

CriticalConneX™ System



The CriticalConneX™ System is a modular network TAP solution for enterprise-class installations. The system comprises a range of highly resilient, rugged rack-mount chassis and hot-swap modules to fit all mainstream LAN technologies and network tools.

The ConneX™ chassis provides TAP deployments with high port density in a 1U rack space, massively reliable power delivery (with a dual supply option for further resilience) and expandability through the addition of further modules.

The chassis is available with an aggregating backplane; this allows the system to aggregate traffic from up to four TAP modules, enabling economical many-to-many configurations of network segments to network tools.

The ConneX™ modules are available to suit all tapping requirements, from basic 10/100 passive breakout TAPs to fully-configurable, fully-featured Gigabit aggregation taps, or even V-Line™ TAPs for risk-free deployment of inline network tools.

This flexible range of plug'n'play modules enables simple and secure access into the corporate LAN for network analysis, forensic monitoring, sniffers/analysers/probes, email/spam filtering, intrusion detection systems (IDS), intrusion prevention systems (IPS), VoIP analysis/monitoring and recording and all other network tools that need access to live traffic.

ConneX™ Chassis



CC1000
ConneX™ Modular Chassis System, 4 Hot-Swappable Slots, Dual AC Power Supplies



CC1010
ConneX™ Modular Chassis System, 4 Hot-Swappable Slots, Single AC Power Supply



CC1020
ConneX™ Modular Chassis System, 4 Hot-Swappable Slots, Aggregating Backplane, Dual AC Power Supplies



CC1000-DC
ConneX™ Modular Chassis System, 4 Hot-Swappable Slots, Dual DC Power Supplies



CC1010-DC
ConneX™ Modular Chassis System, 4 Hot-Swappable Slots, Single DC Power Supply



CC1020-DC
ConneX™ Modular Chassis System, 4 Hot-Swappable Slots, Aggregating Backplane, Dual DC Power Supplies

ConneX™ TAP Modules



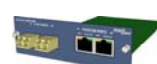
CC1100 Series
10/100 Aggregating Configurable TAP Module



CC1200 Series
100/1000 Breakout TAP Module



CC1205 Series
Multi-mode Fiber to Copper Breakout TAP Module



CC1210 Series
Single mode Fiber to Copper Breakout TAP Module



CC1220 Series
100/1000 Aggregating Configurable TAP Module



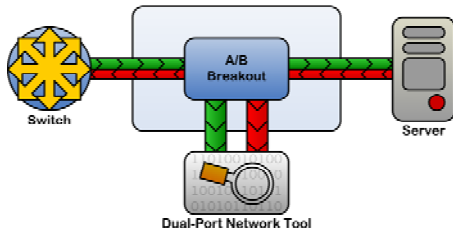
CC1225 Series
Multi-mode Fiber To Copper Aggregating Configurable TAP Module



CC1230 Series
Single mode Fiber To Copper Aggregating Configurable TAP Module

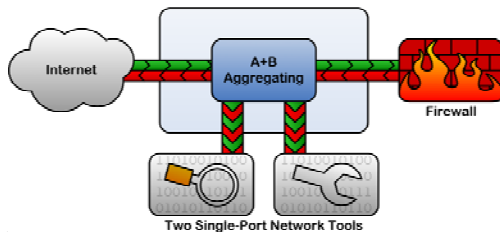
CriticalConneX™ Configurable Modes

Breakout Mode



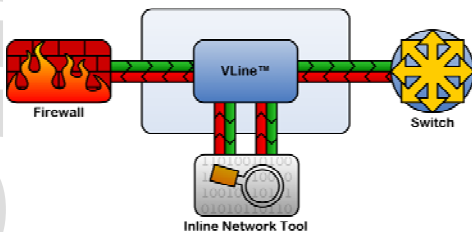
BREAKOUT mode separates the bi-directional full-duplex network traffic into Rx and Tx streams, and uses one Monitor Port for each stream. This mode is used when 100% guaranteed traffic collection is required, and the network tool has dual ports running at the same speed as the Live Network.

