## QUICK REFERENCE GUIDE TO TAPS

What taps do: Network Taps provide permanent access to $100 \%$ of all network traffic - which is required when monitoring and securing your network- without introducing costly bottlenecks or points of failure. Tool changes can be made without network downtime. Why Ixia: Widest range of taps, short lead times, exceptional MTBF, global distribution, best in class worldwide Support

How to use this table: COLUMN 1 provides: connector type- LC or MTP, fiber mode- Multimode ("MM") or Single mode ("SM"), and fiber spec-LR, SR, etc. COLUMN 2 provides: Network speed and fiber diameter. COLUMNS 3-7 provide Part numbers for each Split Ratio. All of this information is determined by the network link to be tapped, and must be provided by your customer.

## Useful Links:

Product Information: https://ixia.keysight.com/products/network-taps-regenerators-and-aggregators
Taps vs Spans: https://ixia.keysight.com/resources/taps-vs-spans-total-visibility-anywhere
Quick Reference Guide: https://ixia.keysight.com/resources/flex-tap-quick-reference-guide

| OPTICAL TAPS |  | Ordering Information / Insertion Loss |  |  |  |  | Accessories |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Family Connector Fiber | Speed/ <br> Wavelength/Fiber Diameter | 50/50 Split Part\#/Insertion Loss | 60/40 Split Part\#/Insertion Loss | 70/30 Split Part\#/Insertion Loss | 80/20 Split Part\#/Inserti on Loss | 90/10 Split Part\#/Insert ion Loss | Y Cable Kits | Rack <br> Mounts |
| FlexTap LC SM LR | $\begin{array}{\|c} \hline \text { All speeds to } 400 \mathrm{G} \\ 1260-1340 \mathrm{~nm}, 1550 \mathrm{~nm} \\ 8.5 \mu \mathrm{~m} \\ \hline \end{array}$ | $\begin{gathered} \text { TP-100-LR-85-50 } \\ 3.7 d B / 3.7 d B \end{gathered}$ | $\begin{gathered} \text { TP-100-LR-85-60 } \\ 2.8 d B / 4.8 d B \end{gathered}$ | $\begin{gathered} \text { TP-100-LR-85-70 } \\ 2.0 d B / 6.1 d B \end{gathered}$ | $\left\|\begin{array}{c} \text { TP-100-LR-85-80 } \\ 1.3 d B / 8.0 d B \end{array}\right\|$ | $\left\|\begin{array}{c} \text { TP-100-LR-85-90 } \\ 0.8 d B / 12.0 d B \end{array}\right\|$ | 705-0014-001 | $\begin{array}{\|c\|} \hline \text { RK-FLEX-ID-24 } \\ \text { RK-FLEX-24 } \\ \text { RK-FLEX-8 } \\ \hline \end{array}$ |
| PatchTap LC SM LR | $\begin{gathered} \text { All speeds to } 100 \mathrm{G} \\ 1260-1340 \mathrm{~nm}, 8.5 \mu \mathrm{~m} \\ \hline \end{gathered}$ | $\begin{gathered} \text { TPPCH-100-LR-85-50 } \\ 3.8 d B / 3.8 d B \\ \hline \end{gathered}$ | - | $\begin{gathered} \hline \text { TPPCH-100-LR-85-70 } \\ 2.3 d B / 6.1 d B \\ \hline \end{gathered}$ | - | - | 705-0014-001 | Patch Panels |
