60 GHz – SN: 1009
Calibration procedure(s)	QA CAL-45.v1 Calibration procedure for 5G Verification and Validation Sources
Calibration date:	April 05, 2018

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Reference Probe EUmmWV2	SN: 9374	23-Mar-18 (No. EUmmWV2-9374_Mar18)	Mar-19
DAE4	SN: 1215	26-Feb-18 (No. DAE4-1215_Feb18)	Feb-19

Secondary Standards	ID #	Check Date (in house)	Scheduled Check

	Name	Function	Signature
Calibrated by:	Leif Klysner	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: April 28, 2018

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Calibration Laboratory of
Schmid & Partner
  Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

Glossary
CW   Continuous wave

Calibration is Performed According to the Following Standards
- Internal procedure QA CAL-45-5Gsources
- IEC TR-63170 ED1, "Measurement procedure for the evaluation of power density related to human exposure to radio frequency fields from wireless communication devices operating between 6 GHz and 100 GHz", November 2017
- DASY6 Handbook

Methods Applied and Interpretation of Parameters
- *Coordinate System:* z-axis in the waveguide horn boresight, x-axis is in the direction of the E-field, y-axis normal to the others in the field scanning plane parallel to the horn flare and horn flange.

- *Measurement Conditions: (1) 10 GHz:* The forward power to the horn antenna is measured prior and after the measurement with a power sensor. During the measurements, the horn is directly mounted to the waveguide source and the reflected power is monitored and adjusted. (2) 30, 60 and 90 GHz: The verification sources are switched on for at least 30 minutes. Absorbers are used around the probe cup to minimize reflections.

- *Horn Positioning:* The waveguide horn is mounted vertically on the flange of the waveguide source to allow vertical positioning of the EUmmW probe during the scan. The plane is parallel to the phantom surface (plane height defined by teaching the point at the surface of the flare of the horn).

- *E- field distribution:* E field is measured in four x-y-planes (10mm, 10mm + λ/4, 150mm; 150mm+ λ/4) with a vectorial E-field probe. The results at 150 mm are used to derive radiated power P_{rad} using numerically determined values. The E-field value stated as calibration value represents the E-field-maxima and the averaged ($1cm^2$ and $4cm^2$) power density values at 10mm in front of the horn.

- *E-field polarization:* Above the open horn, linear polarization of the field is expected.

Calibrated Quantity
- Local peak E-field and spatial-averaged power density S ($1\ cm^2$ and $4cm^2$) at 10, 30, 60 or 90 GHz.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	cDASY6 5G module	V1.0.0.12565
Phantom	5G Phantom	
Distance Horn Aperture - plane	10 mm and 150 mm	
XY Scan Resolution	dx, dy = λ/4	
Number of measured planes	4 (10mm, 10mm + λ/4, 150mm; 150mm+ λ/4)	
Frequency	60 GHz ± 10 MHz	

Calibration Parameters, 60 GHz

Distance Horn Aperture to Measured Plane	P_{rad}[1] (dBm)	Max E-field (V/m)	Uncertainty E (k = 2)	Avg Power Density (W/m^2)		Uncertainty S (k = 2)
				1 cm^2	4 cm^2	
10 mm	21.1	**413.0**	1.2 dB	**345.0**	**239.0**	1.4 dB
150 mm	21.1	**109.0**	1.2 dB	**30.5**	**28.3**	1.4 dB

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[1] derived from far-field E-field data

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ilac-MRA

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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client **Auden**

Certificate No: **DAE4-910_Jun18**

CALIBRATION CERTIFICATE

Object	DAE4 - SD 000 D04 BK - SN: 910
Calibration procedure(s)	**QA CAL-06.v29** **Calibration procedure for the data acquisition electronics (DAE)**
Calibration date:	**June 21, 2018**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Keithley Multimeter Type 2001	SN: 0810278	31-Aug-17 (No:21092)	Aug-18

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Auto DAE Calibration Unit	SE UWS 053 AA 1001	04-Jan-18 (in house check)	In house check: Jan-19
Calibrator Box V2.1	SE UMS 006 AA 1002	04-Jan-18 (in house check)	In house check: Jan-19

	Name	Function	Signature
Calibrated by:	Dominique Steffen	Laboratory Technician	
Approved by:	Sven Kühn	Deputy Manager	

Issued: June 21, 2018

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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Glossary

DAE   data acquisition electronics
Connector angle   information used in DASY system to align probe sensor X to the robot
                         coordinate system.