Aggregating Mode



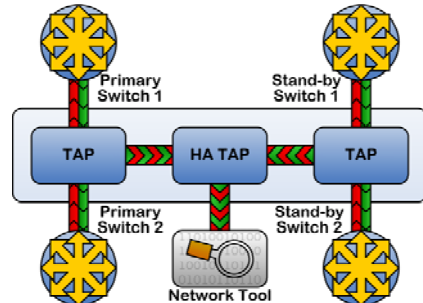
AGGREGATING mode combines the bi-directional full-duplex network traffic into a single stream, and can present two copies of the traffic, one on each Monitor Port. This mode is used when the network tool has only a single interface. If the aggregated traffic rate exceeds the inbound network bandwidth of the network tool then excess packets will be dropped at the Monitor Port. If 100% guaranteed traffic collection required then the network tool interface must run faster than the Live Network, or Breakout mode must be used.

V-Line™ Mode



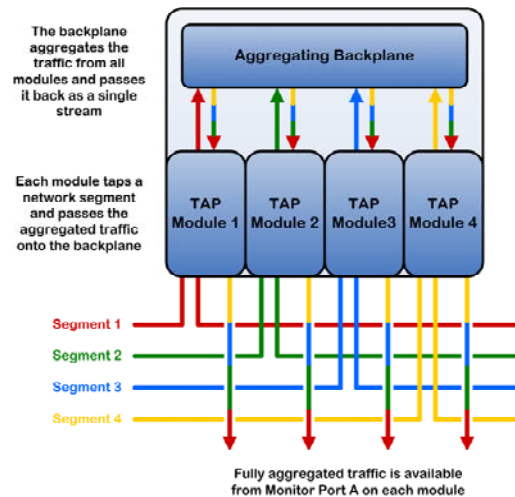
V-Line™ mode is a way of safely deploying and maintaining inline network tools without risk of downtime to the Live Network. The TAP provides extra layers of failsafe for any inline tool, by continually checking throughput and availability it can seamlessly switch the tool into or out of the network path; with the tool now *virtually inline* it can be freely reconfigured and rebooted without affecting the Live Network link.

HA Option



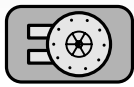
HA (High Availability) is a factory option which can be set for most TAP models. In HA mode, there is no thru-connection between the network ports on the TAP; traffic arriving at either network port A or B is forwarded to the monitor ports only and not to the corresponding network port. This kind of operation is useful when deploying a single network tool into both legs of a parallel hot-standby segment; regular TAPs placed in each network path both feed into an HA TAP which combines the traffic to a single network tool - this stops traffic from one leg being propagated onto the other leg, whilst allowing the network tool to operate fully, even using Packet Injection where required. HA TAPs are also used to aggregate SPAN ports together.

Aggregating Backplane



The ConneX™ chassis with Aggregating Backplane is a unique way of aggregating the traffic from multiple TAPs to multiple network tools. Up to four TAP modules mounted in the chassis can tap Live Networks in the normal way, but they will all pass their traffic onto the chassis' high-bandwidth backplane where it is aggregated. This aggregated traffic is then passed back to each module and is available on Monitor Port A for up to four network tools.

CriticalConneX™ Module Features



Fail-to-Safe – No point of failure – Input power voltage is continuously monitored; if the input voltage is outside nominal levels, then the Live Network Ports fail-closed, maintaining the network link. The proprietary fail-close circuitry is passive and requires no power.



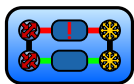
LinkLock – 100% Uptime Guaranteed – A permanent link connection between the two network devices enables Zero Packet Loss on the Live Network Ports while power is turned on or off. Packet Injection is NOT supported in this mode.



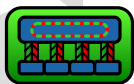
Passive – protects (isolates) the Live Network from receiving traffic back through the monitor ports. Allows network tools to be deployed in 'stealth' mode.



Packet Injection – allows the network tool to inject packets into the live network. The monitor port in Packet Injection Mode is bi-directional, thereby allowing the network tool to transparently inject packets onto the live network. The received packets are assigned high priority and are seamlessly switched into the network traffic. Under full utilization, network traffic is buffered ensuring the injection of the packets and no live network packet loss.



