



Product Information

USB 2.0 Host Controller PMC Module • DB1-FALCON

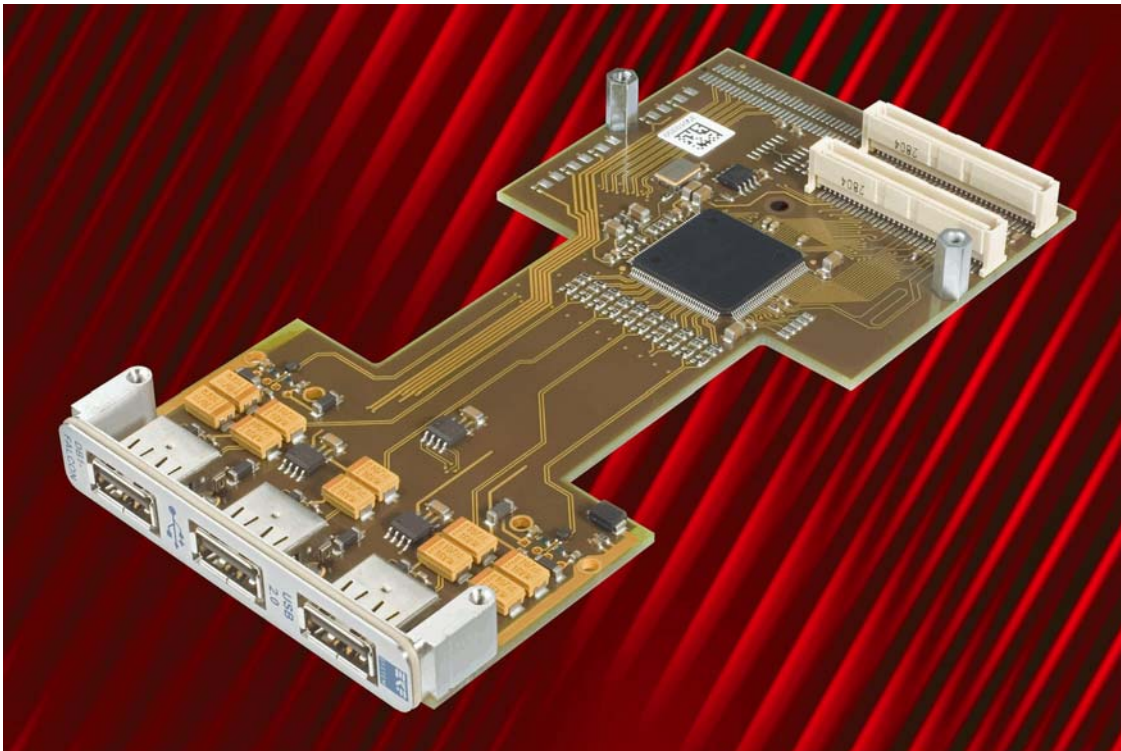
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The **DB1-FALCON** is a 5-port USB2.0 host controller. The PMC mezzanine board complies with the Universal Serial Bus Specification Revision 2.0 and Open Host Controller Interface (OHCI) Specification for full-/low-speed signalling and the Intel Enhanced Host Controller Interface (EHCI) Specification for high-speed data transfers. All downstream facing ports can handle high-speed (480Mbps), full-speed (12Mbps), and low-speed (1.5Mbps) transaction.

All USB power lines are protected against over-current and short circuit conditions. Three of five USB ports are accessible from the PMC front bezel.

As an option, another two USB connectors are situated on-board for system internal usage.

Also as an option, the DB1-FALCON can be configured for rear I/O across the P4 connector.



