



Palma B Distributed Unit DU IX4200 – Ice-Lake-SP (ICX-SP)

Product Description

Designed for Edge computing services with a focus on 4G/5G DUs (Distributed Units), the Palma B Distributed Unit platform features an onboard front panel IO for RU (Radio Unit) connectivity, along with Silicom Time Sync (STS) Technology, 5G ACC100 L1 Acceleration, and Remote Management capabilities.

Palma B Distributed Unit interfaces are built with a PTP (1588) and SyncE for Time Synchronization, along with 8x10G and 4x25G. This design also offers space for hosting multiple eASIC / FPGA cards for service acceleration in both wireline and wireless deployments.



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Key Features

Palma's special features include:

- PTP (1588) hardware based physical layer TimeStamper and SyncE
- On board ACC100 HW FEC accelerator
- Based on Microchip/ Zarlink Servo
- DU-optimized: features TimeSync and FEC Accelerator on main board Simplest and most reliable design
- Thermally optimized solution for E-Temp
- GNSS on board
- Timing ports: 1PPS out, 1PPS in, 10MHz out, 10MHz in

Technical Specifications

General Technical Specifications	
CPU:	Intel Xeon Ice Lake (ICX-SP), Socket P+, 4189 pin, Single Socket 32C/2.2GHz/185W/XCC Intel Code 6338N 16C/2.4GHz/135W/HCC Intel Code 4314
Chipset:	LBG-R, C621A
Memory:	Supports up to 16 DIMMs/ DDR4 with ECC, 8 DDR channel controllers DDR Maximum Speed 3200 MT/s
Storage:	120GB M.2 NVME
PCI#1 – 6:	Total BW PCIe x64G4, slots 2&3 (x16G4) available for add in card
BIOS:	UEFI, Secure Boot
BIOS/ BMC:	SPI, Dual redundant images for both x86 and for the BMC
Operating System:	Linux/ CentOS
Host Mgmt.:	(1) 1GbE RJ45 Management via BMC and in-line management via CLV.
USB 3.0:	2xFront, 2x Internal Vertical
Serial Console:	RJ45 connector using RS232 signaling direct connection to BMC, via Mux / pass through the x86
BMC:	AST2620
TPM:	TPM 2.0
ROT:	Support, CPLD connected to both SPI images
Power Supply:	Dual redundant DC -48V hot swappable power supply 800W
Power Supply voltage rate:	(-36v) – (-75v) DC
Form Factor:	<ul style="list-style-type: none"> • 2U rackmount Form Factor EIA 19”, • Depth: 389/385mm, including mountings/ without mounting ears
Weight:	16kg (564oz)
Cooling:	5 FANs
Sensors/Monitors:	Thermal protection Critical Error Detection Voltage monitors Current protection
Operating Temperature:	0°C – 40°C (32°F – 104°F)
Storage:	-40°C – 65°C (-40°F–149°F)
Operating Altitude	10,000 ft (3,048 m)
Certificates:	EMC: EN55032: 2012 + AC (13) FCC 47 CFR part 15 subpart B EN 61000-3-2: 2014 EN 61000-3-3: 2013 EN 55024: 2010 Safety: CB Scheme 62368-1 CB Scheme 60950-1 CE 62368-1 CE 60950-1 ROHS
SKU1 Features:	
Time Sync SKU1 (On board)	Different in number of ports: Single slot, x8 8Ports, 8x10G, 2xQSFP+ QSFP+: 10GBase-SR, 10GBase-LR

TimeSync SMA:	x5 SMAs: 1PPS Out (default) or 1PPS In – configurable 10MHz Out (default) or 10MHz In or 1PPS Out – configurable 1PPS Out 10MHz Out GNSS antenna In
Profile: IEEE-1588 (2008) (Annex-J.3 Delay Request-Respond Default Profile	Ordinary Clock – Server Ordinary Clock- Client (including slave only OC) Boundary Clock
Profile: IEEE-1588 (2008) (Annex-J.4 Peer-to-Peer	Ordinary Clock – Server Ordinary Clock- Client (including slave only OC) Boundary Clock
Profile: ITU-T G.8265.1 Telecom Profile for Frequency Synchronization	Telecom Grandmaster Telecom Slave
Profile: ITU-T G.8275.1 PTP Telecom Profile for Phase with Full timing Support	Telecom Grandmaster (T-GM) Telecom Boundary Clock (T-BC) Telecom Time Slave Clock (T-TSC)
Profile: ITU-T G.8275.2 PTP Telecom Profile for Phase with Partial timing Support	Ordinary Clock Boundary Clock Transparent Clock (peer-delay-message exchange)
References Selection:	Default BMCA (Best Master Clock Algorithm) Alternate BMCA based on ITU G.781 – Synchronization layer functions for frequency synchronization based on the physical layer
On board FEC Accelerator	Silicom PML 5G/4G FEC HW accelerator x16G3
SKU2 Features:	
Time Sync SKU2: (On board)	Silicom TimeSync SKU2, 12 ports
Network Ports:	12Ports, 2xQSFP+, 1xQSFP28 QSFP+: 10GBase-SR, 10GBase-LR QSFP28: 25/10GBase-SR, 25/10GBase-LR
On board FEC Accelerator	Silicom PML 5G/4G FEC HW accelerator x16G3, same as SKU1

Order Information

P/N	Description	RMN	RTN	Notes:
90500-0169-G00	DU, Palma, 2U,19",32C/2.2GHz, DDR4/128GB/ECC,2xPSU,SKU2	IX4200	IX4200.01	Includes: 2xDC power cable 1x Ground earth cable, SKU2, 12 ports TimeSync
90500-0169-G02	DU, Palma, 2U,19",16C/2.4GHz, DDR4/120GB/ECC,1xPSU,SKU2	IX4200	IX4200.02	Includes: 1xDC power cable 1x Ground earth cable, SKU2, 12 ports TimeSync
90500-0169-E03	DU, Palma, 2U,19",32C/2.2GHz, DDR4/120GB/ECC,1xPSU,SKU2	IX4200		Includes: 1xDC power cable 1x Ground earth cable, SKU2, 12 ports TimeSync
90500-0169-E04	DU, Palma, 2U,19",16C/2.4GHz, DDR4/120GB/ECC,1xPSU,SKU2	IX4200		Includes: 1xDC power cable 1x Ground earth cable, SKU2, 12 ports TimeSync
90500-0169-E05	DU, Palma, 2U,19",32C/2.2GHz, DDR4/120GB/ECC,1xPSU,STS2 NIC	IX4200		Includes: 1xDC power cable 1x Ground earth cable, STS2 NIC 8 ports TimeSync at PCIe slot #2
90500-0169-E06	DU, Palma, 2U,19",16C/2.4GHz, DDR4/120GB/ECC,1xPSU,STS2 NIC	IX4200		Includes: 1xDC power cable 1x Ground earth cable, STS2 NIC 8 ports TimeSync at PCIe slot #2
90500-0169-E07	DU, Palma, 2U,19",32C/2.2GHz, DDR4/120GB/ECC,2xPSU,STS2 NIC	IX4200		Includes: 2xDC power cable 1x Ground earth cable, STS2 NIC 8 ports TimeSync at PCIe slot #2