Methods Applied and Interpretation of Parameters

- *DC Voltage Measurement:* Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.

- *Connector angle:* The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.

- The following parameters as documented in the Appendix contain technical information as a result from the performance test and require no uncertainty.

  - *DC Voltage Measurement Linearity:* Verification of the Linearity at +10% and -10% of the nominal calibration voltage. Influence of offset voltage is included in this measurement.

  - *Common mode sensitivity:* Influence of a positive or negative common mode voltage on the differential measurement.

  - *Channel separation:* Influence of a voltage on the neighbor channels not subject to an input voltage.

  - *AD Converter Values with inputs shorted:* Values on the internal AD converter corresponding to zero input voltage

  - *Input Offset Measurement:* Output voltage and statistical results over a large number of zero voltage measurements.

  - *Input Offset Current:* Typical value for information; Maximum channel input offset current, not considering the input resistance.

  - *Input resistance:* Typical value for information: DAE input resistance at the connector, during internal auto-zeroing and during measurement.

  - *Low Battery Alarm Voltage:* Typical value for information. Below this voltage, a battery alarm signal is generated.

  - *Power consumption:* Typical value for information. Supply currents in various operating modes.

DC Voltage Measurement

A/D - Converter Resolution nominal

High Range:	1LSB =	6.1μV ,	full range =	-100...+300 mV
Low Range:	1LSB =	61nV ,	full range =	-1.......+3mV

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Calibration Factors	X	Y	Z
High Range	403.316 ± 0.02% (k=2)	402.740 ± 0.02% (k=2)	403.223 ± 0.02% (k=2)
Low Range	3.98189 ± 1.50% (k=2)	3.94034 ± 1.50% (k=2)	3.94948 ± 1.50% (k=2)

Connector Angle

Connector Angle to be used in DASY system	270.0 ° ± 1 °

Appendix (Additional assessments outside the scope of SCS0108)

1. DC Voltage Linearity

High Range		Reading (µV)	Difference (µV)	Error (%)
Channel X	+ Input	200036.85	-0.57	-0.00
Channel X	+ Input	20007.13	1.21	0.01
Channel X	- Input	-20003.15	2.23	-0.01
Channel Y	+ Input	200035.57	-4.86	-0.00
Channel Y	+ Input	20005.66	-0.36	-0.00
Channel Y	- Input	-20005.78	-0.47	0.00
Channel Z	+ Input	200031.43	-6.16	-0.00
Channel Z	+ Input	20004.85	-0.87	-0.00
Channel Z	- Input	-20006.04	-0.58	0.00

Low Range		Reading (µV)	Difference (µV)	Error (%)
Channel X	+ Input	2001.67	0.16	0.01
Channel X	+ Input	201.92	0.42	0.21
Channel X	- Input	-198.17	0.31	-0.16
Channel Y	+ Input	2001.38	-0.14	-0.01
Channel Y	+ Input	201.49	-0.03	-0.01
Channel Y	- Input	-198.91	-0.42	0.21
Channel Z	+ Input	2002.08	0.66	0.03
Channel Z	+ Input	199.86	-1.52	-0.75
Channel Z	- Input	-200.22	-1.73	0.87

2. Common mode sensitivity

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Common mode Input Voltage (mV)	High Range Average Reading (µV)	Low Range Average Reading (µV)
Channel X	200	-12.45	-14.44
	- 200	16.44	14.50
Channel Y	200	6.37	5.97
	- 200	-7.85	-7.73
Channel Z	200	-11.52	-12.01
	- 200	10.51	10.13

