



Romax
nexus
Empower | Collaborate | Innovate

Introducing Romax Nexus



- **The most complete simulation platform for engineering the next generation of electro-mechanical drive systems**
- **Focused products** that align with your drivetrain and transmission development cycle, with workflows streamlined to specific users
- **Integrated environment**, all Romax products work together and sit at the heart of your CAE ecosystem
- **Flexible structure**, with accessible products that fit within your development processes and alongside other gold standard tools
- **Backed by 30 years' innovation** in simulation technology and engineering expertise

Focused Products



Rapid and intuitive exploration of drivetrain ideas to enhance the early product development process

For concept designers



Trusted structural simulation and optimisation for the design of durable and robust electro-mechanical drive systems

For durability engineers



Full system NVH simulation from gear and electric machine design through to vehicle sound quality

For NVH analysts



A global efficiency prediction tool for drivetrains and transmissions

For efficiency experts



Advanced simulation of rolling element bearings for bearing designers and application engineers

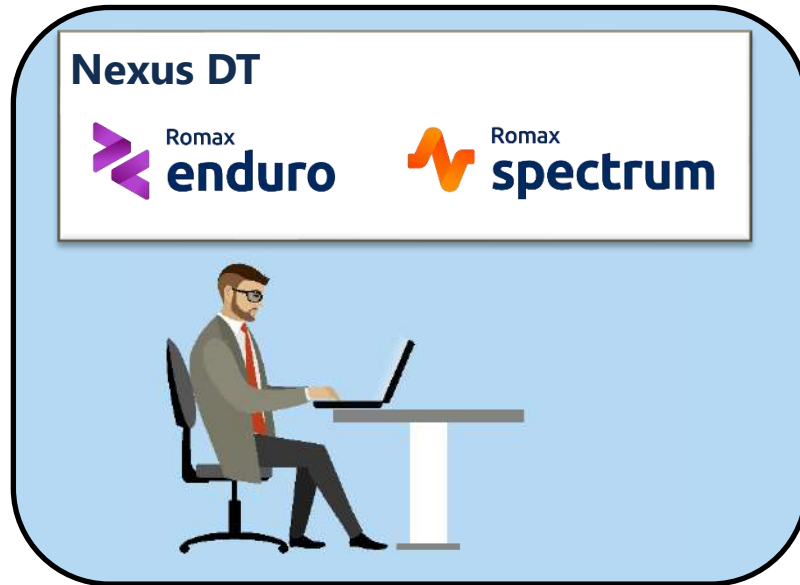
For bearing specialists



Electro-mechanical analysis tool for electrical machine designers

For motor designers

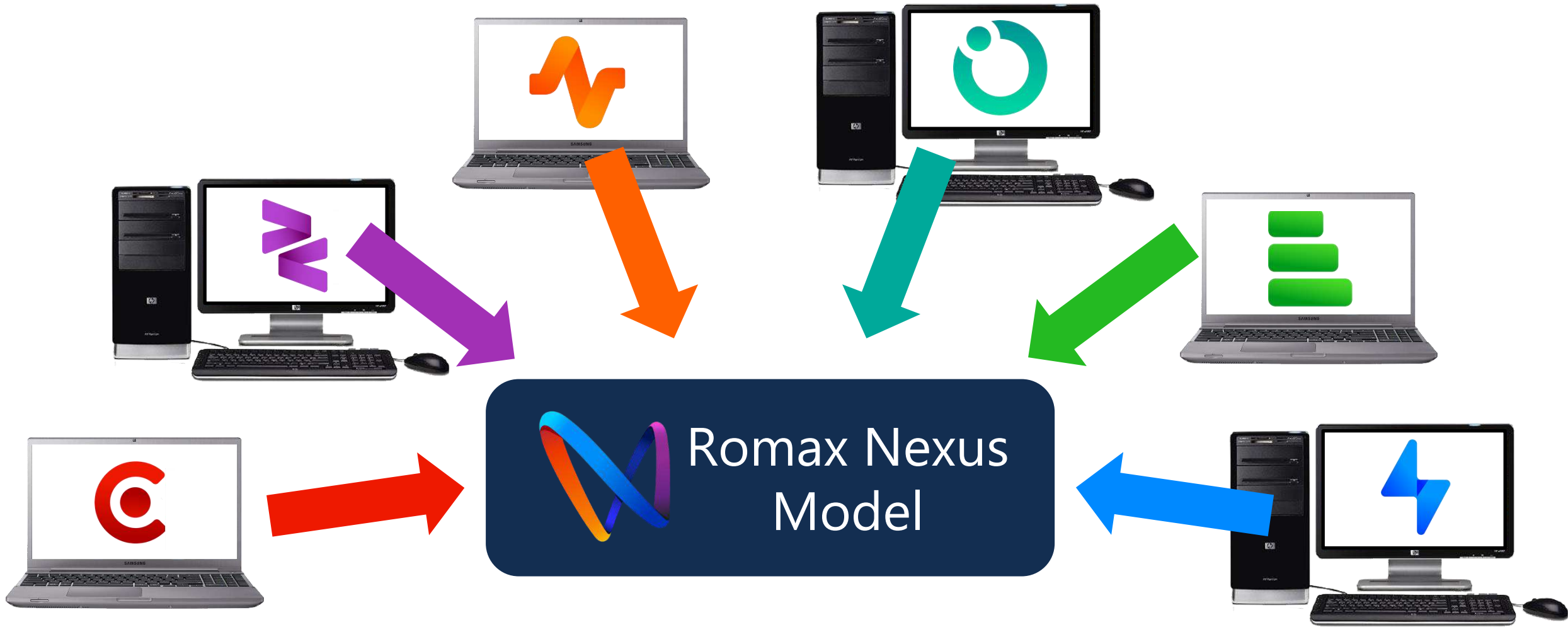
Flexibility of Working



or



Interoperability



Romax Software Partners & Supported Products

3D CAD GEOMETRY

AUTODESK CATIA SOLIDWORKS
SIEMENS NX ptc

STRUCTURAL FEA

ABAQUS
ANSYS
Altair OptiStruct
MSC Nastran

GEARS

ANSOL
Gleason
KLINGENBERG
GEARLAB

BEARINGS

SKF
LUK INA FAG
SCHAEFFLER GROUP
TIMKEN
IWIN
JTEKT
Koyo TOYODA

PROCESS INTEGRATION AND DESIGN OPTIMISATION

aras noesis
iSight & SEE
ETECO EASA
Streamline your software
Accelerate your process

