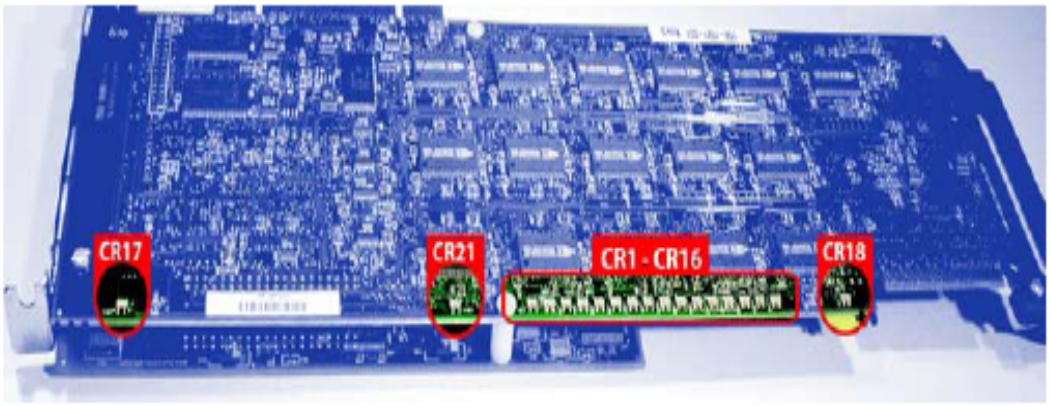
Board Status LEDs

In board status LEDs are located on the SmartWORKS DP. The location of each LED is shown in Figure 5-3.

Figure 5-3: SmartWORKS DP LEDs



CR1 - CR16 (DP 6409)

When on, these LEDs indicate that the DSP has started. Each DSP turns its LED ON to indicate a successful initialization. The DP 3209 has CR1-8.

CR17

A three stage power and board initialization monitoring LED with the following occurrences:

- ON, indicating 3.3V power is supplied and the board is ready for the driver to be loaded.
- OFF, indicating the driver has successfully loaded and the board has initialized.
- BLINKING, indicating the board initialization process has failed.
  Note: Invoking the ***MTBlinkBoard()*** API function causes the LED to blink. The total number of times it blinks equals the board number + 1. Use this function to match board location in a chassis with its board number.

CR18

This LED indicates that clock termination is enabled. "ON" indicates TDM clocks are being terminated. Note, to terminate clocks jumper J8 must be closed.

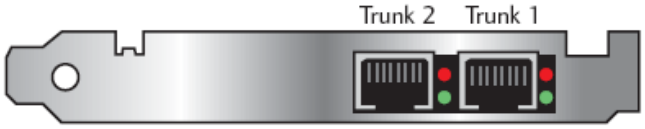
CR21

This LED indicates the state of the CPU. This LED is turned ON by the local CPU upon successful initialization.

Trunk Status LEDs

Two Trunk Status LEDs per trunk are included to help troubleshoot installation problems. As shown below, they are located next to the cable connections.

Figure 5-4: Trunk Status LED Locations



The following table shows possible states of LEDs and describes the state of trunk interface.

Table 5-5: SmartWORKS DP Trunk Status LED Meanings

Lights	Red	Green	Status
○ ○	OFF	OFF	FramerReset
○ ●	OFF	ON	Normal Operation

Lights	Red	Green	Status
	ON	ON	Signal Present & Alarm
	ON	OFF	No Signal, Framer Started

Installation and Wiring

The following section explains how to install the SmartWORKS DP. Wiring diagrams for T1 and E1 systems are also provided.

NOTE: When installing on a network without homologations approval, a CSU/DSU is required between the PBX and the DP card.

ESD Precautions

Switch off the power and remove power cords before opening the computer case. Do not re-attach power cords or switch on power to the computer while the computer case is removed.

 Exercise ESD Precautions: Wear an ESD wrist strap.

Secure the card in a PCI slot with a chassis screw. **NOTE:** Cancel out of the Windows "Found New Hardware" screen. Place the SmartWORKS CD into the CD ROM and allow the board installation to finish.

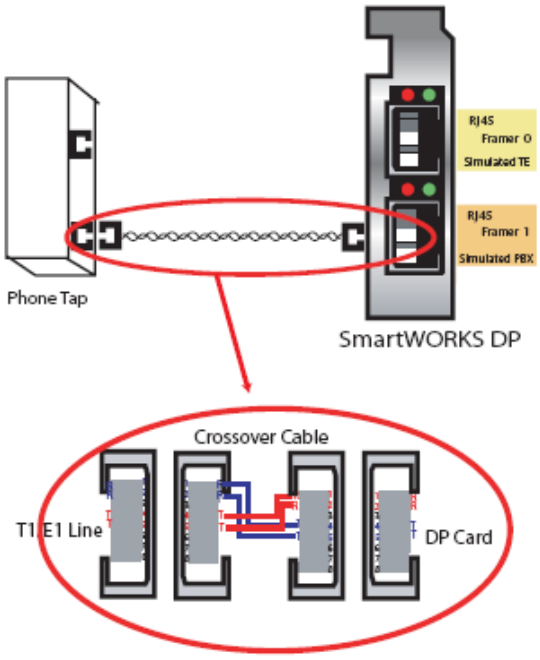
Cable Lengths

The maximum allowable cable lengths from the tap to the SmartWORKS DP card:

