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Elektronik Systeme

EMBEDDED BOARDS

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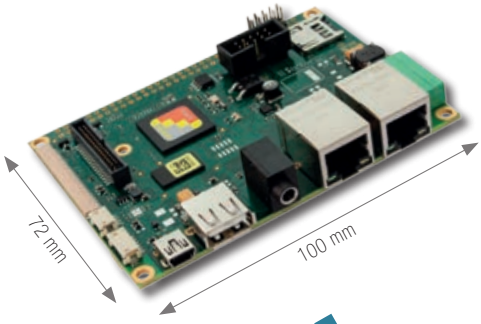
SINGLE BOARD COMPUTER (SBC)

F&S Elektronick Systeme GmbH is a German company which is specialized in Embedded Boards with WindowsCE and Linux. The ARM – based embedded modules from F&S are available as computer-on-module-boards in different form factors as well as single-board computers in the form factor of PicoITX. The boards enable to connect simple and cost-optimized displays from QVGA up to FullHD. Aa minimum availability of 10 years can be guaranteed by the used Freescale CPUs (Cortex-A5/-A7/-A9) from market launch.

Also F&S has their own assembly production, produced with modern production facilities in Stuttgart, Germany. Furthermore, many years of experience in the Embedded Market result in innovative and up to date customer solutions, completed by an extensive soft- and hardware support.



PARAMETERS		armStoneA5	armStoneA9	armStoneA9r2
SINGLE BOARD COMPUTER (SBC)				NEW With WLAN & Bluetooth
Processing power		++	++++	++++
CPU	**Typ**	Freescale Vybrid	Freescale i.MX 6	Freescale i.MX 6
	No. of cores	Single / Dual-Core	Solo / Dual / Quad-Core	Single / DualLite / QuadPlus
	Cores	ARM Cortex-A5 & -M4 (max. 500 & 167 MHz)	ARM Cortex-A9 (max. 1.2 GHz)	ARM Cortex-A9 (max. 1 GHz)
GPU		NEON	3D, 2D, Open VG, Open GL	3D, 2D, Open VG, Open GL
Windows / Linux		WCE 6.0, WEC 7, WEC 2013 / Linux	WEC 7, WEC 2013 / Linux	WEC 2013 / Linux
Flash (max)		1 GB*	1 GB*	1 GB SLC + 32 GB eMMC*
RAM (max)		512 MB	4 GB	4 GB
µSD Card		1x on-board	1x on-board	1x on-board
Ethernet		2 x 10 / 100 Mb	1x 10 / 100 / 1000 Mb	1x 10 / 100 / 1000 Mb
USB Host / Device		1-2x / 1x	4x / 1x	4x / 1x
CAN / UART		1-2x / 3x	1x / 3x	2x / 5x
I²C / SPI		1-2x / 1x	1x / 1x	1x / 2x
Audio		Line In / Out / Mic	Line In / Out / Mic	Line In / Out / Mic
Touch Panel		4-wire analog resistive PCAP-Touch via I²C	4-wire analog resistive PCAP-Touch via I²C	4-wire analog resistive PCAP-Touch via I²C
SATA / PCIe			1x / 1x	1x / 1x
RGB / LVDS		18 bit / 18 bit	18 bit / 2x 18/24 bit	- / 2x 18/24 bit
Temperature range		0 °C ... +70 °C [-25 °C ... +85 °C]*	0°C ... +70°C [-25°C ... +85°C]*	0°C ... +70°C [-25°C ... +85°C]*
Specials				Camera digital, WLAN, Bluetooth
Minimal availability		2023	2029	2029

* Optional expandable

Reserve technical changes!

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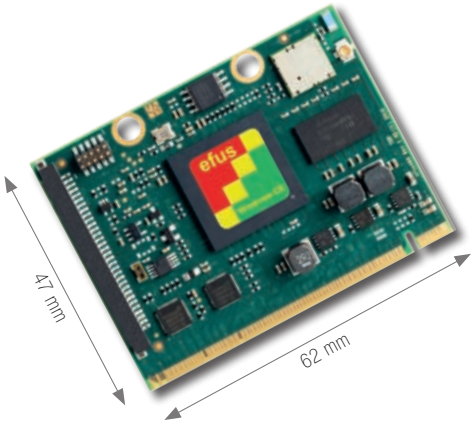
COMPUTER ON MODULE (COM)-BOARDS



Short description of efus (CoM-Board)

- Single Voltage 5 V
- RGB / LVDS
- MXM2 Goldfinger Connector, 230 Pins, 0,5 mm
- Camera, PCIe, SATA
- WLAN, Bluetooth

