



DATASHEET

Edge Compute (EC) Hyper

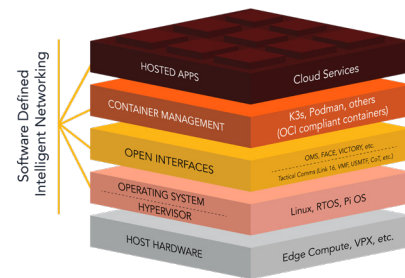
Bringing Small Form Factor Compute Power to the Edge: EC Hyper is a SWaP optimized Intel® server-class hardware solution providing unparalleled compute power, high-density input/output for application hosting of converged data processing and communications across a wide range of systems. Hyper is a centralized hardware communications hub across multi-domain platforms (e.g., air and ground) and environments that provides simultaneous connectivity and management of multiple onboard systems.

EC Hyper is a cost-effective SWaP-constrained compute platform that includes:





- High I/O throughput and integrated CSAC for GPS-denied environments
- MOSA compliance
- Onboard multi-core Intel® Xeon D and FPGA processing
- 2+ TB of external removable, secured storage

Available with the Parry Labs Stratia Software Stack that includes:

- FACE and OMS compliance
- Modern Open, Microservice-based Software Architecture with Kubernetes Orchestration
- Airworthiness and Security Accreditation CATO
- Support for military messaging standards (e.g., Link 16, Cursor-on-Target)
- Application Hosting including Third-Party (e.g., APNT, Mission Management, AI/ML, Sensor Processing)



Off-the-shelf modules or customization options include:

 <p>Processor Flexibility</p>	<ul style="list-style-type: none"> • Alternative Processor SKUs and memory capacities available via COM Express Type 7 industry standard • Alternate capacities of 2.5" SSD drives
 <p>M.2 and mPCIe Expansion Slots with I/O for additional input</p>	<ul style="list-style-type: none"> • Additional HD-SDI inputs • Multiple RS-170 inputs • WiFi • 4G/5G LTE • INS-GPS • Dedicated AI chipset • Custom Modules
 <p>Scalability</p>	<ul style="list-style-type: none"> • Combine multiple EC Hybers or combine with other Edge Compute product offerings (e.g., EC Autonomy)
 <p>Add-Ons</p>	<ul style="list-style-type: none"> • Incorporate with minimal impact to the platform, add: <ul style="list-style-type: none"> • Radios • Payloads • Pods

CPU System on Module (SoM) Specifications

Processor System	CPU	Intel® Xeon® Processor D-1559 (Broadwell), 12 core 1.6GHz
	Memory	64GB of DDR4-2400 SDRAM
Ethernet	10Gb	(2) 10 Gigabit Ethernet ports
	1Gb	12 port Layer-2 Managed Network Switch with (4) Gigabit Ethernet 10/100/1000 Mbps interfaces and (8) 10/100 Mbps interfaces
I/O Ports	USB	(4) USB 3.0 Host Ports & (4) USB 2.0 Host Ports
	1553 Bus	(2) Dual Redundant MIL-STD-1553 Channels (BM, BC or MT)
	Discrete Output	(16) Discrete I/O Interfaces (8 Input, 8 Output)
	Video	(4) Video I/O, default configuration for (2) HD-SDI Inputs
	Serial	(16) Software Programmable Serial UART Ports (RS-232, RS-422, RS-485)
	Audio	(8) Mono Audio Interfaces (Mic/Line In, Line Out, Push-To-Talk (PTT))
	PCIe	(2) PCIe x4 3.0 Root Complex – High Speed Cross Connect Upstream Downstream
Storage	2.5" SSD	(2) Externally removeable 2.5" SATA SSD drives, supplied with (2) 1TB FIPS-140-2 Certified SSD drive by default
Security	TPM	TPM 2.0
Expansion	mPCIe	(1) mPCIe PCIe x1 expansion slot
	M.2	(1) M.2 2280 PCIe x1 expansion slot
Operating System	Linux	Red Hat Enterprise Linux 8.6+ contact factory for additional options

Networking

Networking	12-Port L2 Switch	(1) Gigabit Ethernet Upstream links (Internal; Intel Xeon® CPU) (4) 10/100/1000Base-T Ethernet Downstream Interfaces (External) (8) 10/100Base-T Ethernet Downstream Interfaces (External)
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Timing and Precision

I/O Ports	CSAC	GPS Antenna Port
	CSAC	Configurable 1PPS Input (3.3V, 5V or 10-15V)
	CSAC	Configurable 1PPS Output (3.3V, 5V or 12V)
	CSAC	10MHz Sine Wave Putput (+13dBm ±3dBm)

SWaP Attributes

Power	Supply Voltage	16-32VDC input
	Power Consumption	65W continuous, 80W peak
Mechanical	Dimensions (LxWxH)	Core Dimensions – 6.5" x 6.5" x 6.2" Outer Dimensions – 7.43" x 8" x 6.2"
	Weight	10lbs
Environmentals	Operational Temperature	-55 to 71 °C Fanless, Conduction Cooled
	EMI, Shock, Vibe, Power	MIL-STD-461, MIL-STD-810H & MIL-STD-704