

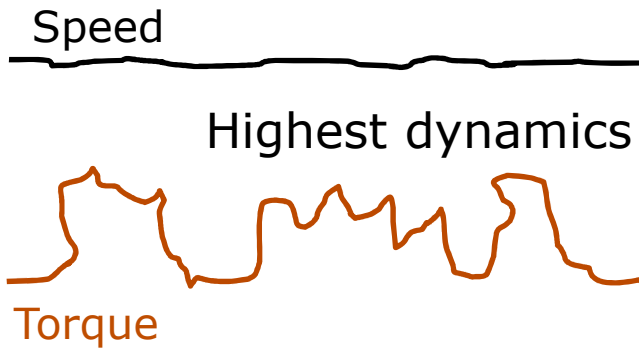


Drive your AC Brushless  
motor easily with **RX62T**

Experiment – Calibrate – Integrate.

Renesas Electronics Europe  
ICBG  
Vincent Mignard  
January 2014      Rev. 1.00

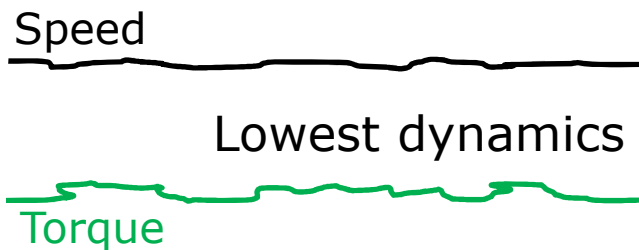
# Which target applications vs. requirements?



Highest MCU cost  
Low CPU load



Medium MCU cost  
Mid CPU load



Lowest MCU cost  
High CPU load



# Set of Motor control solution for your inverters



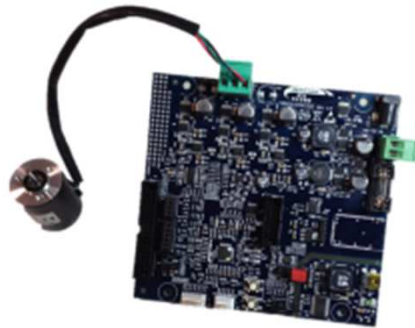
Highest dynamics



Highest MCU cost  
Low CPU load



Good dynamics



Medium MCU cost  
Mid CPU load



Lowest dynamics



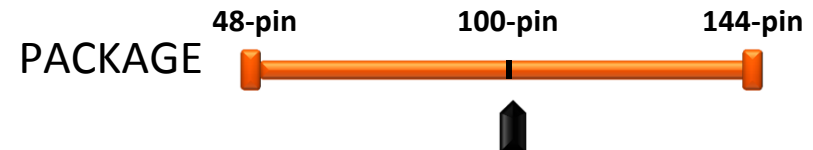
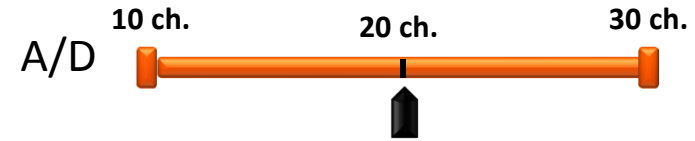
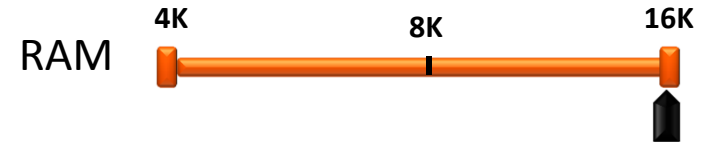
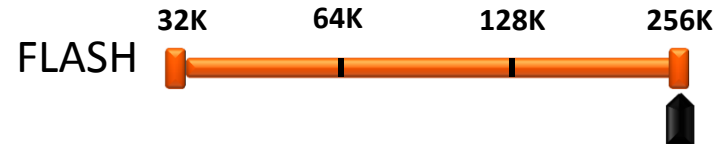
Lowest MCU cost  
High CPU load



# Why RX62T is a suitable MCU for inverter?



32-Bit MCU  
@ 100MHz  
8K Data Flash  
2.7 V to 5.5V  
6 x Op. AMP  
6 x Comparators



