

01 TRACE SETUP





Trace Setup

Contents

01	Requirements and recommendations	3
02	Licensing	4
03	Which Debug Adapter / Active Probe to use?	5
04	What if my CPU does not support Trace?	6

01 Requirements and recommendations

Recommended hardware configuration for long trace recordings:

- High-performance PC with sufficient disk space
- iC5700 BlueBox
- Active Probe
- Target board exposing trace interface



PC with 64-Windows OS

- Multicore CPU (for optimal distribution of workload during program execution flow reconstruction and Profiler/Coverage analysis)
- 8GB RAM or more
- SSD drive with free disk space
- USB 3.0 port



BlueBox iC5700

- 1GB Trace Buffer size
- USB 3.0
- Trace Bandwidth up to 250 MHz in parallel mode
- Trace Bandwidth up to 5Gbps in serial mode

** Trace is also available with iC5000 and iC6000*



Active Probe

- Operating at maximum frequency
- Compact, sturdy design
- Supports various CPUs

**Trace is also available with Debug Adapters*



Your Target

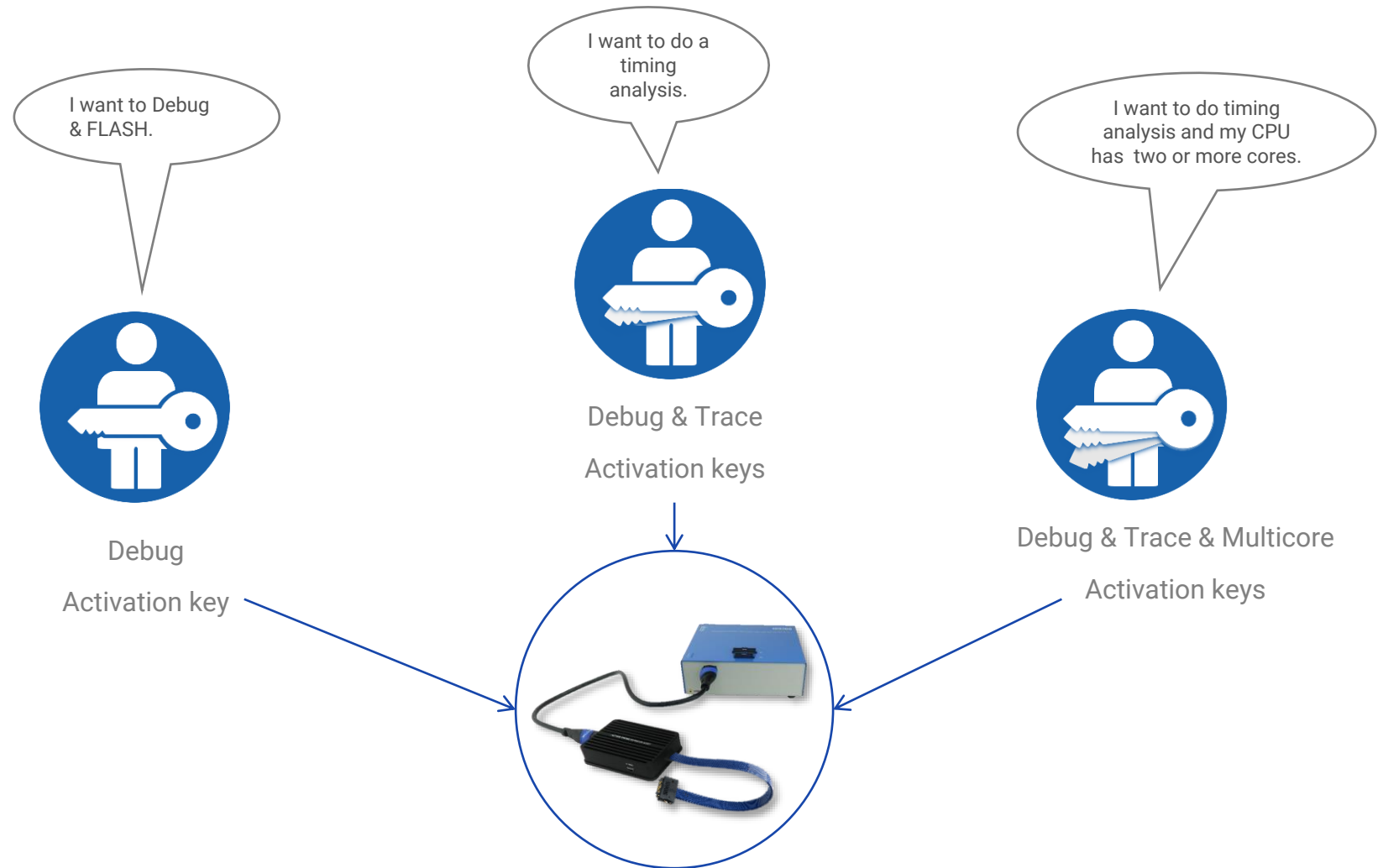
- Trace port
- High quality PCB layout which allows fastest trace streaming

02 Licensing

All software licenses and activation keys are stored inside iSYSTEM Hardware (BlueBox, Active Probe, IOM6 Add-On modules) which allows:

