# Using the KAD/SWI/101

TEC/NOT/065

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## 38.1  KAD/SWI/101 overview

The KAD/SWI/101 is a four-port 100BaseTX Ethernet switch. The internal routing table is fixed, therefore incoming packets on the three ingress (DAU) ports are forwarded to the egress (aggregator) port. The KAD/SWI/101 transparently supports IEEE 1588v1 Precision Time Protocol (PTP) messages.

The KAD/SWI/101 can be used in the following applications:

- As a lower tier switch in a system where synchronization is provided by a NET/SWI/004 PTP Grandmaster.
- As a stand-alone switch in a system consisting of an Acra KAM-500 and a third party Ethernet source.

## 38.2  KAD/SWI/101 software

The KAD/SWI/101 is supported by DAS Studio 3. As the internal routing table is fixed, no setup is required. Four status registers are available (one for each Ethernet port), which indicate the number of packets passed on each port. These registers reset to 0 every second.

## 38.3  KAD/SWI/101 as a lower tier switch

The KAD/SWI/101 can be used to aggregate data from up to three KAD/BCU/140 modules and send this data to a NET/SWI/004. Synchronization is achieved using PTP packets originating from the NET/SWI/004. Programming is accomplished via the console port of the NET/SWI/004.
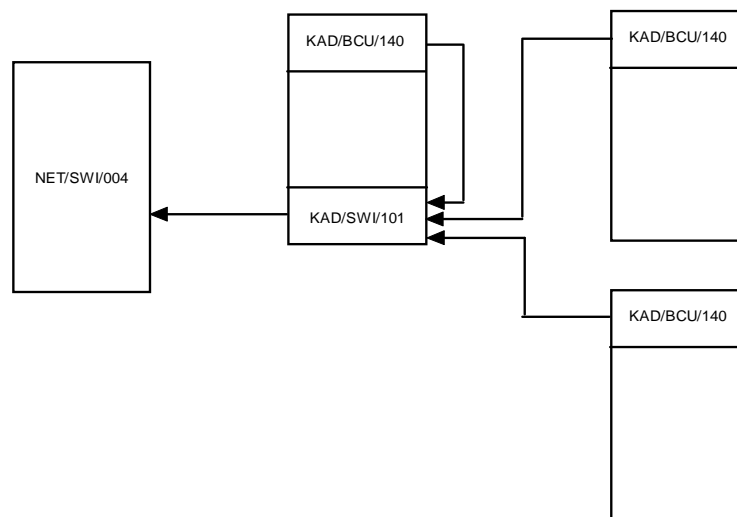


*Figure 38-1: KAD/SWI/101 in a NET/SWI/004 PTP time synchronized system*

**NOTE:**  The maximum number of KAD/SWI/101 switches (or any Curtiss-Wright switches) that can be cascaded is two.

## 38.4  KAD/SWI/101 as a stand-alone switch

The KAD/SWI/101 can be used to aggregate data from an Acra KAM-500 and a third party Ethernet source and send this data to another network node.

Synchronization is achieved using an Acra KAM-500 time module in the chassis containing the KAD/SWI/101; a KAM/TCG/102/D is the most suitable as its IRIG-B outputs can be used to achieve system synchronization. This assumes that the third party Ethernet source accepts IRIG-B synchronization.

**NOTE:** Ensure that the KAM/TCG/XXX module is set as Time Master in DAS Studio 3 setup.

Programming is accomplished through the spare DAU port of the KAD/SWI/101.
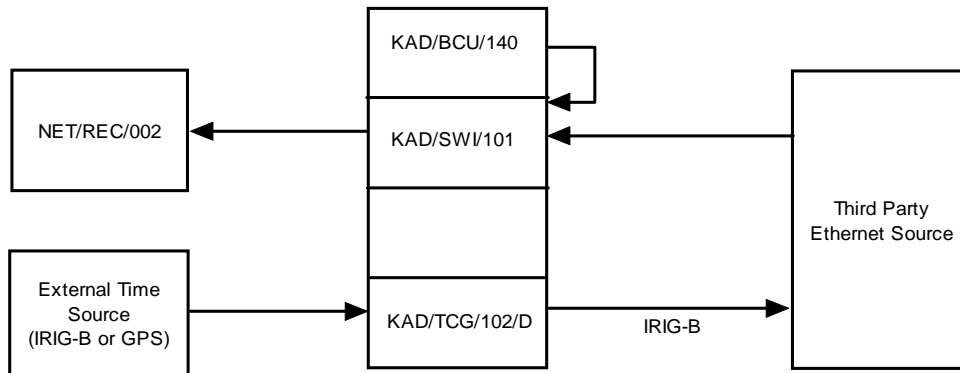


*Figure 38-2: Using the KAD/SWI/101 with a third party Ethernet source*

**NOTE:** The KAD/SWI/101 has neither an IP nor a MAC address so does not respond to Ping or ARP requests, however it does forward Ping or ARP requests. Therefore network nodes connected to the KAD/SWI/101, that are capable of responding to such requests, do respond.