# RX62T MCU Benefits ?



100MHz, MAC, FPU enable complex algo. & full support of Matlab/Scilab equations

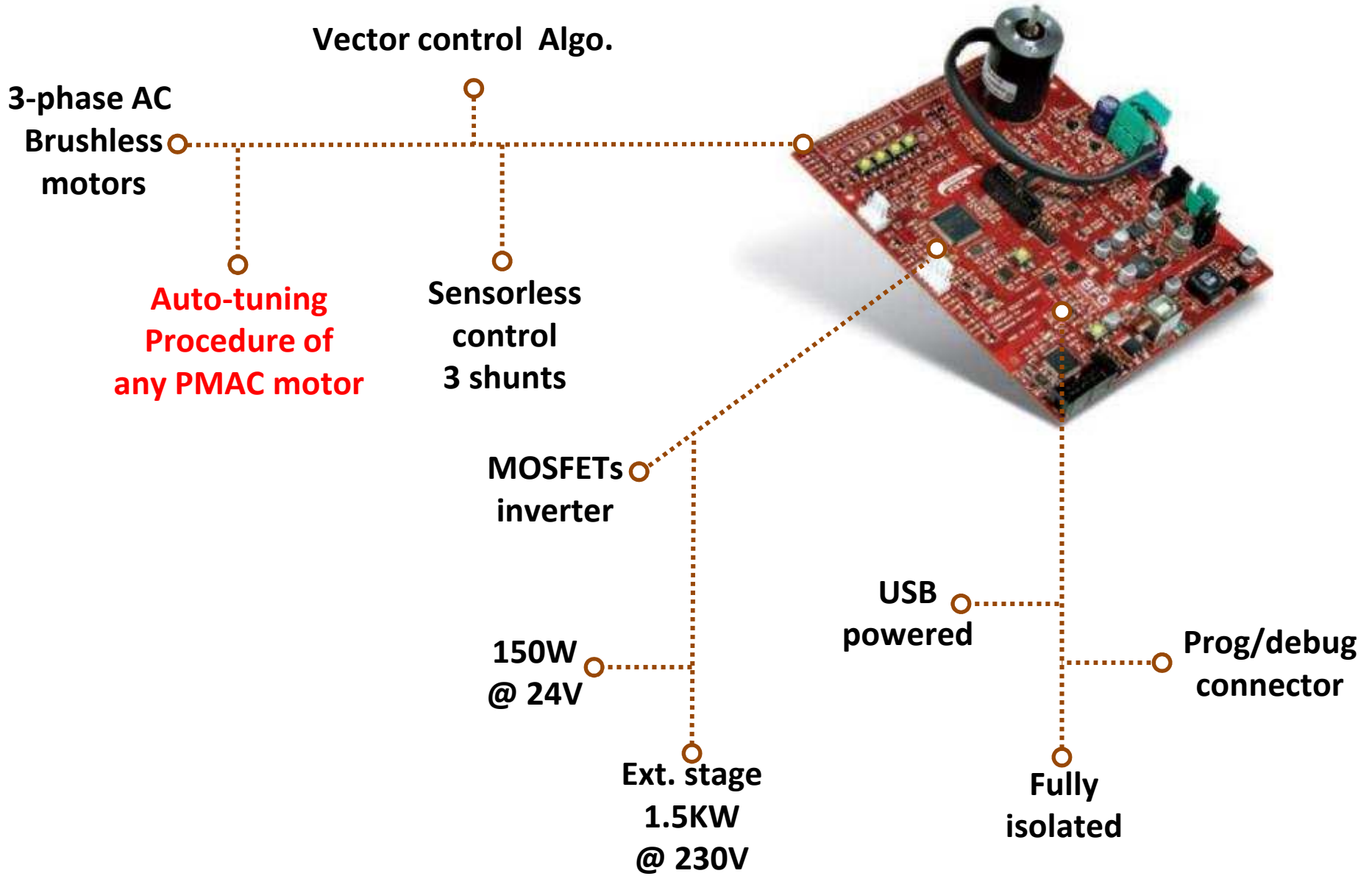
MC timer to drive **two** 3-phase motors, full h/w support of hall sensors, encoder

12-bit A/D with S/H on-chip single/three shunts sensorless algorithm

True 5V enabling high MCU immunity, proven by Langer burst test report.

h/w safety: MPU, POE, CRC, WDT, self-test A/D to comply IEC60730-1

# Which Ref. design did we build for you?



# What's inside the kit?



PC GUI s/w



Schematics, Gerber, BOM  
Datasheets, User's Manual  
HEW Source code



Quick Start Guide



USB powered



Single PCB inverter  
based on RX62T +  
AC Brushless motor





# Advanced PC GUI to speed-up evaluation



Custom motor calibration  
in a few mouse clicks

Alarms status  
displayed

Tuning of key parameters:  
PI coefficients, start-up, etc.

Real-time torques displayed

# Which benefits do you get from such kit?



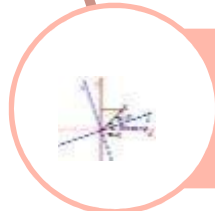
€169



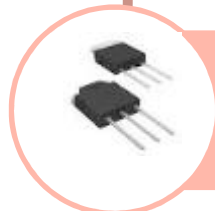
p/n: YROTATE-IT-RX62T



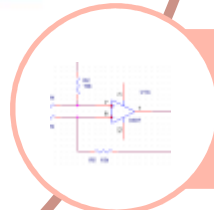
Calibrate & drive any 3-phase Brushless AC motors thanks to the Auto-tuning procedure in 45 seconds



Use royalty-free vector control s/w using small flash footprint and minimum CPU resources



5V MCU & MOSFETs on-board, 1.5KW external power stage ready to be connected



For only €169, it contains: Schematics, Gerber, BOM list, datasheets, User's Manual, Video

# Feel free to evaluate the RX62T MC kit to reach:





Renesas Electronics Europe

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