| FlexTap LC VHD <br> SM LR/LX | All speeds to 400 G $1260-1340 \mathrm{~nm}, 1550 \mathrm{~nm}$ $8.5 \mu \mathrm{~m}$ | TPVHD-100-LR-85-50 <br> $3.7 d B / 3.7 d B$ | TPVHD-100-LR-85- <br> $602.8 d B / 4.8 d B$ | $\begin{gathered} \text { TPVHD-100-LR-85-70 } \\ 2.0 d B / 6.1 d B \end{gathered}$ | - | - | $\left\|\begin{array}{c} 705-0014-001 \\ x 3 \end{array}\right\|$ | $\begin{array}{\|c\|} \hline \text { RK-FLEX-ID-24 } \\ \text { RK-FLEX-24 } \\ \text { RK-FLEX-8 } \\ \hline \end{array}$ |
| FlexTap LC <br> Secure + <br> SM LR | $\begin{gathered} \hline \text { All speeds to } 400 \mathrm{G} \\ 1260-1340 \mathrm{~nm}, 1550 \mathrm{~nm} \\ 8.5 \mu \mathrm{~m} \\ \hline \end{gathered}$ | $\begin{gathered} \text { TPS-100-LR-85-50 } \\ 3.7 d B / 3.7 d B \end{gathered}$ | - | - | - | - | 705-0014-001 | $\begin{array}{\|c\|} \hline \text { RK-FLEX-ID-24 } \\ \text { RK-FLEX-24 } \\ \text { RK-FLEX-8 } \\ \hline \end{array}$ |
| FLEX TAP MTP <br> PSM4 <br> SM LR | All speeds to 400 G $1260-1340 \mathrm{~nm}, 1550 \mathrm{~nm}$ $8.5 \mu \mathrm{~m}$ | - | - | $\begin{gathered} \text { TP-PSM4-85-70-MTP } \\ 2.6 d B / 6.4 d B \end{gathered}$ | - | - | MTP-SM-Y- <br> CBL <br> (optional) | $\begin{array}{\|c\|} \hline \text { RK-FLEX-ID-24 } \\ \text { RK-FLEX-24 } \\ \text { RK-FLEX-8 } \\ \hline \end{array}$ |
| FlexTap LC <br> MM SX | $\begin{gathered} 1 \mathrm{G} \\ 50 \mu \mathrm{~m} \end{gathered}$ | $\begin{gathered} \text { TP-1-SX-50-50 } \\ 4.5 d B / 4.5 d B \end{gathered}$ | $\begin{gathered} \text { TP-1-SX-50-60 } \\ 3.1 d B / 5.1 d B \end{gathered}$ | $\begin{gathered} \text { TP-1-SX-50-70 } \\ 2.4 d B / 6.3 d B \end{gathered}$ | $\begin{gathered} \text { TP-1-SX-50-80 } \\ 1.8 d B / 8.1 d B \end{gathered}$ | $\begin{gathered} \text { TP-1-SX-50-90 } \\ 1.3 d B / 11.5 d B \end{gathered}$ | 705-0012-001 | $\begin{gathered} \hline \text { RK-FLEX-ID-24 } \\ \text { RK-FLEX-24 } \\ \text { RK-FLEX-8 } \\ \hline \end{gathered}$ |
| FlexTap LC <br> MM SR | $\begin{gathered} 50 / 25 \mathrm{G} / 10 \mathrm{G} / 1 \mathrm{G} \\ 810-890 \mathrm{~nm}, 50 \mu \mathrm{~m} \end{gathered}$ | $\begin{gathered} \text { TPX-10-SR-50-50 } \\ 3.9 d B / 3.9 d B \end{gathered}$ | $\begin{gathered} \text { TPX-10-SR-50-60 } \\ 2.9 \mathrm{~dB} / 4.9 \mathrm{~dB} \end{gathered}$ | $\begin{gathered} \text { TPX-10-SR-50-70 } \\ 2.2 \mathrm{~dB} / 6.1 \mathrm{~dB} \end{gathered}$ | TPX-10-SR-50-80 $1.6 \mathrm{~dB} / 7.9 \mathrm{~dB}$ | - | 705-0012-001 | $\begin{array}{\|c\|} \hline \text { RK-FLEX-ID-24 } \\ \text { RK-FLEX-24 } \\ \text { RK-FLEX-8 } \\ \hline \end{array}$ |