3. Channel separation

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Input Voltage (mV)	Channel X (µV)	Channel Y (µV)	Channel Z (µV)
Channel X	200	-	4.62	-2.89
Channel Y	200	9.63	-	4.93
Channel Z	200	10.63	7.69	-

4. AD-Converter Values with inputs shorted

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	High Range (LSB)	Low Range (LSB)
Channel X	16196	17184
Channel Y	15388	15032
Channel Z	16713	16294

5. Input Offset Measurement

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec
Input 10MΩ

	Average (μV)	min. Offset (μV)	max. Offset (μV)	Std. Deviation (μV)
Channel X	1.84	0.59	3.46	0.62
Channel Y	1.42	0.15	2.77	0.52
Channel Z	-0.96	-2.82	0.61	0.60

6. Input Offset Current

Nominal Input circuitry offset current on all channels: <25fA

7. Input Resistance (Typical values for information)

	Zeroing (kOhm)	Measuring (MOhm)
Channel X	200	200
Channel Y	200	200
Channel Z	200	200

8. Low Battery Alarm Voltage (Typical values for information)

Typical values	Alarm Level (VDC)
Supply (+ Vcc)	+7.9
Supply (- Vcc)	-7.6

9. Power Consumption (Typical values for information)

Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	+0.01	+6	+14
Supply (- Vcc)	−0.01	-8	-9

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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client   **Auden**

Certificate No: **DAE4-917_Dec17**

CALIBRATION CERTIFICATE

Object	DAE4 - SD 000 D04 BK - SN: 917
Calibration procedure(s)	QA CAL-06.v29 Calibration procedure for the data acquisition electronics (DAE)
Calibration date:	December 14, 2017

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Keithley Multimeter Type 2001	SN: 0810278	31-Aug-17 (No:21092)	Aug-18

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Auto DAE Calibration Unit	SE UWS 053 AA 1001	05-Jan-17 (in house check)	In house check: Jan-18
Calibrator Box V2.1	SE UMS 006 AA 1002	05-Jan-17 (in house check)	In house check: Jan-18

	Name	Function	Signature
Calibrated by:	Adrian Gehring	Laboratory Technician	
Approved by:	Sven Kühn	Deputy Manager	

Issued: December 14, 2017

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Accreditation No.: **SCS 0108**

Glossary

DAE   data acquisition electronics
Connector angle   information used in DASY system to align probe sensor X to the robot
                         coordinate system.

Methods Applied and Interpretation of Parameters

- *DC Voltage Measurement:* Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.

- *Connector angle:* The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.

- The following parameters as documented in the Appendix contain technical information as a result from the performance test and require no uncertainty.

  - *DC Voltage Measurement Linearity:* Verification of the Linearity at +10% and -10% of the nominal calibration voltage. Influence of offset voltage is included in this measurement.

  - *Common mode sensitivity:* Influence of a positive or negative common mode voltage on the differential measurement.

  - *Channel separation:* Influence of a voltage on the neighbor channels not subject to an input voltage.

  - *AD Converter Values with inputs shorted:* Values on the internal AD converter corresponding to zero input voltage

  - *Input Offset Measurement:* Output voltage and statistical results over a large number of zero voltage measurements.

  - *Input Offset Current:* Typical value for information; Maximum channel input offset current, not considering the input resistance.

  - *Input resistance:* Typical value for information: DAE input resistance at the connector, during internal auto-zeroing and during measurement.

  - *Low Battery Alarm Voltage:* Typical value for information. Below this voltage, a battery alarm signal is generated.

  - *Power consumption:* Typical value for information. Supply currents in various operating modes.

