

## ASI I-MUX Inverse Multiplexer

## Application Note

The separate development of the broadcast and telecom industries has resulted in a situation where often the standard telecom bandwidths are not compatible with the needs of the broadcast industry. Typically this occurs in contribution networks where a single programme stream of between 4Mb/s and 12Mb/s needs to be transported and the only telecom links available and capable of this are E3 (34Mb/s) or DS-3 (45Mb/s). This partial filling of contracted bandwidth is obviously unnecessarily expensive.

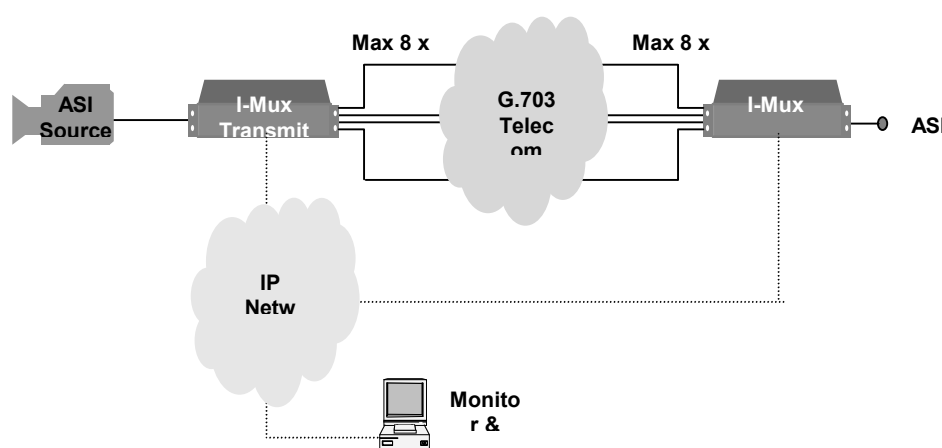
The KLEINBIT solution to this problem is the ASI Inverse Multiplexer (I-Mux). This solution involves the sub-dividing and coding of the incoming ASI stream into a number of channels suitable for transmission across readily available and cost effective E1 (2.048 Mb/s) or T1 (1.544 Mb/s) circuits. These packets are then transported across the G.703 telecom network to a receiver unit, which re-synchronises the ASI stream using the coding data.

The use of I-Muxing therefore allows cost effective transmission of medium bandwidth ASI transport streams.

### I-Mux Transport of ASI Streams

In this typical application an ASI transport stream of 7.92 Mb/s requires transport across a G.703 telecom network. The ASI input is divided into 4 separate streams of 1.98Mb/s that are coded, protected with Reed Solomon Forward Error Correction and transported across the G.703 network on 4 E1 (2.048 Mb/s) links.

At the receive end, the RS FEC corrects errors introduced by the telecom network and then using the coding added to each channel, the ASI transport stream is re-assembled.



The KLEINBIT ASI I-MUX is a modular product allowing the use of 2, 4, 6 or 8 E1/T1 links per ASI transport stream, giving ASI bandwidth capacities of between 4 Mb/s and 15 Mb/s.