DB1-1-FALCON

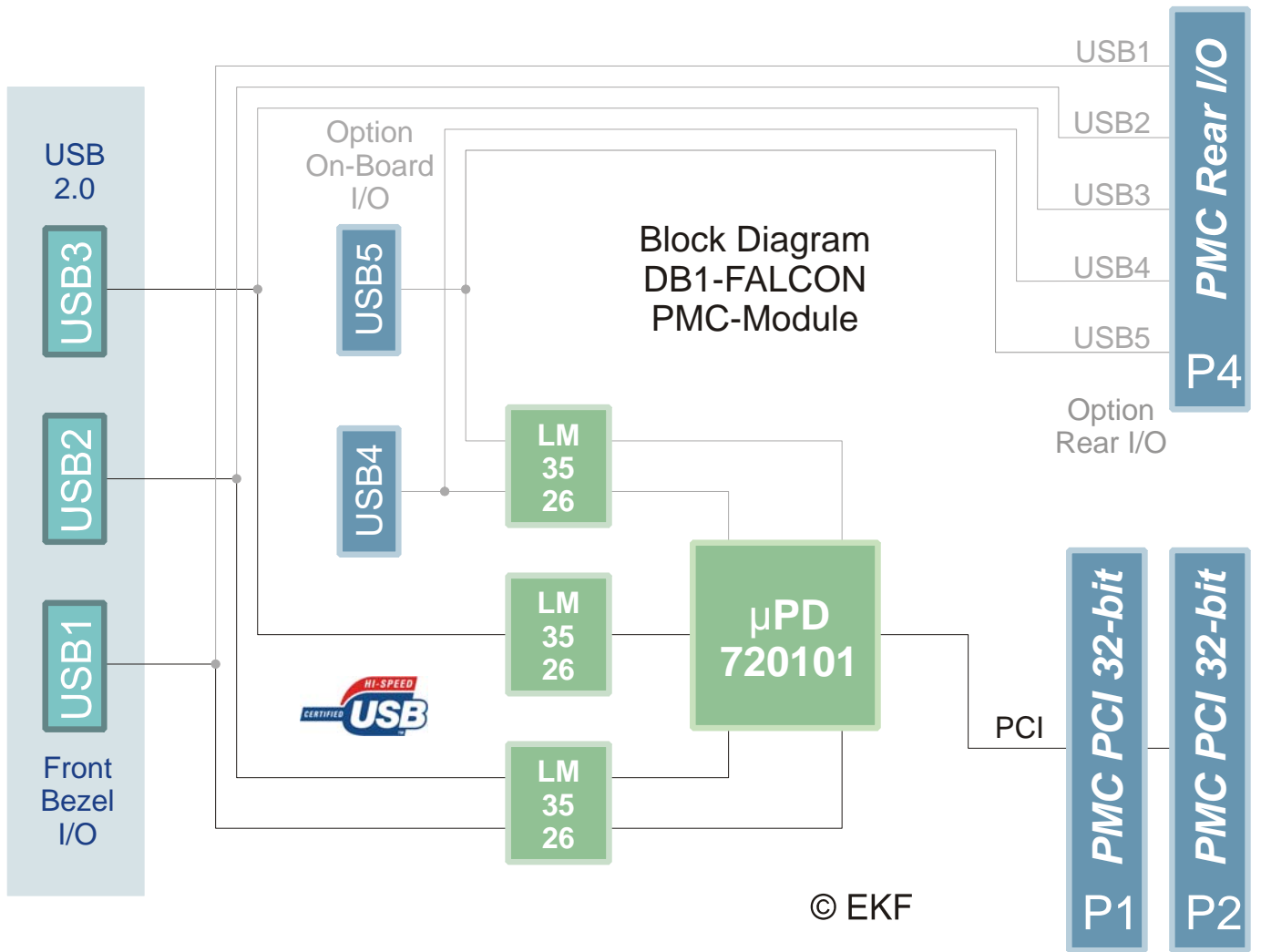
Feature Summary DB1-FALCON

Form Factor	PMC Mezzanine Card 149.0 x 74.0mm Single Size CMC Envelope IEEE P1386.1
USB	Root hub with 5 downstream facing ports, all ports over-current protected, data transfer rate up to 480Mbps, conforming to USB2.0, OHCI Rev. 1.0a, EHCI Rev. 1.0 <ul style="list-style-type: none"> • USB ports 1-3 wired to front bezel type A connectors • USB ports 4-5 wired to on-board type A connectors ¹ (option) • USB ports 1-5 optionally wired to P4 for rear I/O usage (option)
PCI Interface	32-bit, 33/66MHz, P1386 PMC connectors P1/P2
Typical Power Consumption	<ul style="list-style-type: none"> • +3.3V +0.17V/-0.1V 0.4A max. • +5V ± 5% 0.1A max. (w/o external devices) • +Vio 3.3V/5V 0.1A max.
Thermal Conditions	<ul style="list-style-type: none"> • Operating temperature: 0°C ... +70°C • Storage temperature: -20°C ... +85°C
Environmental Conditions	<ul style="list-style-type: none"> • Humidity 5% ... 95% non condensing • Altitude -300m ... +3000m
Shock	15g 0.33ms, 6g 6ms
Vibration	1g 5-2000Hz
MTBF	0.333 * 10 ⁶ h

