**Features**

- Supports standard DS-0A format.
- Designed for NEBS Level III compliance.
- Provides Diagnostic Testing and Latching Loopback.
- DS-0A timing is provided by an external DDS Office Composite Clock. Each shelf accepts two composite clock inputs: one active and one redundant.
- Supports data rates of 56/64Kbps for each DS-0.
- Each SC 5516 provides six DS-0A ports.
- Front Panel LED status indicators evaluate the dataport circuit.
- Front Panel Bantam jacks provide non-intrusive test access. Test signals can be transmitted/received from the DS-0A or the DS-1 directions and may be used to perform manual loopbacks with a bantam-to-bantam patch cord.
- Power requirements are less than 5 Watts per card.
- Configurable through TEAM applications, through a Telnet connection via the SCM, or at the SCM craft (CTRL) port.
- Supports auto-configuration via the SCM.
- Downloadable operating code.

**Introduction**

The SpectraComm 5516 High Density DS0-DP is a SS7 signal transfer point (STP) network access device designed for installation in a SpectraComm shelf located at a SS7 point of presence. Up to four SC5516 cards in the shelf serve as a channel bank for one SC5001 LTU, splitting one T1 line into as many as 24 DS0 channels. A single SpectraComm shelf with an SCM can hold up to three SC5001 LTUs, each interfacing with up to four SC5516 units. With the SC5516 and SS7 STP located at the same site, line protection for outdoor loop connections is not required.

**Typical SC 5516 Application**

Figure 1 shows SC5516 units providing a maximum of 72 DS0 channels from the three SC5001 T1 lines. Transmission data occupies 64 kbps time slots on one of four 4.096 Mb/s SpectraComm backplane data highways.

The SC 5516 converts the data in the 64 kb/s timeslots (received via the SC 5001) to a DS-0A bipolar NRZ AMI 56/64 kb/s signal for connection to an on-site SS7 STP. Conversely, the SC 5516 receives DS-0A data from the STP and converts it into 64 kb/s timeslots and sends it (via the SC 5001) on the T1 line.

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**Figure 1: Typical SC 5516 Application**

Diagram showing the connection between SC 5000 shelf, power supply, and STP.
**SC5516 Physical Specifications**

*Single-slot Blade*
- Width: 178 mm (7.0 in.)
- Height: 21 mm (0.81 in.)
- Depth: 241 mm (9.5 in.)
- Weight: 0.28 kg (10 oz.)
- Shipping weight: 0.74 kg (1 lb 10 oz)

**Environmental Specifications**

*Non-Operating*
- Temperature: -40 to 70 degrees C (-40 to 158 degrees F)
- Altitude: Up to 12,192 m (40,000 ft)

*Operating*
- Temperature: 0 to 50 degrees C (32 to 122 degrees F)
- Relative Humidity: 5% - 95% non-condensing
- Altitude: 0 to 3,048 m (0 to 10,000 ft)

**Electrical Specifications**

- Power (AC or DC), voltage, frequency, and fusing determined by your SpectraComm shelf or enclosure.
- Power Dissipation: Less than 5 Watts

**Compliance & Compatibility**

- Safety: UL Approved
- EMI: FCC Part 15 Approved
- NEBS Level III Certified

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**Operational Specifications**

**Modes of Operation**
- Point-to-Point
- Full Duplex (4-wire)

**Physical Interfaces**
- Front panel CTRL Port RJ45 to Local control
- Front panel Test Clock DB25M to DB9 (test equipment)

**Operation**
- Data Rates: 56Kbps, 64 Kbps
- Signal Encoding: Bipolar Non Return to Zero
- Network Control Codes: Latching DS0-DP Loopback (56Kbps only)
- Terminating Impedance: 135 Ohms nominal
- Operating Range: 0 to 1500 feet (using 24 AWG, unshielded)

**Diagnostic Testing**
- DS-0A Line Loopback
- DS-1 Channel Loopback