| PatchTap LC MM SR | $25 \mathrm{G} / 10 \mathrm{G} / 1 \mathrm{G}$ $810-890 \mathrm{~nm}, 50 \mu \mathrm{~m}$ | $\begin{gathered} \text { TPPCH-10-SR-50-50 } \\ 3.9 \mathrm{~d} B / 3.9 \mathrm{~dB} \\ \hline \end{gathered}$ | - | $\begin{gathered} \text { TPPCH-10-SR-50-70 } \\ 2.2 d B / 6.1 d B \\ \hline \end{gathered}$ | - | - | 705-0012-001 | Patch Panels |
| $\begin{array}{\|ll} \text { FlexTap LC } \\ \text { VHD } & \text { MM } \\ \text { SR/SX } \end{array}$ | $\begin{aligned} & 50 / 25 \mathrm{G} / 10 \mathrm{G} / 1 \mathrm{G} \\ & 810-890 \mathrm{~nm}, 50 \mu \mathrm{~m} \end{aligned}$ | $\begin{gathered} \text { TPVHD-10-SR-50-50 } \\ 3.9 \mathrm{~d} B / 3.9 \mathrm{~d} B \end{gathered}$ | $\left\lvert\, \begin{gathered} \text { TPVHD-10-SR-50-60 } \\ 2.9 d B / 4.9 d B \end{gathered}\right.$ | $\begin{gathered} \text { TPVHD-10-SR-50-70 } \\ 2.2 d B / 6.1 d B \end{gathered}$ | - | - | $\left\lvert\, \begin{gathered} 705-0012-001 \\ x 3 \end{gathered}\right.$ | $\begin{array}{\|c\|} \hline \text { RK-FLEX-ID-24 } \\ \text { RK-FLEX-24 } \\ \text { RK-FLEX-8 } \\ \hline \end{array}$ |
| FlexTap LC <br> BIDI MM SR | $\begin{gathered} 100 \mathrm{G} / 40 \mathrm{G} \\ 832-918 \mathrm{~nm}, 50 \mu \mathrm{~m} \end{gathered}$ | $\begin{gathered} \text { TPX-40-SR-50-50-BD } \\ 4.1 d B / 4.1 d B \end{gathered}$ | - | - | - | - | N/A | $\begin{array}{\|c\|} \hline \text { RK-FLEX-ID-24 } \\ \text { RK-FLEX-24 } \\ \text { RK-FLEX-8 } \\ \hline \end{array}$ |
| FlexTap LC <br> MM MR4 | $\begin{gathered} 40 \mathrm{G} / 25 \mathrm{G} / 10 \mathrm{G} \\ 1260-1360 \mathrm{~nm}, 50 \mu \mathrm{~m} \end{gathered}$ | - | - | $\begin{gathered} \text { TP-40-SR-50-70-MR4 } \\ 3.7 d B / 6.7 d B \end{gathered}$ | - | - | $\begin{gathered} 705-0012- \\ 0001 \end{gathered}$ | $\begin{array}{\|c\|} \hline \text { RK-FLEX-ID-24 } \\ \text { RK-FLEX-24 } \\ \text { RK-FLEX-8 } \\ \hline \end{array}$ |
| FlexTap MTP <br> MM SR4 | 100G/40G/4×25/4×10G <br> $810-890 \mathrm{~nm}, 50 \mu \mathrm{~m}$ | $\begin{gathered} \text { TPX-40-SR-50-50-MTP } \\ 4.4 d B / 4.4 d B \end{gathered}$ | - | $\begin{array}{\|c} \text { TPX-40-SR-50-70-MTP } \\ 2.6 d B / 6.6 d B \end{array}$ | - | - | includes <br> MTP Y cable | $\begin{array}{\|c\|} \hline \text { RK-FLEX-ID-24 } \\ \text { RK-FLEX-24 } \\ \text { RK-FLEX-8 } \end{array}$ |
| FlexTap MTP <br> MM SR10 | $\begin{gathered} 100 \mathrm{G} / 40 \mathrm{G} / 12 \times 10 \mathrm{G} \\ 50 \mu \mathrm{~m} \end{gathered}$ | TPX-100-SR-50-50- <br> MTP 4.4dB/4.4dB | - | $\left\lvert\, \begin{gathered} \text { TPX-100-SR-50-70-MTP } \\ 2.6 d B / 6.6 d B \end{gathered}\right.$ | - | - | includes <br> MTP Y cable | $\begin{array}{\|c\|} \hline \text { RK-FLEX-ID-24 } \\ \text { RK-FLEX-24 } \\ \text { RK-FLEX-8 } \\ \hline \end{array}$ |

