



**ALPHA DATA**

# Alpha Data Introduction

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**[www.alpha-data.com](http://www.alpha-data.com)**



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## Alpha Data 2008

- ❑ High Performance Xilinx FPGA based boards
- ❑ Founded in 1993
  
- Head Office, Edinburgh, UK
- US Subsidiary, Alpha Data Inc, San Jose, CA
- Washington DC, Field Office





## Markets/Applications

### **Mil/Aero**

- Radar
- Sonar
- Satellite Modem
- SDR

### **Broadcast**

- Compression

### **HPC**

- Financial Modelling
- Oil/Gas EM Simulation

### **Medical/Bioinformatics**

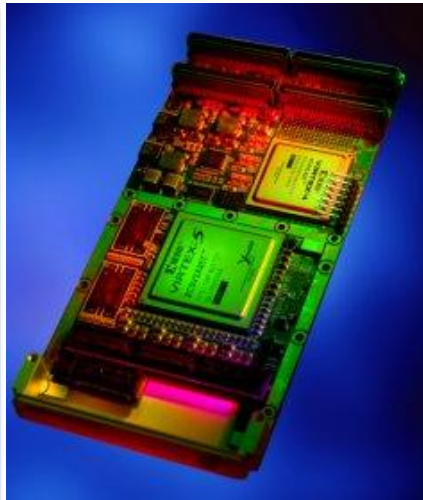
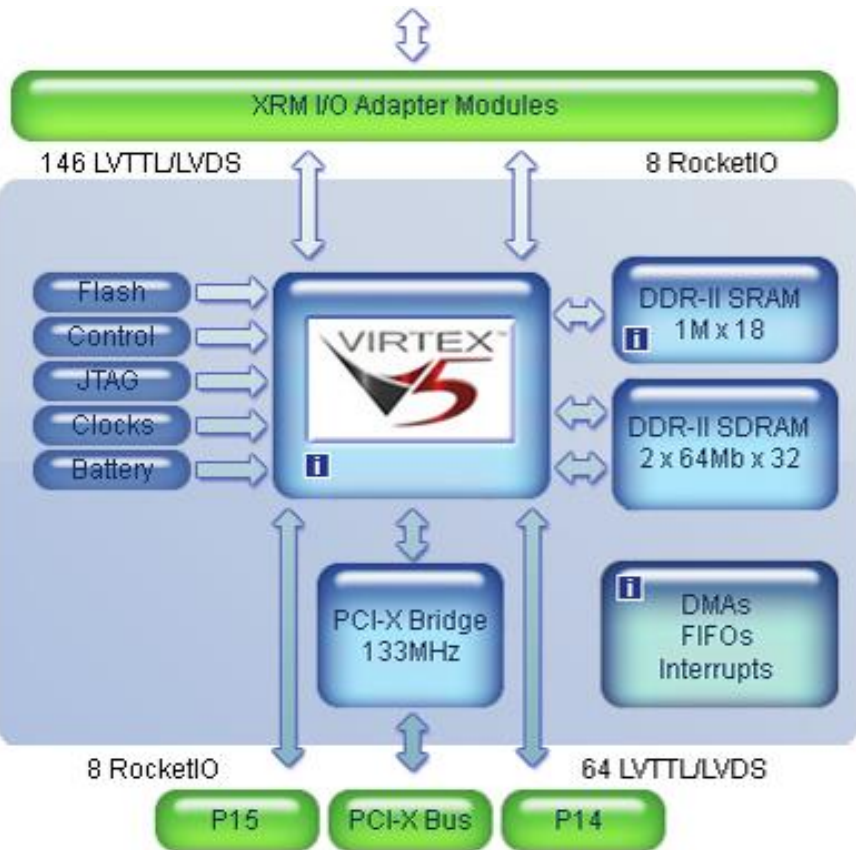
- MRI Scanner
- Genome Sequencing
- Medical Imaging