DC Voltage Measurement

A/D - Converter Resolution nominal

High Range:	1LSB =	6.1µV ,	full range =	-100...+300 mV
Low Range:	1LSB =	61nV ,	full range =	-1.......+3mV

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Calibration Factors	X	Y	Z
High Range	404.220 ± 0.02% (k=2)	404.223 ± 0.02% (k=2)	404.232 ± 0.02% (k=2)
Low Range	3.96911 ± 1.50% (k=2)	4.00612 ± 1.50% (k=2)	3.99363 ± 1.50% (k=2)

Connector Angle

Connector Angle to be used in DASY system	35.5 ° ± 1 °

Appendix (Additional assessments outside the scope of SCS0108)

1. DC Voltage Linearity

High Range		Reading (μV)	Difference (μV)	Error (%)
Channel X	+ Input	199996.93	0.44	0.00
Channel X	+ Input	20002.26	0.60	0.00
Channel X	- Input	-19999.28	1.82	-0.01
Channel Y	+ Input	199997.59	0.94	0.00
Channel Y	+ Input	19999.22	-2.33	-0.01
Channel Y	- Input	-20002.32	-1.16	0.01
Channel Z	+ Input	199996.21	-0.14	-0.00
Channel Z	+ Input	20000.04	-1.59	-0.01
Channel Z	- Input	-20003.10	-1.79	0.01

Low Range		Reading (μV)	Difference (μV)	Error (%)
Channel X	+ Input	2001.32	0.31	0.02
Channel X	+ Input	202.19	0.72	0.36
Channel X	- Input	-197.56	0.79	-0.40
Channel Y	+ Input	2001.46	0.37	0.02
Channel Y	+ Input	200.19	-1.28	-0.63
Channel Y	- Input	-199.02	-0.74	0.38
Channel Z	+ Input	2001.75	0.71	0.04
Channel Z	+ Input	200.73	-0.73	-0.36
Channel Z	- Input	-199.37	-1.03	0.52

2. Common mode sensitivity

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Common mode Input Voltage (mV)	High Range Average Reading (μV)	Low Range Average Reading (μV)
Channel X	200	-4.75	-6.26
	- 200	7.99	6.37
Channel Y	200	4.39	4.17
	- 200	-6.26	-6.75
Channel Z	200	-14.39	-14.25
	- 200	12.04	12.44

3. Channel separation

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Input Voltage (mV)	Channel X (μV)	Channel Y (μV)	Channel Z (μV)
Channel X	200	-	-2.71	-3.12
Channel Y	200	6.26	-	0.59
Channel Z	200	10.34	2.73	-

4. AD-Converter Values with inputs shorted

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	High Range (LSB)	Low Range (LSB)
Channel X	16029	15653
Channel Y	16106	14634
Channel Z	15947	15886

5. Input Offset Measurement

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec
Input 10MΩ

	Average (μV)	min. Offset (μV)	max. Offset (μV)	Std. Deviation (μV)
Channel X	1.05	-0.17	4.03	0.48
Channel Y	-0.88	-3.38	0.10	0.51
Channel Z	-0.06	-0.91	1.01	0.37

6. Input Offset Current

Nominal Input circuitry offset current on all channels: <25fA

7. Input Resistance (Typical values for information)

	Zeroing (kOhm)	Measuring (MOhm)
Channel X	200	200
Channel Y	200	200
Channel Z	200	200

8. Low Battery Alarm Voltage (Typical values for information)

Typical values	Alarm Level (VDC)
Supply (+ Vcc)	+7.9
Supply (- Vcc)	-7.6

9. Power Consumption (Typical values for information)

Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	+0.01	+6	+14
Supply (- Vcc)	−0.01	-8	-9

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Accreditation No.: **SCS 0108**

Client **Sporton (Auden)**

Certificate No: **DAE4-1424_Jan18**

CALIBRATION CERTIFICATE

Object	DAE4 - SD 000 D04 BM - SN: 1424
Calibration procedure(s)	QA CAL-06.v29 Calibration procedure for the data acquisition electronics (DAE)
Calibration date:	January 18, 2018

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Keithley Multimeter Type 2001	SN: 0810278	31-Aug-17 (No:21092)	Aug-18

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Auto DAE Calibration Unit	SE UWS 053 AA 1001	04-Jan-18 (in house check)	In house check: Jan-19
Calibrator Box V2.1	SE UMS 006 AA 1002	04-Jan-18 (in house check)	In house check: Jan-19

	Name	Function	Signature
Calibrated by:	Adrian Gehring	Laboratory Technician	
Approved by:	Sven Kühn	Deputy Manager	

Issued: January 18, 2018

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Glossary

DAE	data acquisition electronics
Connector angle	information used in DASY system to align probe sensor X to the robot coordinate system.

