

Am7936

Subscriber Power Controller (SPC)

PRELIMINARY

DISTINCTIVE CHARACTERISTICS

- CCITT ISDN-compatible switched mode power controller
- 70 V bipolar technology
- Accommodates both galvanically isolated and non-isolated configurations
- Wide input voltage range (15 – 65 V)
- Fixed (5 V DC) or programmable output voltage
- Polarity reversal with external components
- Low-power detection
- Automatic-load disconnect at programmed LOW voltage level
- Clock-synchronization input
- Fixed and programmable under-voltage protection
- Microprocessor reset output
- Programmable reset voltage level
- Low power dissipation

GENERAL DESCRIPTION

The Am7936 Subscriber Power Controller (SPC) is primarily designed to provide a stable, regulated 5 V DC supply to the ICs contained in the Terminal Equipment (TE1). It is fully compatible to the CCITT power recommendations for the 'S' interface. The Am7936 can also be used in Network Terminating (NT) equipment to supply the NT ICs with a regulated DC voltage and/or the 'S' interface with power. The input voltage supply to the Am7936 can be provided by a local line or, in the absence of local power, a battery or via the exchange from one or two pairs of subscriber lines; for example, the 'S,' 'T,' or 'U' reference points. The Am7936, coupled with a few external components, converts the unregulated DC input to a regulated DC output.

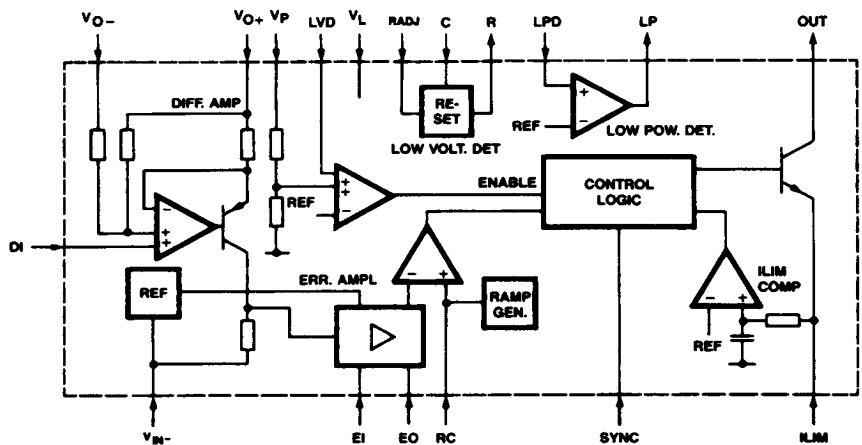
The Am7936 can be operated in both the non-isolated and the galvanically isolated configurations. In the non-isolated configuration, the input voltage is physically connected to the output voltage via the Am7936 and an external inductor.

This configuration may be used for TE voice-only applications such as feature phones, with no local power supply.

For TEs which have a local ground, a galvanically isolated power supply is required to avoid interference caused by noisy grounds or longitudinal currents induced from power lines. An external transformer is used to electrically isolate the input and output voltages of the Am7936. Galvanic isolation applies when a locally powered data terminal is attached via the Am7936's serial port to communicate with the 'S' interface.

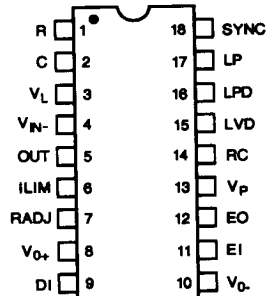
The Am7936 has been developed specifically for CCITT compatible configurations; however, its versatile design makes it useful in numerous other applications.

BLOCK DIAGRAM



BD006432

CONNECTION DIAGRAM



CD009581

Note: Pin 1 is marked for orientation.

ORDERING INFORMATION Standard Products

AMD standard products are available in several packages and operating ranges. The order number (Valid Combination) is formed by a combination of:

- a. **Device Number**
- b. **Speed Option** (if applicable)
- c. **Package Type**
- d. **Temperature Range**
- e. **Optional Processing**

AM7936

P

C

- e. **OPTIONAL PROCESSING**
Blank = Standard processing
B = Bum-in

- d. **TEMPERATURE RANGE**
C = 0 to +70°C

- c. **PACKAGE TYPE**
P = 18-Pin Plastic DIP (PD 018)
D = 18-Pin Ceramic DIP (CD 018)
J = 20-Pin Plastic Leaded Chip Carrier (PL 020)

- b. **SPEED OPTION**
Not Applicable

- a. **DEVICE NUMBER/DESCRIPTION**
Am7936
Subscriber Power Controller

Valid Combinations	
AM7936	PC, PCB, DC, DCB, JC, JCB

Valid Combinations

Valid Combinations list configurations planned to be supported in volume for this device. Consult the local AMD sales office to confirm availability of specific valid combinations, to check newly released combinations, and to obtain additional data on AMD's standard military grade products.