Link Failure Propagation (LFP) – This feature monitors the link status of the Live Network Ports. In the event one of the connected network devices fails, then the TAP will immediately drop the other Live Network Port. This ensures your high availability (HA) design is not comprised.



BackPlane Aggregation (BPA) – This feature allows TAP modules to use the chassis to share tapped traffic between modules.



10BASE-T – supports 10BASE-T Ethernet on Live Network Ports.



100BASE-TX – supports 100BASE-TX Fast Ethernet on Live Network Ports.



1000BASE-T – supports 1000BASE-T Gigabit Ethernet on Live Network Ports.



1000BASE-SX – supports 1000BASE-SX Multimode Fiber on Live Network Ports.



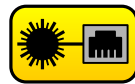
1000BASE-LX – supports 1000BASE-LX Singlemode Fiber on Live Network Ports.



Many-To-One – aggregates multiple network links (or SPAN ports) to a single monitoring port



One-To-Many – mirrors a single network link (or SPAN port) to multiple monitoring ports



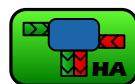
Fiber-To-Copper – allows a gigabit copper network tool to be deployed on a fiber network



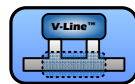
A/B Breakout – breaks out the network traffic into two separate streams (Rx & Tx).



A+B Aggregation – combines the network traffic into a single stream.



HA Mode – Removes the connection & fail-safe feature between the Live Network Ports creating two inputs for SPAN Ports or external CriticalTAPs.



V-Line™ – provides complete failsafe protection for an inline appliance by allowing it to be installed *virtually inline*.



Heartbeat – In V-Line™ Mode heartbeat packets are injected on the monitoring ports connected to the inline Appliance confirming the inline appliance is On-Line. Heartbeat packets are only sent through the monitoring ports and dropped prior to going onto the live network.

ConneX™ Chassis Tech Specs

Operating Specifications:

Operating Temperature: 0°C to 55°C

Storage Temperature: -10°C to 70°C

Relative Humidity: 10% min, 95% max, non condensing

Mechanical Specifications:

Power Supply: Single or Dual Redundant

Universal Input: 85-264 VAC, MTBF 575,000 hrs MIL-HDBK-217F

Optional DC Input: 36-72 VDC, MTBF 368,500 hrs MIL-HDBK-217F

Enclosure:

Dimensions (HxLxW): 44x356x440mm (1.675x14x17.5")

Weight: w/4 modules 5.7 Kg (12.5 lb)

Compliance: Conforms to ANSI/UL Std. 60950, certified to CAN/CSA Std. C22.2 No. 60950, EMC std. EN 55022, EN 55024, FCC Part 15 Class B. Fully compliant with RoHS Directive 2002/95/EC.

CriticalConneX™ Module Feature Matrix



ConneX™ Module Features

	CC1100	CC1200	CC1205	CC1210	CC1220	CC1225	CC1230
Fail-to-Safe	●	●	●	●	●	●	●
LinkLock	○		●	●		● ¹	● ¹
A/B Breakout	○	●	●	●	○	○	○
A+B Aggregation	○				○	○	○
Backplane Aggregation					○	○	○
V-Line™					● ³	● ³	● ³
Passive	○	●	●	●	○	● ¹	● ¹
Packet Injection	○ ²				○	○ ²	○ ²

Live Network Port Speeds

10BASE-T	●						
100BASE-TX	●	●			●		
1000BASE-T		●			●		
1000BASE-SX			●			●	
1000BASE-LX				●			●

● = Standard Feature

○ = Configurable Feature

● = Model Option

Ordering Information

All of the ConneX™ TAP modules are optionally available to order as portable stand-alone units. To specify portable units on your order add -P to the part number e.g. CC1220-P

The CC1100, CC1225 and CC1230 modules are optionally available with Packet Injection (PI) permanently disabled. To specify this option on your order add -S to the part number e.g. CC1225-S

The CC1220, CC1225 and CC1230 modules are optionally available with the V-Line™ feature. To specify this option on your order add -V to the part number e.g. CC1220-V

¹ Only on -S model option

² Not on -S model option

³ Only on -V model option