The Latest Generation of EM Scanners

DASY52 SYSTEMS

Efficient, Versatile and Accurate Near-Field Scanners for DC to THz



What is DASY52?

DASY52 is the 5th generation in our family of Dosimetric Assessment Systems. The DASY 2/3/4 series represent a litany of excellence and innovation in performance and reliability. DASY52 goes one step further to offer the ultimate in efficiency, versatility and accuracy. The exceptional blend of DASY's proven and new technologies pushes the boundaries of near-field characterization and optimization of any device embedded in any environment. DASY52 can be used for various applications ranging from RF design (Antennas, MRI, EMC, etc), fast compliance testing of transmitters, safety evaluations of medical devices, including implants, to EMI/EMC issues.





DASY52 SYSTEMS The Latest Generation of EM Scanners

System Configurations

SPEAG provides all components and procedures (robot, probes, data acquisition electronics, phantoms, liquids, validation dipoles, predefined procedures and evaluation tools, etc.) necessary to test product compliance in accordance with regulatory standards or agencies. In addition, it offers various probes (E, H, T) optimized for special tasks and any EM environment.

The DASY52 systems are designed to meet the needs of a wide range of applications for different levels of functionality and cost in various industries including telecommunications, healthcare and automotive:

DASY52 SAR

A cost-effective package allowing compliance demonstration of mobile phones with SAR limits. Fully compatible with all worldwide standards for transmitters operating at the ear or near the body (<200mm from the skin). The fastest and most accurate scanner on the market.

DASY52 PRO

A more comprehensive tool capable of performing all near-field scanning tasks of the wireless industry including SAR compliance testing, hearing aid compatibility, compliance with derived limits, etc.

DASY52 NEO

The most comprehensive, reliable and fast system that satisfies all current and future needs in near-field scanning. Designed to perform seamlessly with all SPEAG probes and any 3rd party device. Flexible scans and evaluations ranging from one cubic millimeter to several cubic meters. Capable of importing different phantoms. Predefined scanning parameters for easy scanning or customize procedures using script commands. Fully compatible with any standard requiring near-field evaluations.

Unparalleled Precision

The DASY52 systems combine the world's leading analysis and performance technology including our most advanced probes and scanning and evaluation procedures. Continuous research and development efforts in collaboration with various research partners and a high precision robot ensure that we will always provide the most advanced products/technology with an unmatched level of reliability and efficiency. SPEAG also performs the laborious task of regularly updating uncertainty budgets for the various evaluations as a service to a valued customers.

Applications & Features

- Custom selected modules enabling the most accurate, efficient and reliable 3D near-field measurements: standard SAR testing to advanced dosimetric evaluations of implants, MRI safety evaluations and scanning of large objects such as automobile interiors, anti-theft devices; frequency range from DC to THz
- SAR evaluations: predefined procedures and evaluations for automated compliance testing with all worldwide standards, e.g., IEEE 1528, OET 65, IEC 62209-1, IEC 62209-2, EN 50361/0, EN 50383 and others
- HAC evaluations: advanced hardware extensions allowing automated compliance testing according to the ANSI C63.19 standard and CTIA Test Plan, etc.
- MPE and derived limit evaluations of E- and H-fields: compliance testing following the protocols defined in IEEE C95.3, EN 50392, EN 50357, etc.
- Analysis of close near-fields to optimize radiation performance, EMC, EMI
- Large assortment of system components (probes, validation dipoles, phantoms, etc.) enabling compliance with standards and communication systems used worldwide
- Integration of 3rd party probes (for both analog and digital input)
- Control of devices such as communication testers, generators, etc.
- Enhanced GUI enabling direct comparison with results from SEMCAD X
- Custom-defined scanning procedures controlled by scripting language
- ISO 17025 calibration of the DASY5 system components

Services

SPEAG is accredited to calibrate all relevant components according to ISO17025. Calibration services are offered with the shortest turn-around time (less than two weeks).

SPEAG engineers are world-renowned experts in all compliance standards and their applications. We strive to exceed the expectations of our customers through unparalleled product development, support and training.

