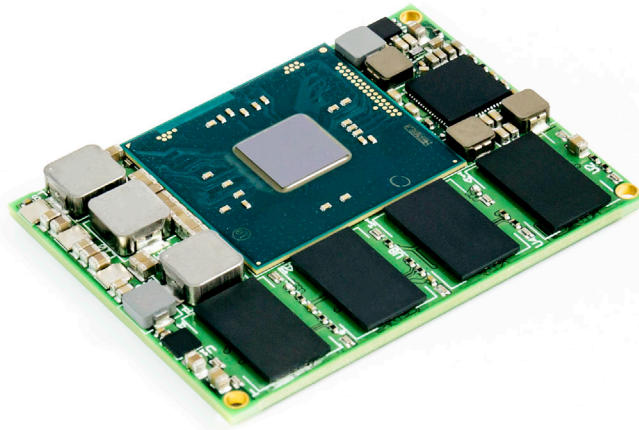


# Intel Braswell MicroSoM™

## System-on-Module



### *World's Smallest Intel Braswell-based SoM*

Embedding Intel's SoC in your system has never been so easy... or so profitable. Why? Because SolidRun's MicroSoM™ gives you the unprecedented computing power of Intel's Braswell family of 14 nm Celeron® and Pentium® SoCs, but without the complexity.

No more browsing through hundreds of Intel-supplied PDF files for the data you need – we've done all the hard work, and give you all the flexibility:

**No power design headaches** – No more complex power conversions and sequencing. SolidRun's MicroSoM™ connects to the input power supply, and supplies your carrier board with five output power lines.

**Small footprint** – Our tiny, 53mm×40mm module provides you with optimal design flexibility. Now you can design your system in any shape, any size.

**Complete system on a module** – Our MicroSoM™ gives you everything you need for heavy-duty IoT apps, including video analytics.

**Unified development platform** – Develop, test, and deploy on the same x86 and GPU architecture. Simple and efficient.

- » Leverage Intel's Braswell 14nm SoC for reduced power consumption.
- » High reliability for mission-critical applications – Medical, Industrial, Drones, Point of Sale and more.
- » Price / Performance flexibility – scale memory size from 1 GB to 8 GB.
- » 1 Page PC - Carrier schematics on a single A3 page
- » Onboard eMMC.

**Need to reduce development time further?** Just attach our deployment-ready SolidPC Q4 carrier board, and you have a complete, application-ready hardware platform (or just take advantage of our field-proven reference design).

	MicroSoM™ IB8000	MicroSoM™ IB3710
System On Chip	Atom E8000	Pentium N3710
Processor cores	4	4
Memory (RAM)	Options: 1 GB / 2 GB / 4 GB / 8 GB	8 GB
CPU HFM Clock (GHz)	1.04, Burst 2.00	1.60, Burst 2.56
Graphic GPU	Intel Gen8 LP - 12EU	Intel Gen8 LP - 16EU
GPU HFM Clock (MHz)	320, Turbo Clock 600	400, Turbo Clock 700
Max Resolution (DP 1.1a, HDMI 1.4b)	3840×2160 @30 Hz, 2560×1600 @60; 24 bpp. eDP 1.4 Max 2560×1600 @60; 24bpp	3840×2160 @30 Hz, 2560×1600 @60; 24 bpp. eDP 1.4 Max 2560×1600 @60; 24 bpp
Junction temp. range	0°C-90°C	0°C-90°C
<b>Mechanical</b>		
Dimensions	52.8×40mm	
Max. height from carrier	6.1mm to 8.6mm (depending on DF40 1.5-4.0 mm mating height on carrier board)	
Mechanical fastening	3×M1.8 mechanical holes	
<b>Main Features</b>		
DDR-3L	Onboard one channel (1GByte version) and dual channel (all other) DDR3L 1600Mbps , up to 8GByte total	
Network	Onboard 10/100/1000 Mbps (RTL8111G)	
SPI flash (for BIOS)	Onboard 64 Mbit - externally programmable via 8 pin header	
eMMC	Optional - from 4 GB to 128 GB	
<b>Power</b>		
PMIC	Onboard - battery powered optimized	
Vin (Vsys)	Single 7v to 21v	
Voltages out for carrier	MicroSoM™ provides voltage for carrier - V5S (2.8A), V3P3S (2.1A), V3P3A (2.8A), V1P8A (1.75A), V1P8S (1.05A)	
<b>MicroSoM™ to Carrier Connectivity</b>		
Board to board connectivity	3×80 pin Hirose DF40 (1.5mm to 4mm mating)	
<b>High Speed Connectivity</b>		
Display	4K30 DisplayPort / HDMI and 4K30 DisplayPort / embedded DisplayPort	
Camera	Via Flex cable - One 4 lane MIPI CSI-2 and one 2 lane MIPI CSI-2	
USB 3.0	×4 (one of them OTG)	
PCIe Gen 2.0 1 lane	×3	
SATA 6 Gbps gen iii	×2	
<b>Low Speed Connectivity</b>		
Full UART	×2	
I2C	×1	
HD Audio	On carrier board	
MCU: STM32F042K4U6	On board - 5 generic input/output, 1×HDMI CEC, and 1×IR input Connected by internal USB to main processor Reset and boot signals of MCU are processor-controlled to ease development	
SD interface	4 data pins with programmable 3.3v / 1.8v voltage rail	
PMU	2 wakeup signals and other power management indications	
RTC Battery	RTC switchover on MicroSoM, 3.3v battery on carrier	
GPIOs	Multiplexed with multiple functions, including: UART, I2C, SATA DevSlp, PCIE CLKREQ, SDI	

All data is for information purposes only and not guaranteed for legal purposes. Subject to change without notice. Information in this brochure has been carefully checked and is believed to be accurate; however, no responsibility is assumed for inaccuracies. All brand or product names are trademarks or registered trademarks of their respective owners.