What a bypass does: Bypass switches are in-line devices that provide fail-safe protection for in-line security and monitoring devices. When inline tools fail, bypass switches automatically redirect network traffic so that it flows around the failed tool, instead of through

## QUICK REFERENCE GUIDE TO BYPASSES

it. Bypass switches typically have heartbeats to detect security tool failure, and power fail protection to continue to operate with no power.
Why Ixia: External bypass architecture, pre-configured heartbeats, redundant or serial active tool support, centralized management with IFC, world class GUI interface for rapid deployment of complex topologies, highest density (VHD), and the only bypass with two management ports (DUO).

Useful Terminology:
An External bypass switch is purpose-built hardware that keeps your network safe in the event of tool failure. Some security tools come with Internal bypass switches, but internal switches could require you to break your network link to disconnect the tool for service maintenance.

High availability ("HA") refers to a network architecture design that provides continued availability of network resources, even if individual components fail.
Failover modes: Active-Standby is defined as a primary active tool connected through the iBypass switch along with redundant inactive tools that are activated in event of primary tool failure. Active-Active is defined as duplicate primary active tools connected serially through the iBypass switch.

## Useful Links:

Product Information: https://ixia.keysight.com/products/iBypass
Quick Reference Guide: https://ixia.keysight.com/resources/ibypass-quick-reference-guide
Video: https://ixia.keysight.com/products/ibypass-duo

| Bypass Switches | Ordering Information |  | Specifications/Features |  |  |  |  | Accessories/Notes |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FAMILY | Part Num | ers | Speed | Networks per Device | Media <br> Type | High Availability | Link <br> Fault Detect | Accessories | Important Notes |
| iBypass 100G | IBP100G-CH-AC IBP100G-CH-DC <br> (Up to 2 Modules per Chassis) | MIBP100G- <br> SR4 <br> MIBP100G- <br> LR4 | 100G | 1 or 2 | Fiber | - | LFD | IBP100G-ACPS IBP100G-DCPS IBP100G-FANASSY | Each Module supports 1 network and 1 tool segment Fail Open/Fail Close |
| iBypass VHD | IBPVHD-CH-AC IBPVHD-CH-DC IBPVHD-CHONLY- <br> AC | $\begin{aligned} & \text { IM-21-BYP } \\ & \text { LIC-IM-21- } \\ & \text { AR } \end{aligned}$ | 10/1G | 12 <br> Segments | SFP+/SFP | Active-Active ActiveStandby | $\begin{aligned} & \text { LFD / } \\ & \text { LFDC } \end{aligned}$ | $\begin{gathered} \text { IM-21-BATT } \\ \text { IBPVHD-PWR- } \\ \text { AC IBPVHD- } \\ \text { PWR-DC } \end{gathered}$ | Chassis includes one module that contains <br> 4 bypass switches. Order SFP+KT or SFPKT Transceivers. |
| iBypass 40G | 12BP-40G-SR-50-Q | - | 40G | 1 Segment | Fiber | - | LFD | - | Two 3M MM MTPMTP network cables included. Standard 40G MM MTP-MTP tool side cables not included. |
| iBypass DUO | IBPDUO-1X10-SR IBPDUO-2X10-SR IBPDUO-1X10-LR IBPDUO-2X10-LR | - | 10G/1G | 1 or 2 | Fiber | Active-Active ActiveStandby | $\begin{aligned} & \text { LFD / } \\ & \text { LFDC } \end{aligned}$ | DUO-PWRAC DUO10G-VHD-FAN-ASSY | Mounting Brackets and Rack mounts included with $1 \times 10$ Chassis |
| iBypass HD | $\begin{aligned} & \text { IBP-8000 } \\ & \text { IBP-8000-DC } \\ & \text { (Up to } 4 \text { Modules } \\ & \text { per Chassis) } \end{aligned}$ | DBM-100 <br> DBM-200 <br> DBM-250 <br> DBM-300 | 10/100/1G | Up to 8 Segments | Copper or Fiber | Active- <br> Standby | LFD | - | Chassis requires minimum 1 DBM module. Each DBM module contains 2 bypass switches. Order two SFPKT <br> Transceiver kits per |
| iBypass 3 | 13BP-CU3 | - | $\begin{array}{\|c} 10 / 100 / 1 \mathrm{G} \\ \text { Copper } \end{array}$ | 1 Segment | Copper | - | $\begin{aligned} & \text { LFD / } \\ & \text { LFDC } \end{aligned}$ | RK-8V2 rack mounts RK-8V2-BPL Blank Plates | Holds up to 8 taps in 1RU |

915-7513-01 $7091 \operatorname{Rev} \mathrm{C}$