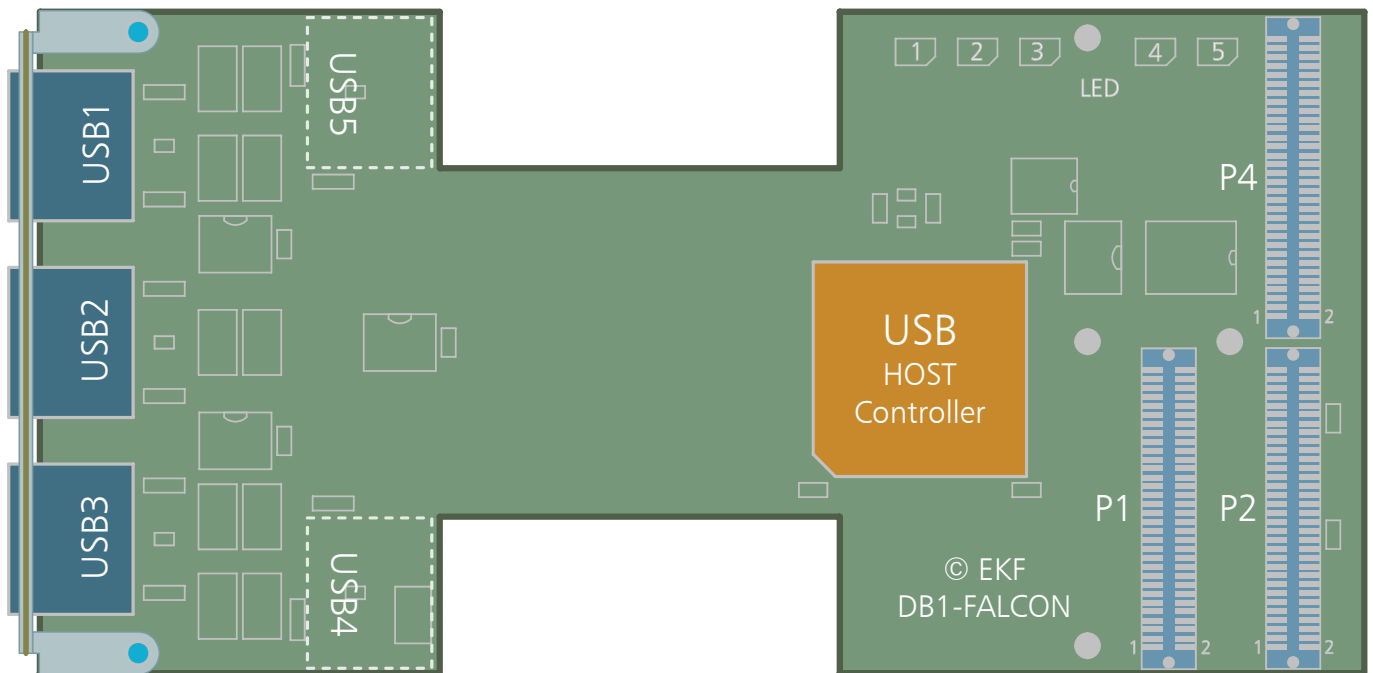
¹ internal connectors are bottom mounted; please ensure that there is enough space available to the neighbored slot in your system (~7mm required in addition for the USB4/USB5 receptacles)