Methods Applied and Interpretation of Parameters

- *DC Voltage Measurement:* Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.

- *Connector angle:* The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.

- The following parameters as documented in the Appendix contain technical information as a result from the performance test and require no uncertainty.

  - *DC Voltage Measurement Linearity:* Verification of the Linearity at +10% and -10% of the nominal calibration voltage. Influence of offset voltage is included in this measurement.

  - *Common mode sensitivity:* Influence of a positive or negative common mode voltage on the differential measurement.

  - *Channel separation:* Influence of a voltage on the neighbor channels not subject to an input voltage.

  - *AD Converter Values with inputs shorted:* Values on the internal AD converter corresponding to zero input voltage

  - *Input Offset Measurement:* Output voltage and statistical results over a large number of zero voltage measurements.

  - *Input Offset Current:* Typical value for information; Maximum channel input offset current, not considering the input resistance.

  - *Input resistance:* Typical value for information: DAE input resistance at the connector, during internal auto-zeroing and during measurement.

  - *Low Battery Alarm Voltage:* Typical value for information. Below this voltage, a battery alarm signal is generated.

  - *Power consumption:* Typical value for information. Supply currents in various operating modes.

DC Voltage Measurement

A/D - Converter Resolution nominal

High Range:	1LSB =	6.1µV ,	full range =	-100...+300 mV
Low Range:	1LSB =	61nV ,	full range =	-1.......+3mV

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Calibration Factors	X	Y	Z
High Range	403.161 ± 0.02% (k=2)	403.640 ± 0.02% (k=2)	403.214 ± 0.02% (k=2)
Low Range	3.96908 ± 1.50% (k=2)	3.99860 ± 1.50% (k=2)	3.98355 ± 1.50% (k=2)

Connector Angle

Connector Angle to be used in DASY system	356.0 ° ± 1 °

Appendix (Additional assessments outside the scope of SCS0108)

1. DC Voltage Linearity

High Range		Reading (µV)	Difference (µV)	Error (%)
Channel X	+ Input	199995.70	-0.30	-0.00
Channel X	+ Input	20003.23	1.64	0.01
Channel X	- Input	-19998.95	2.29	-0.01
Channel Y	+ Input	199997.52	1.07	0.00
Channel Y	+ Input	20002.22	0.64	0.00
Channel Y	- Input	-20001.28	-0.14	0.00
Channel Z	+ Input	199997.35	1.36	0.00
Channel Z	+ Input	20001.71	0.09	0.00
Channel Z	- Input	-20001.46	-0.28	0.00

Low Range		Reading (µV)	Difference (µV)	Error (%)
Channel X	+ Input	2001.58	0.21	0.01
Channel X	+ Input	202.33	0.64	0.32
Channel X	- Input	-197.31	0.87	-0.44
Channel Y	+ Input	2001.34	-0.09	-0.00
Channel Y	+ Input	200.50	-1.17	-0.58
Channel Y	- Input	-199.25	-1.03	0.52
Channel Z	+ Input	2001.06	-0.29	-0.01
Channel Z	+ Input	200.82	-0.76	-0.38
Channel Z	- Input	-199.10	-0.88	0.45

2. Common mode sensitivity

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Common mode Input Voltage (mV)	High Range Average Reading (µV)	Low Range Average Reading (µV)
Channel X	200	-0.46	-1.90
	- 200	2.81	1.51
Channel Y	200	-12.98	-13.83
	- 200	11.82	11.62
Channel Z	200	-8.33	-8.37
	- 200	6.85	6.79

3. Channel separation

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Input Voltage (mV)	Channel X (µV)	Channel Y (µV)	Channel Z (µV)
Channel X	200	-	2.91	-3.40
Channel Y	200	9.04	-	3.79
Channel Z	200	9.99	6.29	-