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DASY5 Component List

Hardware Configuration	EASY4	DASY	5 SAR	DASY5 AIR DASY5 PRO		DASY	5 NEO		
Included in Package	EASY4	TX 60	TX 90	TX 90	TX 60	TX 90	RX 160	TX 90	RX 160
Controller Cabinet		Х	Х	Х	Х	Х	Х	Х	Х
EOC		Х	Х	Х	Х	Х	Х	Х	Х
TX 60L / CS8		Х			Х				
TX 90L / CS8			Х	х		Х		Х	
RX 160L / CS8							Х		Х
EASY4	Х								
DAE4		Х	Х	Х	Х	Х	Х	Х	Х
DAE4easy	0							0	0
Measurement Server DASY5		Х	Х	Х	Х	Х	Х	Х	X
AMMI (part of T-coil package)				0	0	0	0	0	0
PC Pentium & Color LCD Monitor	0	Х	Х	Х	Х	Х	Х	Х	Х
Probe Extension 150mm						0	0	Х	X
Probe Extension 300mm						0	0	Х	X
Probe Extension (custom made)						0	0	0	0
Probe Alignment Unit (LB)		Х	Х	х	Х	Х	Х	Х	X
Probe Alignment Extension Unit (LBE)							Х	Х	X
Universal Digital and Analog Data Acquisition System							Х	Х	X
Cables/Accessories		Х	х	х	Х	х	х	х	X
Software EASY4	Х								
Software DASY5 SAR V5.x		Х	Х						
Software DASY5 AIR V5.x				х					
Software DASY5 PRO V5.x					Х	х	Х		
Software DASY5 NEOV5.x								х	X
Dosimetric Probe ET3D	0	0	0		0	0	0	0	0
Dosimteric Probe ES3D	0	Х	Х		Х	Х	X	Х	X
Dosimetric Probe EX3D	0	0	0		Х	х	Х	Х	X
Dosimetric Probe ET1D		0	0		0	0	0	0	0
Universal E-field Vector Probe EU2D		-		0	0	0	0	0	0
E-Field Probe ER3D	0			0	Х	х	Х	Х	X
H-Field Probe H3D	0			0	Х	х	Х	х	X
Universal H-Field Vector Probe HU2D				0	0	0	0	0	0
Temperature ProbeT1	0	0	0		0	0	0	0	0
Temperature ProbeT1LAB	0	0	0		0	0	0	0	0
AM1D Probe (part of T-coil package)		-		0	0	0	0	0	0
SAM Twin V4.0		Х	х		Х	Х	Х	Х	X
Mounting Device Phone		Х	Х		Х	Х	Х	Х	X
ELI4		0	0		Х	Х	Х	Х	X
Mounting Device Laptop		0	0		Х	Х	Х	Х	X
HACTest Arch (part of RF/T-coil package)				0	0	0	0	0	0
AMCC (part of T-coil package)				0	0	0	0	0	0
Standard Birdcage MITS 1.5 (v5.2)								0	0
ASTM Phantom (v5.2)	0							0	0
SAR Validation Dipoles D900 and D1800		х	х		Х	х	х	х	X
HAC Validation Dipoles CD835, CD1880 and CD2450				0	0	0	0	0	0
Sample Liquid HSL 900 (301)		Х	Х		Х	Х	X	Х	X
ISO 17025 Additional Calibration	0	0	0	0	0	0	0	0	0
Installation & Basic Training (3 days)		X	X	X	X	X	X	X	X
Training SAR Compliance Testing (per day)		0	0		0	0	0	0	0
Training HAC Compliance Testing (per day)		-	-	0	0	0	0	0	0
Training Medical Compliance (per day)								0	0

O = option

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DASY5 Feature List (1/2)