features are subject to change

Block Diagram DB1-FALCON



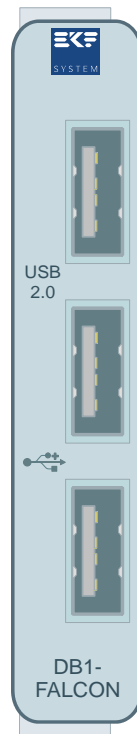
Orientation of Connectors DB1-FALCON



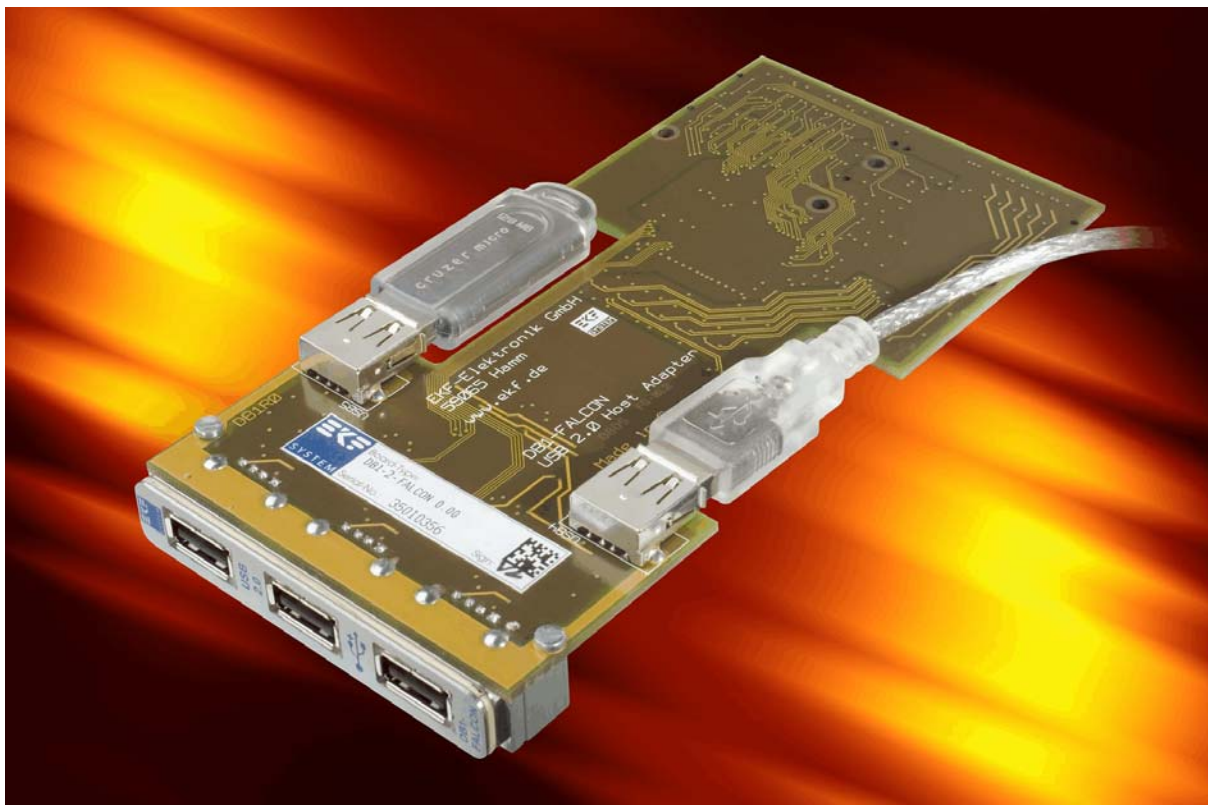
The optional on-board connectors USB4/USB5 are mounted on the bottom side of the PCB. Hence, before ordering the DB1-2-FALCON, you must ensure that there is enough space available to the neighbored slot right to the PMC carrier board in your system (~7mm height required in addition for the USB4/USB5 receptacles).

The DB1-FALCON module has a cutout beneath each connector USB4/USB5 in order to simplify system internal wiring.

