

AccelArray™ Specifications

Base master options

The base master, which is the core of the platform, will be available with two I/O speeds: the 400Mbps Megaframe and the 622Mbps to 3.125Gbps Gigaframe. Gigaframe products are scheduled to be available in the first quarter of 2004.

Megaframe options

Frame name	M10	M20	M30	M40	M50	
I/O cell count	472	696	824	952	1176	
FF cell count	20k	50k	70k	93k	150k	
Usable gate count	256k	639k	895k	1194k	1918k	
ASIC-equivalent gate count	455k	1139k	1594k	2126k	3416k	
SRAM capacity (bits)	2RW SRAM	800k	1680k	2240k	4400k	
	1R/1W SRAM	60k	90k	150k	150k	
	Max total	860k	1770k	2345k	3000k	4550k
PLL macro count	8	8	8	8	8	
Max power consumption (W) (f=333 MHz; V=1.3 v; Tj=125°C)	2	5	7	9	14	
Packaging (body size in [brackets]; ball pitch: 1.00 mm)	FCBGA625 [27mm sq.]	3				
	FCBGA729 [29mm sq.]	3	3			
	FCBGA961 [33mm sq.]		3	3	3	
	FCBGA1156 [35mm sq.]			3	3	3
	FCBGA1681 [42.5mm sq.]					3

Note: Max power consumption will vary greatly depending on the product class.

Embedded IP macros

1. Analog PLL

Input frequency: 25M-800MHz
 Output frequency: 400-800MHz
 User frequency: 25M-800MHz
 Phase shift: 0/90/180/270 degrees

2. SRAM

1R/1W SRAM: 32 word x 40 bit
 2RW SRAM: 512 word x 40 bit

3. I/O interfaces

For Megaframe

HSTL (High Speed Transistor Logic*1)
 LVCMOS 2.5V I/F
 PCML (Pseudo Current Mode Logic)
 LVDS (Low Voltage Differential Signals)

SSTL2 (STUB Series Terminated Logic for 2.5V)

PCI-66 (Peripheral Component Interconnect)

PCI-X (*2)

LVC MOS 3.3V I/F (*3)

*1: Requires 1.5V power

*2: 3.3V tolerant. Interface may not satisfy PCI standards

*3: 3.3V tolerant I/F

For Gigaframe (data rate in parentheses)

Serdes Framer Interface: SFI4 interface supports 16 channels, 10Gbps to 12.5Gbps of data (622Mbps to 800Mbps)

Hyper Transport (400Mbps/600Mbps/800Mbps)

RapidIO (500Mbps/700Mbps)

System Packet Interface: SPI4P2 (622Mbps to 800Mbps)

10Gbps Attachment Unit Interface: XAUI (3.125Gbps)

FibreChannel (1.0Gbps/2.0Gbps)

RapidIO: (1.25Gbps/2.5Gbps/3.125Gbps)

SFI4P2: (2.5Gbps–3.125Gbps)

Serial ATA: (1.5Gbps/3.0Gbps)

PCI express: (2.5Gbps Clock Data Recovery)

4. *DDR Interface (data rate in parentheses)*

Double Data Rate SDRAM (400Mbps)

Quad Data Rate (QDR®) SRAM (400Mbps)

Peer to Peer SDR (200Mbps)

Peer to Peer DDR (200Mbps)

Single Data Rate SDRAM (167Mbps)

*QDR is a registered trademark of Integrated Device Technology, Inc. and Micron Technology, Inc.