Trunk Type	Maximum Length
E1	16 meters
T1	30 meters

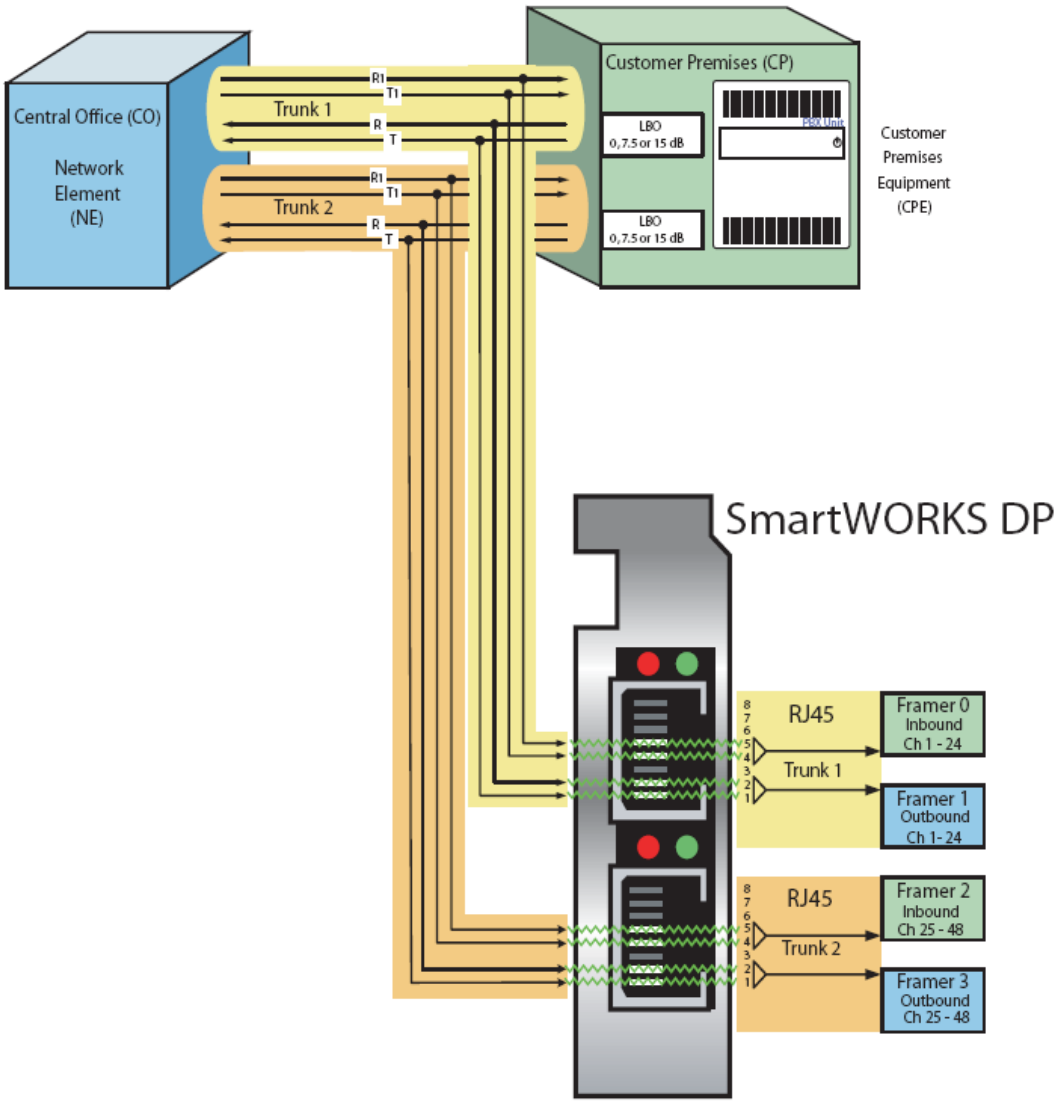
Wiring Requirements

A cross-over cable is typically required when installing a SmartWORKS DP. If a cross over cable is not used, the Receive and Transmit wires do not line up properly. Use the following diagram as a reference:



WIRING ON T1 INTERFACE

The SmartWORKS DP has two RJ-45 ports on its front bracket. In a typical configuration, standard Category 5 (Cat 5) network cables connect the DP to a pair of T1 trunks via a punch-down block. Connecting to the punch-down block may require cable modification. For more information on connecting Cat 5 cables to a punch-down block, refer to the documentation that accompanies your punch-down block.



Due to the non-symmetrical aspect of the ISDN protocol, it's vital to follow the wiring scheme above when passive ISDN support is used.

Wiring on E1 Interface

The process of passively tapping E1 trunks is no different than tapping T1 trunks. However, with European telephony there are a few differences in channel numbers and possibly hardware.

Instead of Cat 5 cable, some European networking and telephony lines run over standard Coaxial cable. So, a Dual BALUN converter may be necessary to make the switch from Coaxial to RJ-45 (see Figure 5-6 on page 47).

Also, if Coaxial is the type of networking cable being used tapping can be done through Coaxial TEE connectors.

Figure 5-6: DP E1 Wiring Diagram