Front Panel I/O Functions DB1-FALCON

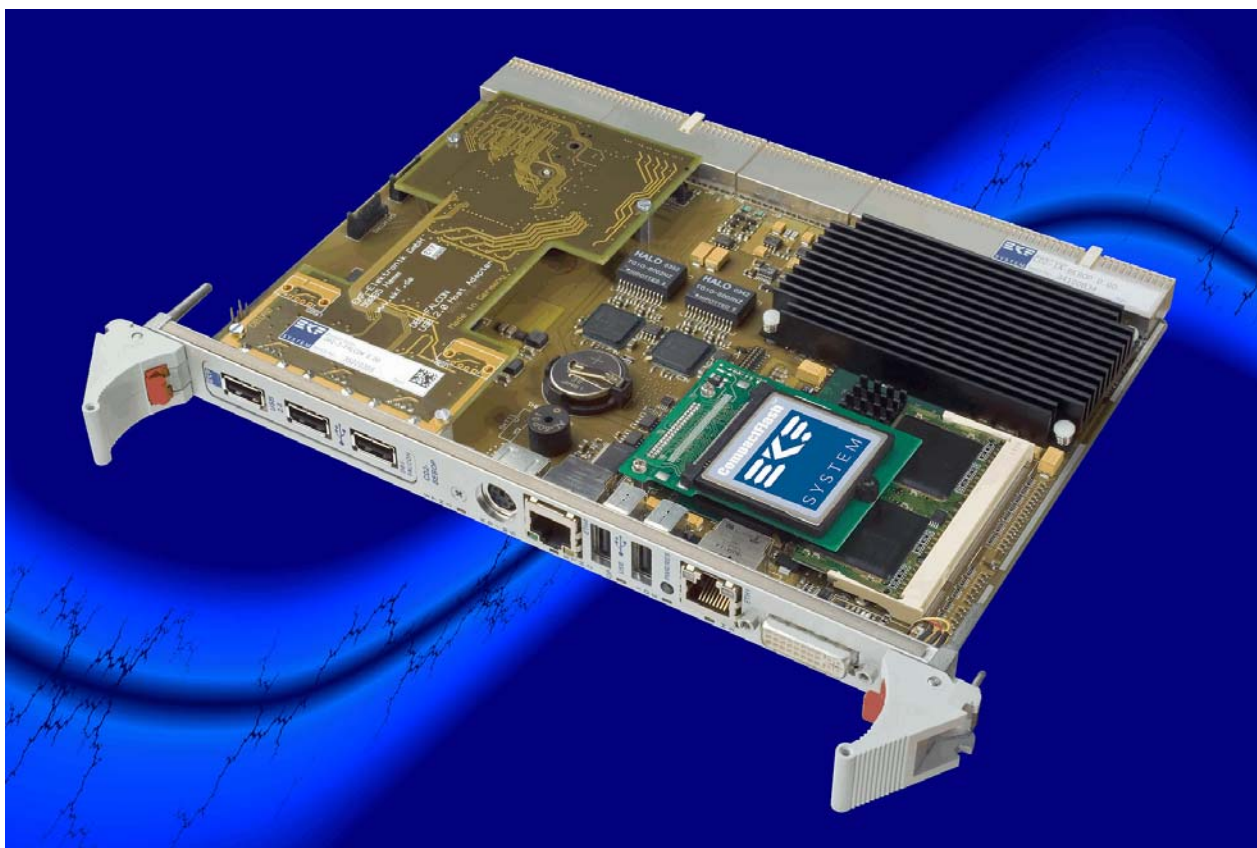


Front Bezel
DB1-FALCON



DB1-2-FALCON

Ordering Information		
Alias	Ordering No.	Short Description
FALCON	DB1-1-FALCON	PMC USB2.0 host controller EHCI/OHCI, three front bezel USB connectors for external usage
FALCON	DB1-2-FALCON	PMC USB2.0 host controller EHCI/OHCI, three front bezel USB connectors for external usage, two on-board USB connectors for internal usage. Please note: Internal connectors are bottom mounted; please ensure that there is enough space available to the neighbored slot in your system before ordering (~7mm required in addition for the USB4/USB5 receptacles)
FALCON	DB1-3-FALCON	PMC USB2.0 host controller EHCI/OHCI, five rear I/O USB channels routed to P4, no front bezel USB connectors



DB1-FALCON on a CPU Carrier Board

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