4. AD-Converter Values with inputs shorted

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	High Range (LSB)	Low Range (LSB)
Channel X	15959	15999
Channel Y	15879	15974
Channel Z	15876	13967

5. Input Offset Measurement

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec
Input 10MΩ

	Average (μV)	min. Offset (μV)	max. Offset (μV)	Std. Deviation (μV)
Channel X	1.35	-0.75	2.41	0.45
Channel Y	-0.22	-1.57	0.59	0.39
Channel Z	-0.59	-1.51	1.35	0.38

6. Input Offset Current

Nominal Input circuitry offset current on all channels: <25fA

7. Input Resistance (Typical values for information)

	Zeroing (kOhm)	Measuring (MOhm)
Channel X	200	200
Channel Y	200	200
Channel Z	200	200

8. Low Battery Alarm Voltage (Typical values for information)

Typical values	Alarm Level (VDC)
Supply (+ Vcc)	+7.9
Supply (- Vcc)	-7.6

9. Power Consumption (Typical values for information)

Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	+0.01	+6	+14
Supply (- Vcc)	-0.01	-8	-9

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Accreditation No.: SCS 0108

Client **Sporton**

Certificate No: DAE4-853_Jul18

CALIBRATION CERTIFICATE

Object	DAE4 - SD 000 D04 BM - SN: 853
Calibration procedure(s)	QA CAL-06.v29 Calibration procedure for the data acquisition electronics (DAE)
Calibration date:	July 24, 2018

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Keithley Multimeter Type 2001	SN: 0810278	31-Aug-17 (No:21092)	Aug-18

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Auto DAE Calibration Unit	SE UWS 053 AA 1001	04-Jan-18 (in house check)	In house check: Jan-19
Calibrator Box V2.1	SE UMS 006 AA 1002	04-Jan-18 (in house check)	In house check: Jan-19

	Name	Function	Signature
Calibrated by:	Dominique Steffen	Laboratory Technician	
Approved by:	Sven Kühn	Deputy Manager	

Issued: July 24, 2018

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Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: SCS 0108

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Glossary

DAE   data acquisition electronics
Connector angle   information used in DASY system to align probe sensor X to the robot
                          coordinate system.

Methods Applied and Interpretation of Parameters

- *DC Voltage Measurement:* Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.

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DC Voltage Measurement

A/D - Converter Resolution nominal

High Range:	1LSB =	6.1µV ,	full range =	-100...+300 mV
Low Range:	1LSB =	61nV ,	full range =	-1.......+3mV

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Calibration Factors	X	Y	Z
High Range	402.653 ± 0.02% (k=2)	403.319 ± 0.02% (k=2)	403.479 ± 0.02% (k=2)
Low Range	3.95632 ± 1.50% (k=2)	3.96571 ± 1.50% (k=2)	3.96767 ± 1.50% (k=2)

Connector Angle

Connector Angle to be used in DASY system	133.5 ° ± 1 °

Appendix (Additional assessments outside the scope of SCS0108)

1. DC Voltage Linearity

High Range		Reading (μV)	Difference (μV)	Error (%)
Channel X	+ Input	199996.99	1.42	0.00
Channel X	+ Input	20003.62	1.84	0.01
Channel X	- Input	-20000.02	1.12	-0.01
Channel Y	+ Input	199996.86	1.15	0.00
Channel Y	+ Input	20003.13	1.35	0.01
Channel Y	- Input	-20002.42	-1.42	0.01
Channel Z	+ Input	199995.34	-0.26	-0.00
Channel Z	+ Input	20000.34	-1.41	-0.01
Channel Z	- Input	-20002.42	-1.26	0.01

