FRONTLINE solvers

The leader in spreadsheet optimization and simulation

Frontline Solvers Optional Plug-in Solver Engines for Platform-Level Products

(See by-engine descriptions on www.solver.com for full range of problems each engine will solve)

By Solver Engine

	Bits	Limits	Especially Suited For
	(32-bit/64-bit)	**(Var x Const)**	
Large Scale LP/QP Solver			
Standard Version	Both	32000 x 32000	LP/QP/MIP
Extended Version	Both	Unlim x Unlim	LP/QP/MIP
Large Scale GRG Solver			
Extended Version	Both	12000 x 12000	Smooth nonlinear
Large Scale SQP Solver	Both	Unlim x Unlim	Smooth nonlinear, non-smooth
KNITRO	Both	Unlim x Unlim	Smooth nonlinear
MOSEK			
Extended	Both	Unlim x Unlim	LP/QP, QCP and SOCP + convex nonlinear
Gurobi			
LP/MIP	Both	Unlim x Unlim	LP/MIP
LP/QP/MIP	Both	Unlim x Unlim	LP/QP/MIP Smooth Non-linear
XPRESS			
LP/MIP	Both	Unlim x Unlim	LP/MIP
LP/QP/MIP	Both	Unlim x Unlim	LP/QP/MIP
OptQuest	32-bit	5000 x 1000	Non-smooth

By Problem Type

	Best Choice(s)	Alternative Choice
Linear/MIP	Gurobi, XPRESS, LS LP/QP	MOSEK
Quadratic		
QP Convex	Gurobi, XPRESS, LS LP/QP	MOSEK
QP Non-convex	LS SQP, KNITRO, LS LP/QP	LS GRG
Quadratically Constrained		
QCP Convex	MOSEK, KNITRO, LS GRG	LS SQP
QCP Non-convex	KNITRO, LS GRG, LS SQP	
QCP (unknown convexity)	KNITRO, LS GRG, LS SQP	
Second Order Cone	MOSEK, KNITRO, LS GRG	LS SQP
Smooth Nonlinear		
NLP Convex	KNITRO, LS GRG, LS SQP	MOSEK
NLP Non-convex	KNITRO, LS GRG, LS SQP	
NLP (unknown convexity)	KNITRO, LS GRG, LS SQP	
Non-Smooth	OptQuest, LS SQP	LS GRG
Simulation Optimization	OptQuest, LS SQP	LS GRG

LS = Large-Scale