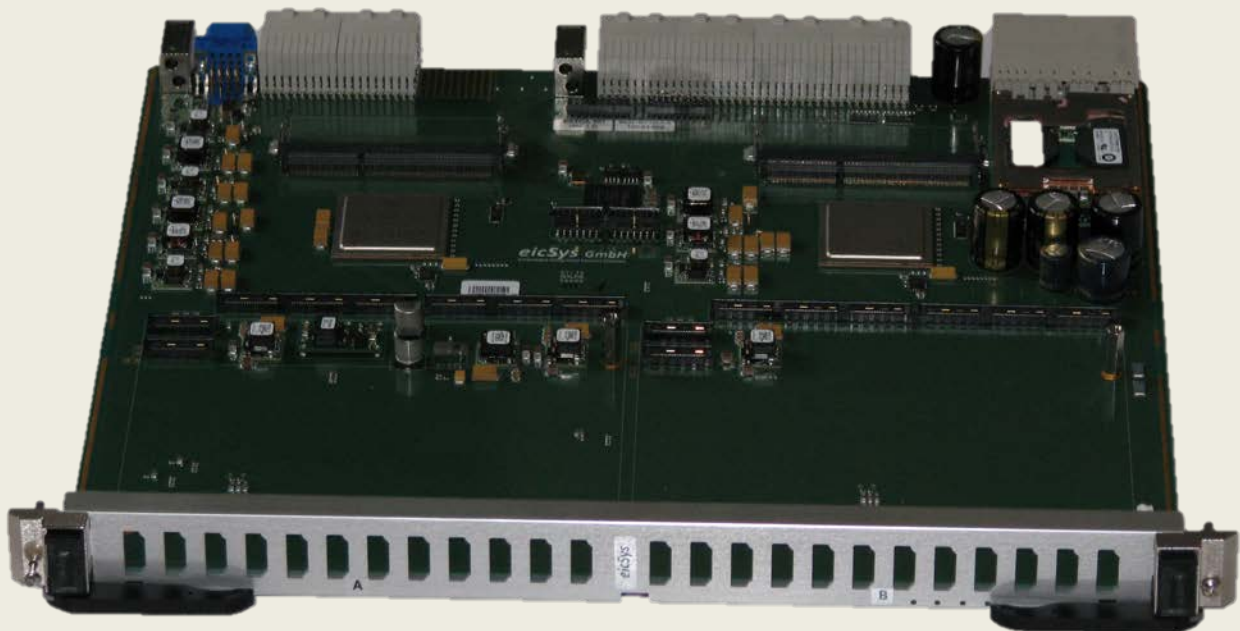


## EATCA-101 Carrier Blade

### General Description

The EATCA-101 board is an universal carrier for custom mezzanine modules implemented in ATCA standard. The blade has been designed to optimize the flow of data between mezzanines, processing units (2 x Virtex 6 FPGA), memory devices (DDR3 SODIMM), the backplane and rear transition modules (RTMs) for a fast, low latency, real time processing. The primary application of the blade is trigger and data acquisition system for a large scale detectors. The blade provide a high bandwidth, full mesh connectivity for exchanging data between boards in the ATCA crate. For these reasons it can also be used for efficient implementation of control systems - both real time and slow. When supported by ATCA Concentrator Unit it provides huge computation power for digital signal processing. To provide stable, clean clock signals a configurable clock distribution with jitter attenuators is implemented.

Photo: EATCA-101



*Specification subject to change without notice*

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Description	
<b>Dimensions</b>	288mm x 322mm compliant to PICMG3.x ATCA Specification
<b>Blade Interfaces</b>	
FRON PANEL	USB interface for board programing, diagnostic
ZONE 1	Power – 80W + up 120W for mezzanine modules Base interface
ZONE 2	Full-mesh connectivity P20: clock and trigger signal inputs 4 x GTX
ZONE 3	14 x GTX, CLK IN
Mezzanine	2 slots for mezzanine, 12V, 60W each
<b>Chipset</b>	2 x Virtex6 LX240T FPGA
<b>Memory</b>	2 x SODIMM DDR2 memory up to 4GB
<b>Mezzanine Interface</b>	5 banks of data to FPGA: <ul style="list-style-type: none"> <li>• 8 x LVDS data lines up to 1GHz DDR</li> <li>• 2 x LVDS clock capable pins</li> </ul> 8 x GTX 1 x clock from the blade (clock distribution) 16 x single CMOS lines Power management and board configuration
<b>Software Support</b>	firmware upgrade through Ethernet or RTM
<b>Environmental</b>	Operation: Temperature Range: –40°C to +85°C Storage: Temperature Range: –40°C to +90°C Humidity: 5-90%, non-condensing
<b>Ordering Information</b>	EATCA-101

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Developed by: **eicSys Hamburg**

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