MBD, ENGINE AND SYSTEM ANALYSIS

Adams MathWorks
GT Gamma Technologies MODELICA

VIBROACOUSTICS

Actran SIEMENS
HBK LMS
HOTTINGER BRÜEL & KJÆR
COUSTY

ELECTROMAGNETIC FEA

Motor Design Limited ANSYS Maxwell
Altair Flux JMAG
SIMULIA

CFD

ANSYS FLUENT
Altair nanoFluidX
Exa
Fluidyna



Complete Simulation Platform

Work


- ✓ Independently or together, seamlessly
- ✓ Alongside other tools in your process
- ✓ With our industry-leading expertise and unparalleled customer support

Common

- ✓ File format
- ✓ Model builder
- ✓ Static analysis engine

Add on

- ✓ More advanced capabilities
- ✓ Optimisation procedures
- ✓ Interfaces to other gold standard products









Romax
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Romax **evolve** Romax **energy** Romax **enduro**

Romax **concept** Romax **spin** Romax **spectrum**

GEARS Gleason ANSOL GEARLAB KLINGELBERG	ELECTROMAGNETIC FEA SIMULIA Motor Design Limited Altair Flux™ JMAG ANSYS Maxwell	MBD, ENGINE AND SYSTEM ANALYSIS Adams MathWorks GT HODELICA	VIBROACOUSTICS Actran SIEMENS LMS Brüel & Kjær COUSTYX	BEARINGS ILWIN JTEKT Koyo TOYOTA LUK FAG SCHAEFFLER GROUP SKF TIMKEN
	PROCESS INTEGRATION AND DESIGN OPTIMISATION Comet NOESIS iSight & SEE EASA	3D CAD GEOMETRY AUTODESK CATIA SOLIDWORKS SIEMENS NX ptc	CFD ANSYS FLUENT Exa FluidDyna Altair nanoFluidX	STRUCTURAL FEA ABAQUS ANSYS Altair OptiStruct MSC Nastran

PRODUCTS AND OPTIONS

	Concept Design	Durability & Structural Analysis	NVH & Dynamics	Efficiency & Thermal Analysis	Bearing Design & Analysis	Electric Machine Design & Analysis
<i>Base Products</i>	 Romax <i>CD-01</i>	 Romax <i>DS-01</i>	 Romax <i>ND-01</i>	 Romax <i>ET-01</i>	 Romax <i>BG-01</i>	 Romax <i>EM-01</i>
<i>Product Options</i>		<ul style="list-style-type: none"> Helical Gear & Spline Contact Analysis <i>DS-11</i> System Gear Contact Analysis <i>DS-12</i> Bevel Gear Design and Rating <i>DS-13</i> 	<ul style="list-style-type: none"> System Gear Transmission Error <i>ND-11</i> E-Machine NVH <i>ND-12</i> Planetary Gear Sidebands <i>ND-13</i> Acoustic Analysis <i>ND-14</i> Acoustic Analysis for Actran <i>ND-15</i> Gear Rattle Analysis <i>ND-16</i> Dynamic System Export <i>ND-17</i> 	<ul style="list-style-type: none"> Advanced Efficiency Analysis <i>ET-12</i> 	<ul style="list-style-type: none"> Thrust Roller Bearing Stress Analysis <i>BG-21</i> Thrust Ball Bearing Stress Analysis <i>BG-22</i> Four-Point Contact Bearing Stress Analysis <i>BG-23</i> Spherical Roller Bearing Stress Analysis <i>BG-24</i> Cross Roller Bearing Stress Analysis <i>BG-25</i> Three-Point Contact Bearing Stress Analysis <i>BG-26</i> Asymmetric Bearing Stress Analysis <i>BG-30</i> 	<ul style="list-style-type: none"> Electrical Machine NVH Analysis <i>EM-11</i> Acoustic Analysis <i>ND-14</i> Acoustic Analysis for Actran <i>ND-15</i>
<i>Other Products</i>			<ul style="list-style-type: none"> Romax Dynamic Fusion <i>ND-02</i> 		<ul style="list-style-type: none"> Bearing Dynamics <i>BG-02</i> 	

Specialist Components

- Cycloidal Drive *SC-12*

Modeller Options

- FE Modelling and Analysis *MD-11*
- Flexible Bearing Raceways *MD-12*
- Detailed Hydrodynamic Journal Bearing Analysis *MD-13*
- CAD FUSION *MD-20*
- Translator Pack 1 *MD-21*
- Translator JTOpen *MD-23*
- Translator Pack 2 *MD-22*
- Translator CATIA *MD-24*

Other Options

- Variability & Optimisation *PI-11*
- EM Excitation Interface *PI-24*
- Gear Analysis Interface *PI-31*
- HGSim Interface *PI-32*
- XML Model Import and Export *PI-41*
- XML Results Export *PI-42*

Solutions to drive business and sustainability



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