### **Telecoms**

- Encryption

### **Security**

- Fingerprint Recognition
- Luggage Scanner



## Virtex5 FPGA FF1136

- LX110T
- LX155T
- SX95T
- FX70T
- FX100T

## Memory

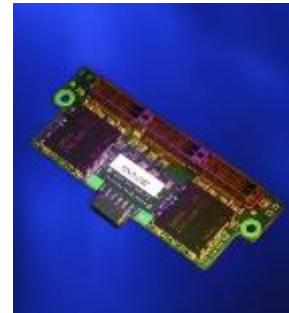
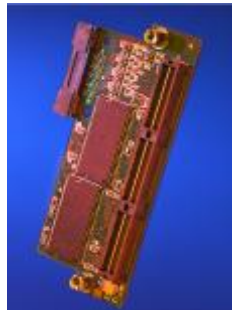
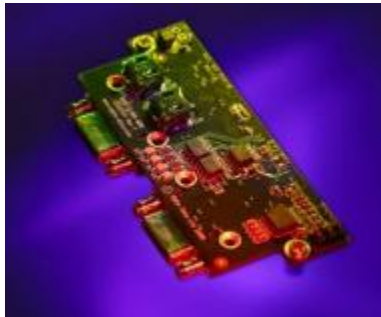
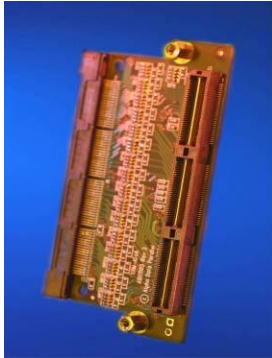
- DDR2 DRAM
- DDRII SRAM
- Flash

## Rocket I/O

- **x8 XMC lanes**
- **x8 Front lanes**



## XRM – Digital I/O

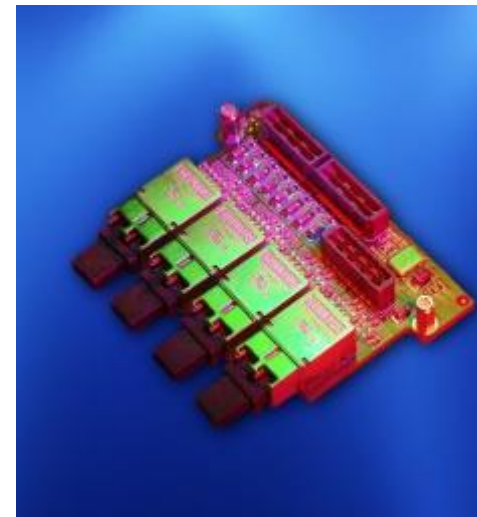
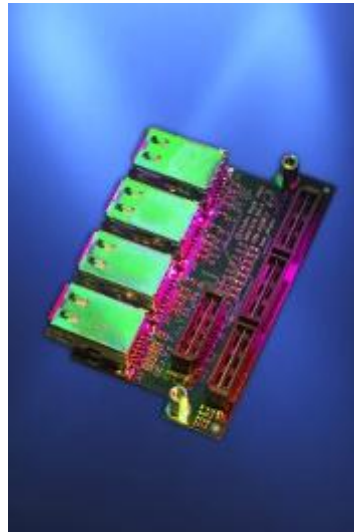
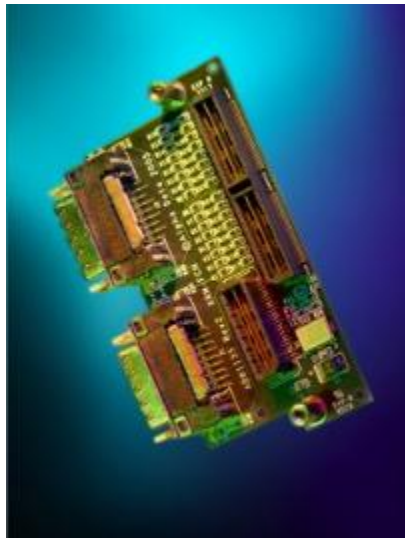


<b>XRM</b>	<b>First Delivery</b>	<b>Description</b>	<b>I/O Count</b>
XRM-IO146	2001	User Defined I/O: Mictor 152 pin	146
XRM-IO34	2001	User Defined I/O: SCSI-2 68 pin	34
XRM-FPDP	2004	VITA17: Front Panel Data Port 80 pin	42
XRM-RS485	2008	RS485: 50 pin D-Sub Connector, selectable direction / termination	40
XRM-CAMERALINK	2004	AIA Cameralink: MDR-26 (base)	24
XRM-MINI-CLINK	2006	AIA Cameralink: 2 x MDR-26 mini (dual base, medium or full)	24
XRM-DDR	2002	Memory: 1 bank x 64 DDR, User Defined I/O: Mictor 38 pin	34
XRM-ZBT	2003	Memory: 2 banks x 36 ZBT, RS232	2
XRM-ETH	2004	10/100 ETH, User Defined I/O: Mictor 38 pin, RS232	38