Low Range		Reading (μV)	Difference (μV)	Error (%)
Channel X	+ Input	2002.06	0.81	0.04
Channel X	+ Input	201.69	0.01	0.00
Channel X	- Input	-197.81	0.40	-0.20
Channel Y	+ Input	2001.19	-0.07	-0.00
Channel Y	+ Input	201.32	-0.28	-0.14
Channel Y	- Input	-198.71	-0.48	0.24
Channel Z	+ Input	2001.01	-0.10	-0.01
Channel Z	+ Input	200.73	-0.78	-0.39
Channel Z	- Input	-198.74	-0.39	0.19

2. Common mode sensitivity
DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Common mode Input Voltage (mV)	High Range Average Reading (μV)	Low Range Average Reading (μV)
Channel X	200	-6.54	-8.40
	- 200	10.04	8.25
Channel Y	200	4.94	4.77
	- 200	-5.28	-5.77
Channel Z	200	1.16	1.46
	- 200	-3.62	-3.50

3. Channel separation
DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Input Voltage (mV)	Channel X (μV)	Channel Y (μV)	Channel Z (μV)
Channel X	200	-	8.01	2.30
Channel Y	200	11.72	-	8.82
Channel Z	200	14.69	9.44	-

4. AD-Converter Values with inputs shorted

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	High Range (LSB)	Low Range (LSB)
Channel X	16243	16610
Channel Y	16089	16674
Channel Z	16234	15819

5. Input Offset Measurement

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Input 10MΩ

	Average (μV)	min. Offset (μV)	max. Offset (μV)	Std. Deviation (μV)
Channel X	0.29	-0.41	1.44	0.33
Channel Y	-0.17	-1.64	0.77	0.39
Channel Z	0.76	-0.87	2.49	0.52

6. Input Offset Current

Nominal Input circuitry offset current on all channels: <25fA

7. Input Resistance (Typical values for information)

	Zeroing (kOhm)	Measuring (MOhm)
Channel X	200	200
Channel Y	200	200
Channel Z	200	200

8. Low Battery Alarm Voltage (Typical values for information)

Typical values	Alarm Level (VDC)
Supply (+ Vcc)	+7.9
Supply (- Vcc)	-7.6

9. Power Consumption (Typical values for information)

Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	+0.01	+6	+14
Supply (- Vcc)	−0.01	-8	-9

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Client **Sporton**

Certificate No: DAE4-854_Jun18

CALIBRATION CERTIFICATE

Object	DAE4 - SD 000 D04 BM - SN: 854
Calibration procedure(s)	QA CAL-06.v29 Calibration procedure for the data acquisition electronics (DAE)
Calibration date:	June 14, 2018

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Keithley Multimeter Type 2001	SN: 0810278	31-Aug-17 (No:21092)	Aug-18

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Auto DAE Calibration Unit	SE UWS 053 AA 1001	04-Jan-18 (in house check)	In house check: Jan-19
Calibrator Box V2.1	SE UMS 006 AA 1002	04-Jan-18 (in house check)	In house check: Jan-19

	Name	Function	Signature
Calibrated by:	Eric Hainfeld	Laboratory Technician	
Approved by:	Sven Kühn	Deputy Manager	

Issued: June 14, 2018

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

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Glossary

DAE   data acquisition electronics
Connector angle   information used in DASY system to align probe sensor X to the robot
                              coordinate system.

Methods Applied and Interpretation of Parameters

- *DC Voltage Measurement:* Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.

- *Connector angle:* The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.

- The following parameters as documented in the Appendix contain technical information as a result from the performance test and require no uncertainty.

  - *DC Voltage Measurement Linearity:* Verification of the Linearity at +10% and -10% of the nominal calibration voltage. Influence of offset voltage is included in this measurement.

  - *Common mode sensitivity:* Influence of a positive or negative common mode voltage on the differential measurement.

  - *Channel separation:* Influence of a voltage on the neighbor channels not subject to an input voltage.

  - *AD Converter Values with inputs shorted:* Values on the internal AD converter corresponding to zero input voltage

  - *Input Offset Measurement:* Output voltage and statistical results over a large number of zero voltage measurements.

  - *Input Offset Current:* Typical value for information; Maximum channel input offset current, not considering the input resistance.

