

The NATIVE-server-R1 is a compact MTCA chassis designed for server applications which comes with a NAT-MCH-G4 including an optional NAT-MCH-G4-CLK-P. Moreover, it comprises of a NAT-PM and an integrated NAT-AMC-COMex PrAMC (Processing AMC).

The chassis features four payload slots in total: two slots for double-wide, mid-size AMCs which can be expanded by two RTMs, and two slots for single-width, mid-size AMCs without RTMs.

NAT-AN	IC-COMex V2	AMC 1-4 Ports	AMC 1 SFS	AMC2 DFS	AMC3 SMS	AMC4 DMS	MCH Ports	NAT-MCH-G4	CLk-G4	Cooling Unit 1	Power supply Module
Port 17-20	Fat pipe	Port 17-20	##	XXX	<u> </u>	1	Port 17-20				
Port 16	TCKLC/D	Port 16					Port 16				
Port 12-15	Fat pipe	Part 12-15					Port 12-15				
Port 8-11	Fat pipe	Port 8-11					Port 8-11				AC 450 WR
Port 4-7	Fat pipe	Port 4-7					Port 4-7				
FCLKA		FCLKA	4	•		₹	ськз		CLK 3		DC 450/48
TOLKID		TOLKD					TOLK D				
TCLKC		TCLKC					TOLKIC				
TCLK B	•	TOLKB	4	-	_		CLK2		CLK2		
TCLKA	1	TCLKA	4	-	_		CLK1		CLK 1		DC450/ 24
Port 3	SATA /SAS	Port 3	4-				Port 3				
Port 2		Port 2	4		•		Port 2				
Port 1	Fabric A	Port 1	•	•	•		Port 1				DC12
Port 0	Fabric A	Port 0	4	4	-		Port 0				
IPMB_L	•	IPMB_L	4	_	4		PMB_L	E CONTRACTOR OF THE CONTRACTOR			
IRMB_0		IPMB_0					PMB_0	4		→	
JTAG		JTAG					JTAG				
	COMex-Carrier V2		AMC 1 SFS/SM S	AMC2 DFS/SM S	AMC3 SMS	AMC4 DMS/DF S		eMCH-G4	CLK-G4	Cooling Unit 1	Power supply Module 1

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111111111	Form Factor	
	4-slot 1U chassis, mountable in 19" racks	
	up to two single-wide, mid-size AMCs and	
	up to two double-wide, mid-size AMCs and their correspondent RTM	
Height	• 10	
Width	• 445mm	
Depth	approx. 373mm approx. 5.9kg	Maria San San San San San San San San San Sa
Weight	approx. 5.8kg NAT-MCH-G4 with NAT-MCH-G4-CLK-P	
	Xilinx Zyng MPSoC with FPGA / 2x ARM A9	
Processing	1 GB DDR3 RAM	
Resources	256 MB QSPI FLASH	
	10GbE switch for Fabric A	
	2x 25GbE Uplink at front panel via SFP28-DD 10G Ethernet to backplane	
	CLK I/O via SMA at front panel	
Interfaces	GPS IN via SMC at front panel as option	
	CLK1/CLK2 to each AMC CLK2 PGIs Parkets	
	CLK3 PCIe Recloak Debug via Micro-USB B	
System	Central management and data switching	
Management	Power and system management.	
Software /	FreeRTOS	
Firmware		
	NAT-PM-AC600 (other PM on request)	
Input Voltage	• 100 – 265VAC	
Mains Frequency	• 50/60 Hz • 400W	
Output (max.)	• 6.6A @12 VDC	
Output Power	• 180mA @3.3V	
	NAT-AMC-COMex	
	Atmel Microchip ATxmega128 Atmel Sthere Controller 2010	
Onboard Carrier	Intel Ether Controller i810 2x M.2 PCIE x4 interface (for memory and graphics)	
	MicroSD-Card	
Backplane	• IPMI	
Interconnect	AMC Port 0/1: 1G-KX/10G-KR AMC Port 0/1: 1G-KX/10G-KR	
- Interconnect	AMC PORT 4-7/8-11/12-15/17-20: PCIE Gen4 x4 to all AMCs 4x USB 3.0	
Front Panel	2x 25GbE Uplink via SFP28	
Interfaces	GPIO via Micro-D connector	
	Debug via Micro-USB B	
	Cooling Units	
	Integrated Cooling Units including air filter Cooling concept from right to left	
	4 fans for front area, 3 fans for rear area	
	Cooling power of 400W @ +55°C operating temperature	

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