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# XRM Gigabit Interfaces

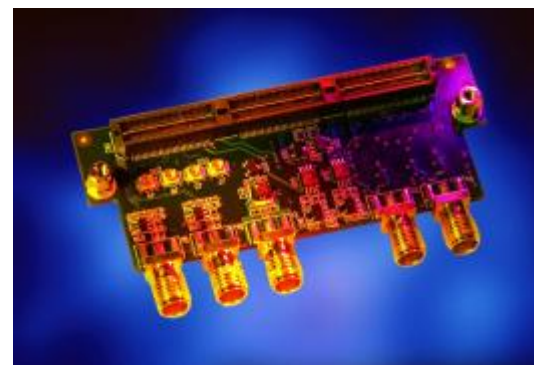
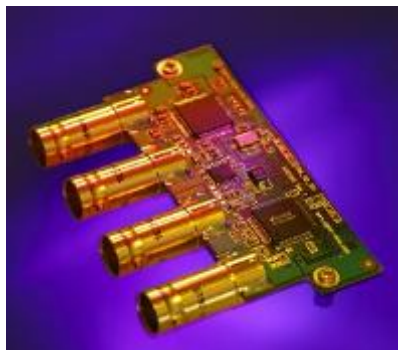
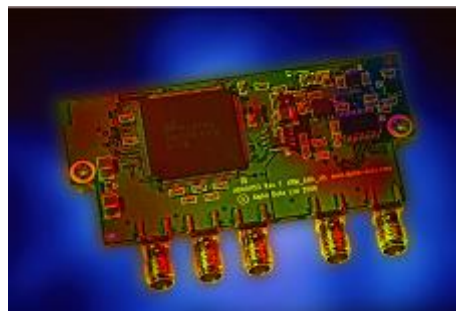
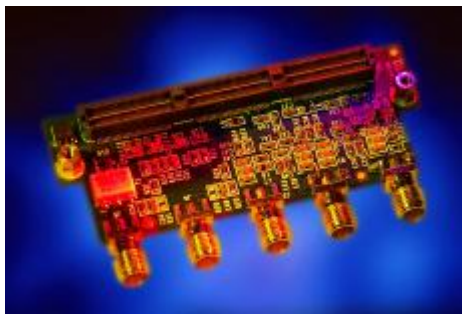


<i>XRM</i>	<i>First Delivery</i>	<i>Description</i>	<i>I/O Count</i>
XRM-IO146 ROCKET	2004	User Defined I/O: Mictor 152 pin, with gigabit serial	120 + 7 (full duplex)
XRM-FCN	2005	Gigabit Serial Interface: 2 x FCN	8 (full duplex)
XRM-FCN-C1	2008	Gigabit Serial Interface: 2 x FCN, 2 x JPEG2000 150MHz	8 (full duplex)
XRM-HSSDC2A	2007	Gigabit Serial Interface: 4x HSSDC2, Oscillator	4 (full duplex)
XRM-OPT	2005	Gigabit Serial Interface: 4 x Duplex 2.5Gbps Optical Tranceivers	4 (full duplex)



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# XRM Analog / Video



<b>XRM</b>	<b>First Delivery</b>	<b>Description</b>	<b>I/O Count</b>
XRM-ADC-D2/125	2007	Analog: 2 x 14 bit ADC 125MHz	2
XRM-ADC-D3/1G5	2008	Analog: 2 x 8 bit ADC 1500MHz	2
XRM-ADC-S4/3G	2008	Analog: 1 x 8 bit ADC 3000MHz	1
XRM-VIDEO-IO	2005	S-Video In, SVGA Out	2
XRM-HD-SDI	2006	Coax Video: HD-SDI In, HD-SDI Out (Differential)	2
XRM-DAC-D3/275	2007	Analog: 2 x 14 bit DAC Channels, 100MHz TI5672	2



## Company Advantages

- ❑ Xilinx Partnership
  - Get newest, fastest, biggest FPGA
- ❑ Small Company
  - Custom design services – IP, I/O Modules
  - High level of support
- ❑ Product Architecture
  - PCI Bridge device – Re-Configurable Target, resource savings, ease of design
  - XRM – Re-Configurable I/O
  - Flexible Solutions
- ❑ Value Added to products
  - Comprehensive SDK
  - Example Applications
  - Quality control – full test of every product
  - Build to Order