  - *Input resistance:* Typical value for information: DAE input resistance at the connector, during internal auto-zeroing and during measurement.

  - *Low Battery Alarm Voltage:* Typical value for information. Below this voltage, a battery alarm signal is generated.

  - *Power consumption:* Typical value for information. Supply currents in various operating modes.

DC Voltage Measurement

A/D - Converter Resolution nominal

High Range:	1LSB =	6.1μV ,	full range =	-100...+300 mV
Low Range:	1LSB =	61nV ,	full range =	-1.......+3mV

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Calibration Factors	X	Y	Z
High Range	404.937 ± 0.02% (k=2)	404.730 ± 0.02% (k=2)	405.829 ± 0.02% (k=2)
Low Range	3.97284 ± 1.50% (k=2)	3.94535 ± 1.50% (k=2)	3.99553 ± 1.50% (k=2)

Connector Angle

Connector Angle to be used in DASY system	325.0 ° ± 1 °

Appendix (Additional assessments outside the scope of SCS0108)

1. DC Voltage Linearity

High Range		Reading (μV)	Difference (μV)	Error (%)
Channel X	+ Input	200033.40	-4.54	-0.00
Channel X	+ Input	20004.28	-1.77	-0.01
Channel X	- Input	-20002.65	2.58	-0.01
Channel Y	+ Input	200036.32	-2.03	-0.00
Channel Y	+ Input	20002.05	-3.86	-0.02
Channel Y	- Input	-20005.10	0.28	-0.00
Channel Z	+ Input	200036.91	-1.46	-0.00
Channel Z	+ Input	20003.85	-2.05	-0.01
Channel Z	- Input	-20005.17	0.36	-0.00

Low Range		Reading (μV)	Difference (μV)	Error (%)
Channel X	+ Input	2002.16	0.22	0.01
Channel X	+ Input	202.15	0.38	0.19
Channel X	- Input	-198.29	-0.31	0.16
Channel Y	+ Input	2001.95	0.27	0.01
Channel Y	+ Input	201.01	-0.63	-0.31
Channel Y	- Input	-198.91	-0.79	0.40
Channel Z	+ Input	2001.73	-0.08	-0.00
Channel Z	+ Input	200.57	-1.12	-0.56
Channel Z	- Input	-199.68	-1.47	0.74

2. Common mode sensitivity
DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Common mode Input Voltage (mV)	High Range Average Reading (μV)	Low Range Average Reading (μV)
Channel X	200	-11.94	-13.63
	- 200	15.47	13.71
Channel Y	200	-8.45	-8.32
	- 200	7.64	7.27
Channel Z	200	16.23	16.03
	- 200	-18.86	-19.07

3. Channel separation
DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Input Voltage (mV)	Channel X (μV)	Channel Y (μV)	Channel Z (μV)
Channel X	200	-	1.45	-3.45
Channel Y	200	7.54	-	3.39
Channel Z	200	9.04	5.14	-

4. AD-Converter Values with inputs shorted

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	High Range (LSB)	Low Range (LSB)
Channel X	16138	16479
Channel Y	16030	14603
Channel Z	15846	16180

5. Input Offset Measurement

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec
Input 10MΩ

	Average (μV)	min. Offset (μV)	max. Offset (μV)	Std. Deviation (μV)
Channel X	0.51	-0.22	1.41	0.30
Channel Y	1.02	-0.44	1.87	0.35
Channel Z	0.62	-0.69	1.46	0.38

6. Input Offset Current .

Nominal Input circuitry offset current on all channels: <25fA

7. Input Resistance (Typical values for information)

	Zeroing (kOhm)	Measuring (MOhm)
Channel X	200	200
Channel Y	200	200
Channel Z	200	200

8. Low Battery Alarm Voltage (Typical values for information)

Typical values	Alarm Level (VDC)
Supply (+ Vcc)	+7.9
Supply (- Vcc)	-7.6

9. Power Consumption (Typical values for information)

Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	+0.01	+6	+14
Supply (- Vcc)	−0.01	-8	-9