

# TAMC641 High Performance Virtex-5 AMC with FMC Slot

### Application Information

The TAMC641 is a standard single Mid-Size/Full-Size AMC module providing different types of user configurable Virtex-5 FPGA.

For flexible I/O solutions the TAMC641 provides a VITA 57 high pin count FMC Module slot, allowing active and passive signal conditioning.

All FMC I/O lines are directly connected to the FPGA-pins, which maintains the flexibility of the Select I/O technology of the Virtex-5 FPGA.

In addition, the FPGA is connected to the following external memories:

- two banks of DDR2 SDRAM (up to 128 M x 32 (512 MB) each)

- two banks of QDR-II SRAM (up to 4 M x 18 (8 MB) each)

The FPGA is configured by a flash device. The flash device is in-system programmable. An in-circuit debugging option is available via a JTAG header for readback and real-time debugging of the FPGA design (using Xilinx "ChipScope").

Multiple clocks are supplied to the FPGA.

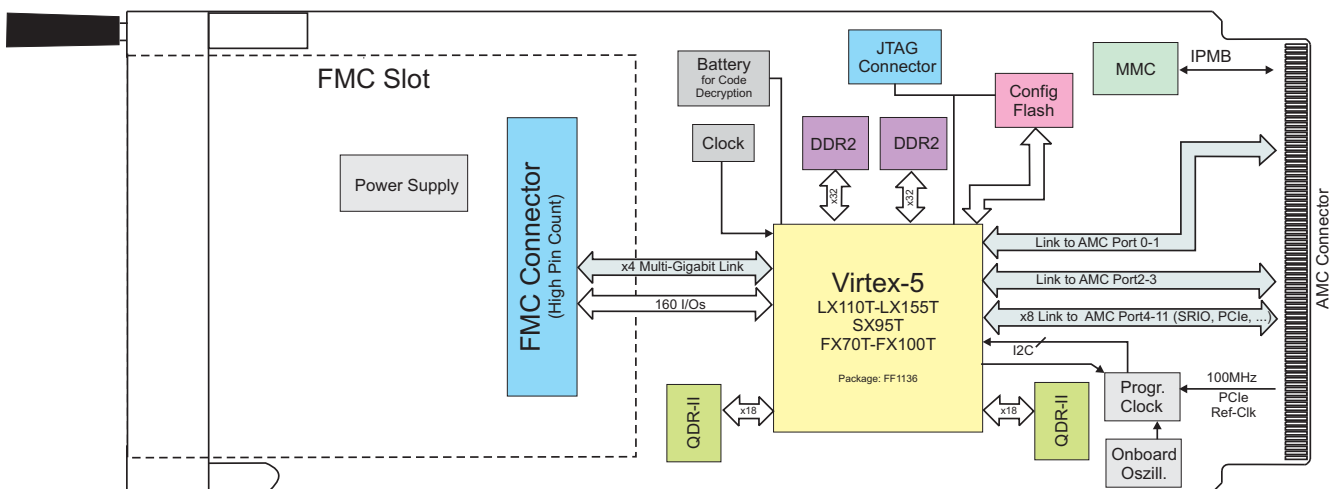
The IPMI Connectivity Records located inside the MMC (Module Management Controller) can be modified by the customer, to adapt to the different possible communication protocols (PCIe, SRIO, XAUI, ...).

User applications for the TAMC641 require the full ISE Foundation software, which must be purchased from Xilinx.

For First-Time-Buyers the engineering documentation TAMC641-ED is recommended.

### Technical Information

- Form Factor: PICMG AMC.0 R2.0 Module
  - Board size: single Mid-Size/Full-Size AMC
- Virtex-5 FPGA
  - XC5VLX110T or XC5VLX155T
  - XC5VSX95T
  - XC5VFX70T or XC5VFX100T
- 2 x QDR-II SRAM bank, 1M x18 (2 MB) each
- 2 x DDR2 SDRAM bank, 64 M x32 (256 MB) each
- IPMI V1.5 support
- Front panel LEDs:
  - Blue Hot Swap LED
  - Red FAIL LED (LED1)
  - Green USER / Power Good LED (LED2)
- FMC Slot (high pin count)
  - 160 single ended I/Os or 80 differential
  - x4 Multi-Gigabit Link to FMC
- Operating temperature 0°C to +70°C
- MTBF (MIL-HDBK217F/FN2 G<sub>B</sub> 20°C)  
TAMC641-xx: tbd h



**Order Information****RoHS Compliant**

<b>TAMC641-10R</b>	LX110T-1, 512 MB DDR2, 4 MB QDR-II, Mid-Size front panel, RoHS compliant
<b>TAMC641-11R</b>	same as TAMC641-10R but Full-Size Front Panel
<b>TAMC641-12R</b>	LX155T-1, 512 MB DDR2, 4 MB QDR-II, Mid-Size front panel, RoHS compliant
<b>TAMC641-13R</b>	same as TAMC641-12R but Full-Size Front Panel
<b>TAMC641-14R</b>	SX95T-1, 512 MB DDR2, 4 MB QDR-II, Mid-Size front panel, RoHS compliant
<b>TAMC641-15R</b>	same as TAMC641-14R but Full-Size Front Panel
<b>TAMC641-16R</b>	FX70T-1, 512 MB DDR2, 4 MB QDR-II, Mid-Size front panel, RoHS compliant
<b>TAMC641-17R</b>	same as TAMC641-16R but Full-Size Front Panel
<b>TAMC641-18R</b>	FX100T-1, 512 MB DDR2, 4 MB QDR-II, Mid-Size front panel, RoHS compliant
<b>TAMC641-19R</b>	same as TAMC641-18R but Full-Size Front Panel

**Optional available on request:**

- Operating temperature -40°C to +85°C
- Faster FPGA speed grades
- 1 GB DDR2 (2 banks 128 M x 32)
- 8 MB QDR-II (2 banks of 2 M x 18) or 16 MB QDR-II (2 banks of 4 M x 18)

**Documentation**

<b>TAMC641-DOC</b>	User Manual
<b>TAMC641-ED</b>	Engineering documentation