- moving the BlueBox from one PC to another
- accessing the BlueBox via Ethernet from any PC

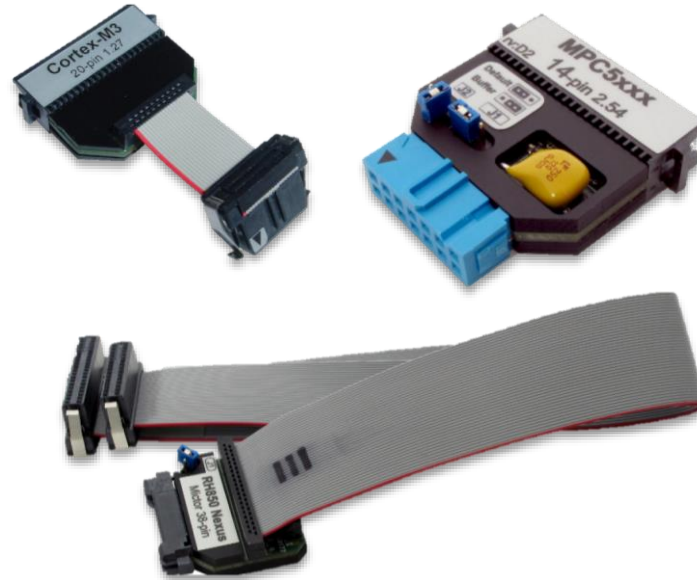
Activation keys for tracing are pre-programmed by iSYSTEM according to the purchase order. Additional activation keys can be purchased any time later.



03 Which Debug Adapter / Active Probe to use?

iSYSTEM supports debug and trace interfaces for various microcontroller architectures (Infineon TriCore, ARM Cortex, Renesas RH850, NXP/ST Power Architecture) through:

- Debug Adapters
- Active Probes (iC5700 only)



Examples of Debug Adapters



Examples of Active Probes

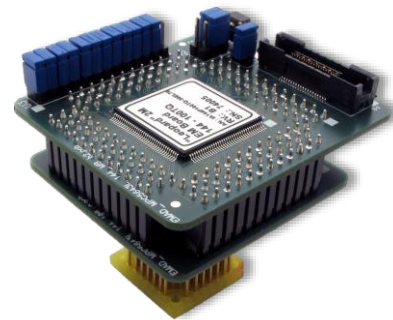


For more information about available connections to the embedded microcontroller or SoC please read [Debug Adapters User Manual](#) or visit [Active Probes iSYSTEM web site](#).

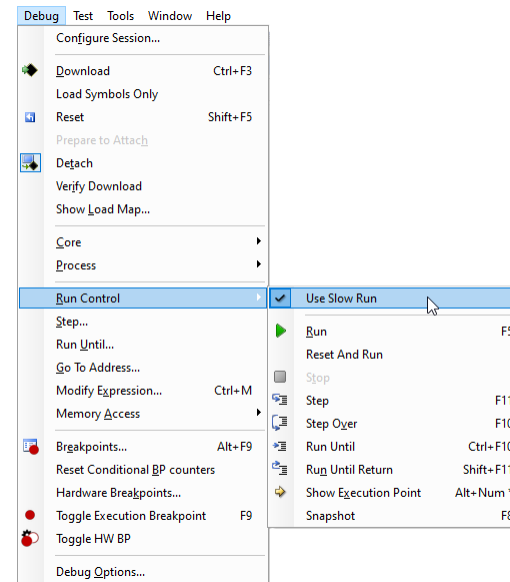
04 What if my CPU does not support Trace?

Some CPUs do not have any trace capabilities. For such cases iSYSTEM offers different alternative solutions:

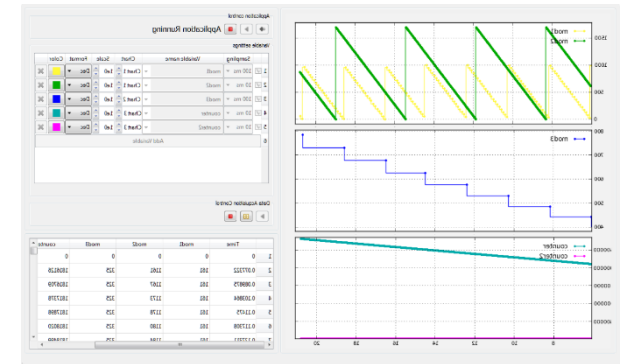
1. **Emulation Adapter** providing a missing trace interface port.
2. **Slow Run** steps through the application and constantly logs a program counter. Code coverage is also available with this method.
3. **daqIDEA** is an alternative for data trace. It uses real-time read access to snoop the data changes in the memory.



Emulation Adapter



Slow Run



daqIDEA



Further Reading

For more information refer to our online resources:

Hardware Solutions:

- On-Chip Analyzer BlueBox [iC5700](#)
- [Debug Adapters](#)
- [Active Probes](#)
- [Emulation Adapters](#)

winIDEA Online Help:

- Trace Port PCB [Design Guidelines](#)
- [Licensing](#)

[Knowledge Base](#)