

## H A R D W A R E

# INFINERA CLOUD XPRESS 2

Second-generation Cloud Xpress data center interconnect platform with hyperscalability, extreme simplicity, power and space efficiency, and built-in data encryption support

**The Infinera Cloud Xpress 2 Platform** is purpose-built for scalable 100 Gigabit Ethernet (GbE) high-capacity metro cloud data center interconnect (DCI) over multi-terabit links with simplicity, efficiency, and security. The Cloud Xpress 2 complements the 500 gigabits per second (Gb/s) Cloud Xpress and extends the Cloud Xpress Family to create unmatched choice and flexibility for metro cloud DCI.

**Scalable:** The Cloud Xpress 2 incorporates Infinera's groundbreaking Infinite Capacity Engine to deliver a 1.2 terabits per second (Tb/s) wavelength-division multiplexing (WDM) super-channel in only 1 rack unit (1RU). Data center operators can start by using a fraction of the platform's capacity and scale up as needed with Infinera's unique Instant Bandwidth capability, which allows point-and-click activation of capacity without requiring any new hardware truck rolls, installation or configuration. Flexible 10/40/100 GbE support enables a smooth transition from 10 GbE and 40 GbE clients to 100 GbE as capacity demands grow. Multiple Cloud Xpress 2 units can

be racked, stacked and managed as a single unit in order to scale capacity up to 27.6 Tb/s per fiber pair.

**Simple:** With a simple operational model and extensive automation support, the Cloud Xpress 2 is designed for easy deployment and operational efficiency. The rack-and-stack appliance form factor and easy 1-2-3 configuration make deployment simple. The Cloud Xpress 2 also supports data center automation with capabilities such as topology auto-discovery, zero-touch provisioning support and standard application programming interfaces (APIs) for programmability and streaming telemetry. Built-in amplification enabling reach of up to 130 kilometers (km) eliminates the need for external amplifiers on most metro DCI links, and 1.2 Tb/s super-channel output reduces or eliminates the need for multiplexers and fiber connections, both of which help to minimize DCI solution complexity and to maximize reliability. Reliability is further bolstered by photonic integrated circuit (PIC) technology and an architecture that combines redundant power



supplies and fans with a hot swappable control module to support hitless software upgrades.

**Efficient:** The Cloud Xpress 2 is designed for operational efficiency. The Infinite Capacity Engine allows the Cloud Xpress 2 to achieve very high density and high power efficiency, enabling deployment in data center locations with limited available rack space and helping to control space and power costs. Support for simple operations and automation allows operators to maximize the efficiency of operations staff and lower the total cost of operation.

**Secure:** The Cloud Xpress 2 with the Infinite Capacity Engine supports built-in data encryption that can be enabled with product-specific license keys. Encryption can be enabled based on the IEEE Media Access Control Security (MACsec) protocol or Layer 1 (bulk) encryption, employing state-of-the-art NIST-complaint AES-256 encryption technologies. The Cloud Xpress 2 is FIPS-140-2 Level 2 certified (Certificate Number: 3671) to further enhance its security feature sets and its deployments in security-conscious environments.

Features	
Type	Value
Client Interface	10 GbE, 40 GbE, 100 GbE
Maximum Client-side Capacity	1200 Gb/s
Line Interface	1200 Gb/s super-channel via LC connector
Line-side Capacity	Configurable in 100 Gb/s increments via Instant Bandwidth Maximum 1200 Gb/s
Maximum Capacity per Fiber	27.6 Tb/s
Reach Specifications	Metro, regional up to 600 km Unamplified reach up to 130 km
Redundancy	Power supply AC or DC, 1:1 redundant Fans, 1:4 redundant Control module: hot swappable Compatible with optional fiber protection switch, Y-cable
Management and Automation, Software-defined Networking	Command-line interface (CLI) SNMP, Syslog, RADIUS, TACACS+ NETCONF/RESTCONF/YANG, gRPC, telemetry Zero-touch provisioning (ZTP), DHCP LLDP snooping Stackability, nodal management Infinera Digital Network Administrator (DNA)
Security	Data Encryption <ul style="list-style-type: none"> <li>• MACsec (IEEE 802.1AEbw-2013)</li> <li>• Layer 1 bulk encryption</li> <li>• Advanced encryption AES-256</li> <li>• Internet Key Exchange IKEv2 (RFC 7296/4307)</li> <li>• X.509v3 certificate for peer authentication</li> <li>• Elliptic Curve Diffie-Hellman (ECDH Group 21) secured key negotiation</li> <li>• Hitless AES-256 key rotation</li> </ul> Certification <ul style="list-style-type: none"> <li>• FIPS-140-2 Level 2 certified – Certificate Number 3671</li> </ul>

Models			
Short Name	Model Number	Client Interfaces	Encryption
CX-1200F	CX-100E-1200F	12 x QSFP/QSFP28 configurable Up to 12 x 100 GbE Up to 12 x 40 GbE Up to 48 x 10 GbE	Supported, requires activation, configurable per client port

**Physical Specifications**

Type	Value	Specifications
Mechanical	Height	1.72" / 43.7 mm (1 RU)
	Width	17.4" / 442 mm
	Depth	23.7" / 600 mm
Electrical	Typical Power Consumption	680 W
	Input Voltage Range (AC Option)	100-240VAC 50/60Hz
	Input Voltage Range (DC Option)	-40V DC to -72V DC
Environmental	Operating Temperature	0° to 40° C
	Storage Temperature	-40° to 70° C
	Humidity	90% non-condensing

**Regulatory and Compliance**

Type	Specifications
Emissions	FCC Class A, CISPR Class A Compliant, CE
Laser Safety	ANSI Class 1M, IEC Class 1M, EN 60825. FDA21 CFR 1040
Product Safety	UL/EN/IEC/AS/NZS/CAN/ 60950-1
Immunity	EN55024
NEBS Compliance	NEBS Level 1/3 <ul style="list-style-type: none"> <li>• GR-63-CORE: Network Equipment Building Systems – Physical Protection</li> <li>• GR-1089-CORE: Electromagnetic Compatibility and Electrical Safety – Generic Requirement for Network Telecommunications Equipment</li> </ul>

Specifications and Features are subject to change