	EASY4	DAS	/5 SAR	DASY5 AIR	DA	DASY5 PRO		DASY5 NEO	
	EASY4	TX 60	TX 90	TX 90	TX 60	TX 90	RX 160	TX 90	RX 160
Hardware Compatibility									
Dosimetric Probe ET3D, ES3D, EX3D, ET1D	Х	Х	Х		Х	Х	Х	Х	X
E-Field Probe ER3D	Х			Х	Х	Х	Х	Х	X
E-Field Vector Probe EU2D				Х	Х	Х	Х	Х	Х
H-Field Probe H3D	Х			Х	Х	Х	Х	Х	Х
H-Field Vector Probe HU2D				Х	Х	Х	Х	Х	X
Temperature ProbeT1,T1LAB	Х	Х	Х		Х	X	Х	Х	X
AM1D Probe (T-coil)				Х	Х	Х	Х	Х	Х
Probe Extensions (150mm, 300mm, custom made)				0		0	0	Х	X
Interface to 3rd Party Probe (analog or digital input) (v5.2)				Ŭ		0	0	Х	X
Standard Birdcage MITS 1.5 (v5.2)								Х	X
Module: SAR Compliance Std.									
IEEE 1528-2003. OET 65		x	x		х	x	х	Х	X
IEC 62209-1, IEC 62209-2		X	X		X	X	X	X	X
EN 50361 EN 50360		X	X		X	X	X	X	X
EN 50383		X	X		X	X	X	X	X
			~		~		~	~	
Module: Derived Limits									
EN 50392				×	x	x	x	x	X
EN 50352				×	X	X	X	X	X
LN 50357, LN 50304				^	~	^	^	~	^
Modulo: HAC Compliance									
				×	v	v	v	v	v
ANSI C03.19				×	^		^	^	
Modulo: Modical									
								v	v
AAMI PC69, AIMD MR JWG (latest drait)									<u> </u>
Madula: CAR Fusikustian									
Rever Peteroneo/Drift		v	v		×	v	v	v	v
Power Reference/Drift		X	X					 	
Area Scan Envidiatent on Creded Crid			X		~				
Automatia Multinla Zeam Seen			X		~				\rightarrow
Automatic Multiple Zoom Scan		X	X		~			 	
Volume Scan		X	X		~			 	
2-dxis Scan		X	X		X		X	 	
		X	X		X	X	X	X 	
SAR Scan (time optimized <5 min)		X	X		X	X	X	X 	
Quadratic Sheppard Inter/Extrapolation		X	X		X	X	X	X	X
Boundary Correction		X	X		X	X	X	X	X
Advanced Modulation Correction Algorithm		X	X		X	X	X	X	X
Fast SAR Algorithm		X	X		X	X	X	X	X
Auto Multi-Band Evaluation (v5.2)		X	X		X	X	X	X	X
Broad-Band Frequency Linearization		X	X		X	X	X	X	X
Medium Parameter Interpolation		X	X		X	X	X	X	X
SAR Evaluation from Temperature Rise		X	X		X	X	X	X	X
Peak SAR Evaluation		X	X		X	X	X	X	X
Peak Spatial SAR Evaluation 1g, 10g, user defined mass		X	X		X	X	X	X	X
Peak Contiguous SAR Evaluation 10g (v5.2)		X	X		X	X	X	X	X
Peak Contiguous SAR Evaluation user defined mass (v5.2)		X	Х		X	X	X	X	X
Total Absorber Power Evaluation (v5.2)		Х	Х		Х	X	Х	Х	X
Module: Batch Procedures									
Predefined SAR Compliance Procedure		Х	Х		Х	X	Х	Х	X
Predefined HAC Compliance Procedure				Х	Х	X	Х	Х	X
Predefined System Performance Check Procedure		Х	Х	X	Х	X	Х	Х	X
Custom made Procedure		Х	Х	Х	Х	Х	Х	Х	X
Module: Report Generation									
OET 65, IEC 62209 or IEEE 1528 Report		Х	Х		Х	X	X	Х	X
ANSI C63.19 Report				Х	Х	Х	Х	Х	Х
System Performance Check Report		X	X	X	X	X	X	Х	X

O = option

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DASY5 Feature List (2/2)

