

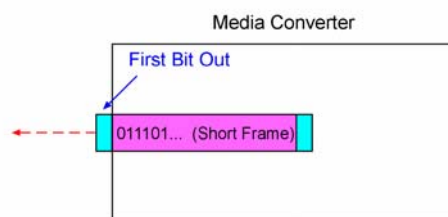
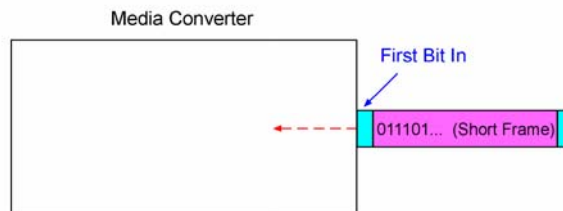
Application Note  
**Latency Test for KSD-103**  
2011/08/29

Device: KSD-103 Industrial 3-Port Fast Ethernet Media Converter Switches  
Standard: Latency definition specified in **RFC2544** and **RFC1242**.

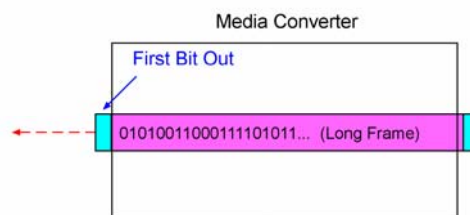
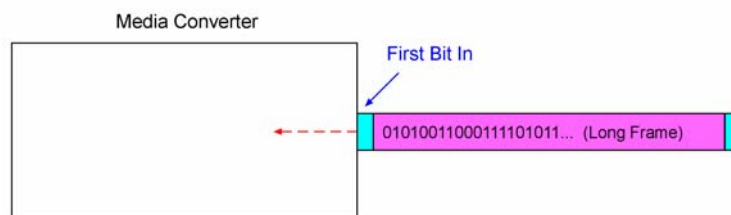
**1. Cut-Through (Bit-Forwarding) Latency**

1.1 Definition: The time interval starting when the end of the first bit of the input frame reaches the input port and ending when the start of the first bit of the output frame is seen on the output port. **(First Bit In, First Bit Out)**

1.2 Latency of the **Short Frame** forwarding



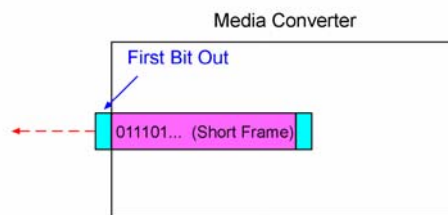
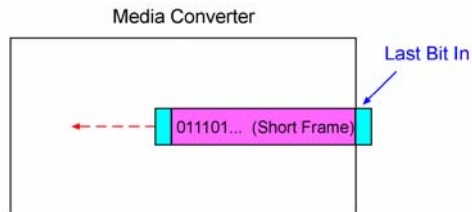
1.3 Latency of the **Long Frame** forwarding



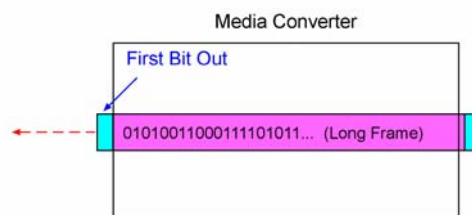
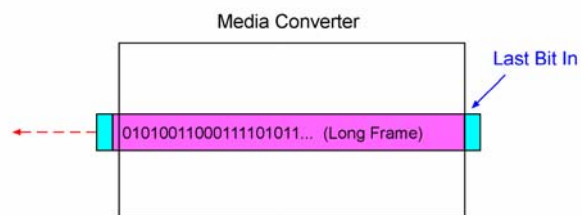
## 2. Store-and-Forward Latency

2.1 Definition: The time interval starting when the last bit of the input frame reaches the input port and ending when the first bit of the output frame is seen on the output port. **(Last Bit In First Bit Out)**

2.2 Latency of the **Short Frame** forwarding



2.3 Latency of the **Long Frame** forwarding

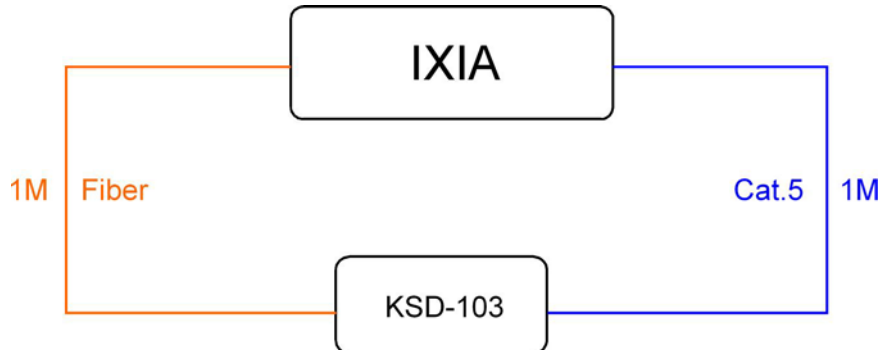


### 3. KSD-103 Forward Mode

KSD-103 supports Store-and-forward mode.

### 4. Test Configuration

Test configuration with IXIA tool and the shortest cables involved:



### 5. KSD-103 Test Result

Packet size / Mode	64-bytes packet	1518-byte packet
Cut-Through mode	7640 ns <sup>*1</sup>	123960 ns <sup>*1</sup>
Store-and-forward mode	2540 ns <sup>*2</sup>	2600 ns <sup>*2</sup>

Remark:

\*1 Data varies depending on the packet length.

\*2 The data is consistent for all different packet lengths.

\*3 Basically, the KSD-103 is a store-and-forward device. It is suggested to refer to the figures under "Store-and-forward" mode in the above table.