NEW With WLAN & Bluetooth

COMPUTER ON MODULE (COM)-BOARDS		PARAMETERS	efusA9	efusA9X	efusA7UL
Processing power			++++	+++	+
CPU	**Typ**		Freescale i.MX 6	Freescale i.MX 6	Freescale i.MX 6
	No. of cores		Solo/DualLite/Quad-Core	SoloX	UltraLite
	Cores		ARM Cortex-A9 (max. 1.2 GHz)	ARM Cortex-A9 & -M4 (max. 1 GHz / 200 MHz)	ARM Cortex-A7 (max. 528 MHz)
GPU			3D, 2D, Open VG, Open GL	Neon, FPU, Open GL / ES	Neon Security
Windows / Linux			WEC 7, WEC 2013 / Linux	WEC 2013 / Linux	WEC 2013 / Linux
Flash (max)			1 GB + 32 GB eMMC*	1 GB + 32 GB eMMC*	1 GB + 32 GB eMMC*
RAM (max)			2 GB	2 GB	1 GB
µSD Card			2x external	2x external	2x external
Ethernet			1x 10 / 100 / 1000 Mb	2x 10 / 100 / 1000 Mb	2x 10 / 100 Mb
USB Host / Device			1x / 1x	1x / 1x	1x / 1x
CAN / UART			2x / 4x	2x / 4x	2x / 4x
I²C / SPI			2x / 2x	2x / 2x	2x / 2x
Audio			I²S	I²S	I²S
Touch Panel			external via I²C	external via I²C	external via I²C
SATA / PCIe			1x / 1x	- / 1x	
RGB / LVDS			18 bit / 2x 24 bit	18 bit / 24 bit	18 bit / -
Temperature range			0°C ... +70°C [-20°C ... +85°C]*	0°C ... +70°C [-20°C ... +85°C]*	0°C ... +70°C [-20°C ... +85°C]*
Specials			Camera digital	Camera analog/dig., WLAN, Bluetooth	WLAN, Bluetooth
Minimal availability			2027	2025	2030

* Optional expandable

Reserve technical changes!

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Nagold (Headquarters)

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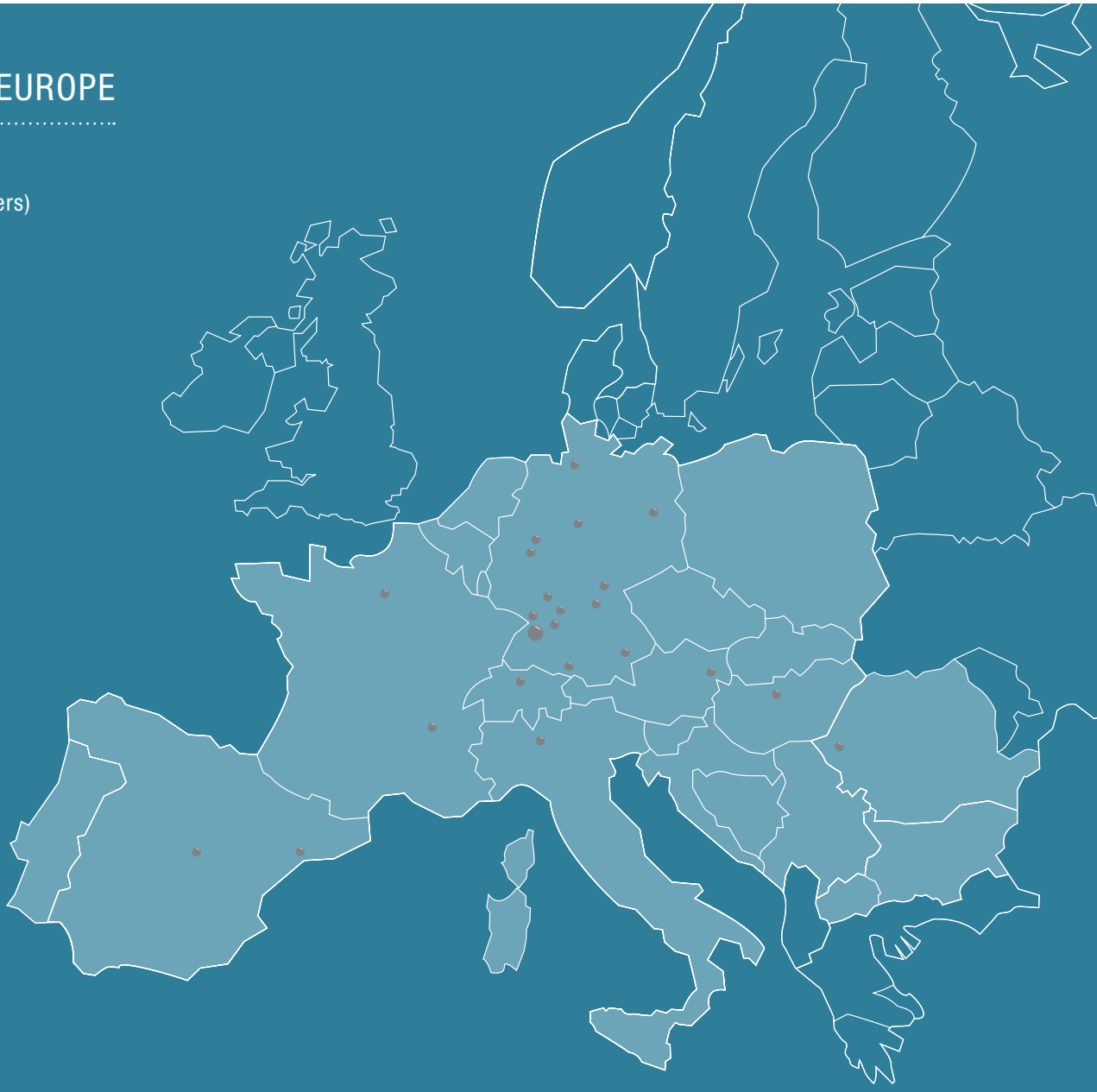

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