	EASY4 DASY5 SAR		DASY5 AIR DASY5 PRO			DASY5 NEO			
	FASY4	TX 60	TX 90	TX 90	TX 60	TX 90	BX 160	TX 90	BX 160
Module: Phantom	2/10/14	177.00	1700	17.00	177.00	17.00	100 100	17.00	
Optical / Machanical Surface Detection		v	v	×	v	v	v	v	v
Twin SAM Phontom				^					
					~				
ELI4 Phantom / Flat Phantom (6mm shell)		<u> </u>	X		X	X	X	X	X
Whole-Body Phantom (v5.2) / Torso Phantom (v5.2)					X	X	X	X	X
ASTM Phantom (v5.2)								X	X
HAC Arch Phantom / AMCC Calibration Coil				X	X	X	X	X	X
SEMCAD Defined Phantom				X	X	X	Х	Х	X
CAD Importer of SAT, IGES, STEP, 3DS, Pro/E, CATIA, STL				0	0	0	0	0	0
Module: Scan Evaluation									
Time Sweep (sampling rate >128 µs)	Х	Х	Х	Х	Х	Х	Х	Х	Х
Averaged Values (user definable averaging time)	Х	Х	Х	Х	Х	Х	Х	Х	X
Notch Filter (user definable notch frequency)	X	X	х	X	Х	X	х	х	X
1D Botation Scan	~	X	X	X	X	X	X	X	X
2D Botation Scan			~	× ×	~	X	X	X	X
Offeet Componention	v	v	v		v				
Onset Compensation				X	X				
1D Linear / 2D Planar Scan (flat/along phantom surface)		X	X	X	<u>X</u>	X	X	X	X
3D Scan in World Coordinates (flat/along phantom surface)				X	X	X	X	X	X
Arbitrary 1D, 2D or 3D Scans (CAD defined)				X	Х	X	X	Х	X
Auto-Save	X	X	X	X	X	X	Х	Х	X
Relative Measurements	X			X	Х	X	Х	Х	X
LabView	Х								
Module: Visualization									
1D Charts (Time Sweep, 1D scans, 1D rotation, etc.)	Х	Х	Х	Х	Х	Х	Х	Х	X
2D Charts (2D scans, 2D rotation)		X	х	X	Х	X	х	х	X
3D Charts (3D scans)		X	X	X	X	X	X	X	X
East 3D OGL OTech based rendering		X	X	X	X	X	X	X	X
Linear or Logarithmia Scale Date Perrogentation					 				
Visualization of Custic line Assure and Data				<u>^</u>	X				
		^	^	X	X				
Polarization Visualization				X	<u>X</u>	X	X	X	X
Iransparent Mode		X	X	X	X	X	X	X	X
Device & Phantom Visualization		X	X	X	X	X	X	X	X
Data Export	Х	X	Х	X	Х	X	Х	Х	X
Graphic Export		X	Х	X	Х	X	Х	Х	X
SEMCAD Data Import					Х	X	Х	Х	X
Import of 3rd party Results					Х	X	Х	Х	X
Data Comparison					Х	Х	Х	Х	Х
Module: External Device Control									
GPIB Commands		0	0	0	X	x	x	x	X
User defined appouncements by e-mail or by SMS		0	0	0	X	X	X	X	X
		0	0	0	~		~	~	
Madula HAC Evaluation									
					X	×	×	X	× ×
Automatic W Class Evaluation for E-field				X	<u> </u>	X	X	X	
Automatic M Class Evaluation for H-field				X	X	X	X	X	X
Automatic M Class Evaluation for Combined E/H-field				X	X	X	X	X	X
Automatic T Class Evaluation (T-coil)				X	Х	X	Х	Х	X
Module: MRI									
Evaluation Procedure (v5.2)								Х	Х
ISO 17025 Calibration Services									
E-field Calibration in Air (CW, GSM, LIMTS, IS-95, etc.)	x	x	х	x	Х	X	x	X	X
E-field Calibration in Liquid (CW/ GSM LIMTS IS 95, etc.)	X	X	x		X	X	X	X	X
H field Calibration (CW) GSM LIMTE IS OF TETRA at 1				v	× ×		\sim	×	
Temperature Celibration				×					
	×				<u>^</u>				
System validation Dipole Calibration		X	X		X	X	X	X	X
HAC validation Dipole Calibration		X	X	X	X	X	X	X	X
DAE Calibration	I X	I X	X	X	X	I X	X	X	I X

O = option

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