

Operational States of Digital Interface Products for Part 68 and CS 03

The following operational states are needed to test your product to the FCC's Part 68 and IC's CS 03 requirements for T1 / DS1 / ISDN PRI interface products. A piece of diagnostic software developed for the interface, this is how these states are typically achieved.

- The capability to transmit an all ones (active state) / Alarm Indication Signal (AIS) with the board / product set to internal timing. This is for measuring output power and pulse repetition rate.
- The capability to transmit a 1 in 8 pattern **or** to loopback the receive pair to the transmit pair through the framer (known as payload loopback on most chipsets). This is to measure pulse template.
- **For long haul interfaces**, the capability to have -7.5 and -15.0 dB of Line Build Out (LBO) in the 1 in 8 AMI unframed pattern **or** in payload loopback
- The capability to transmit all zeros in AMI Unframed (idle state). This is for measuring transverse (longitudinal) balance and return loss.
- **For products that can connect one digital port to another digital port**, connect all timeslots (or at least one timeslot) from one port to a second port. This is for measuring through transmission characteristics.
- **For products which use encoded analog content**, the ability to connect the analog port to one of the 56 or 64 kbps digital timeslots. This is for measuring SF guard bands and On-Hook signal level.
- **For products that generate DTMF in analog format in a timeslot**, the ability to dial 0 to 9, * and # for a minimum duration of 3 seconds each.
- **For xDSL interfaces**, the ability to transmit at maximum output power. This is used to measure spectral density and longitudinal voltage.
- **For xDSL interfaces**, the ability to shut off the transmit "trying to connect" ability. This is to measure transverse balance.