High Density Digital Signal Zero Dataport with DS0A Signalling

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.

Figure 1: Typical SC 5516 Application

General DataComm
The Best Connections in the Business

SpectraComm 5516
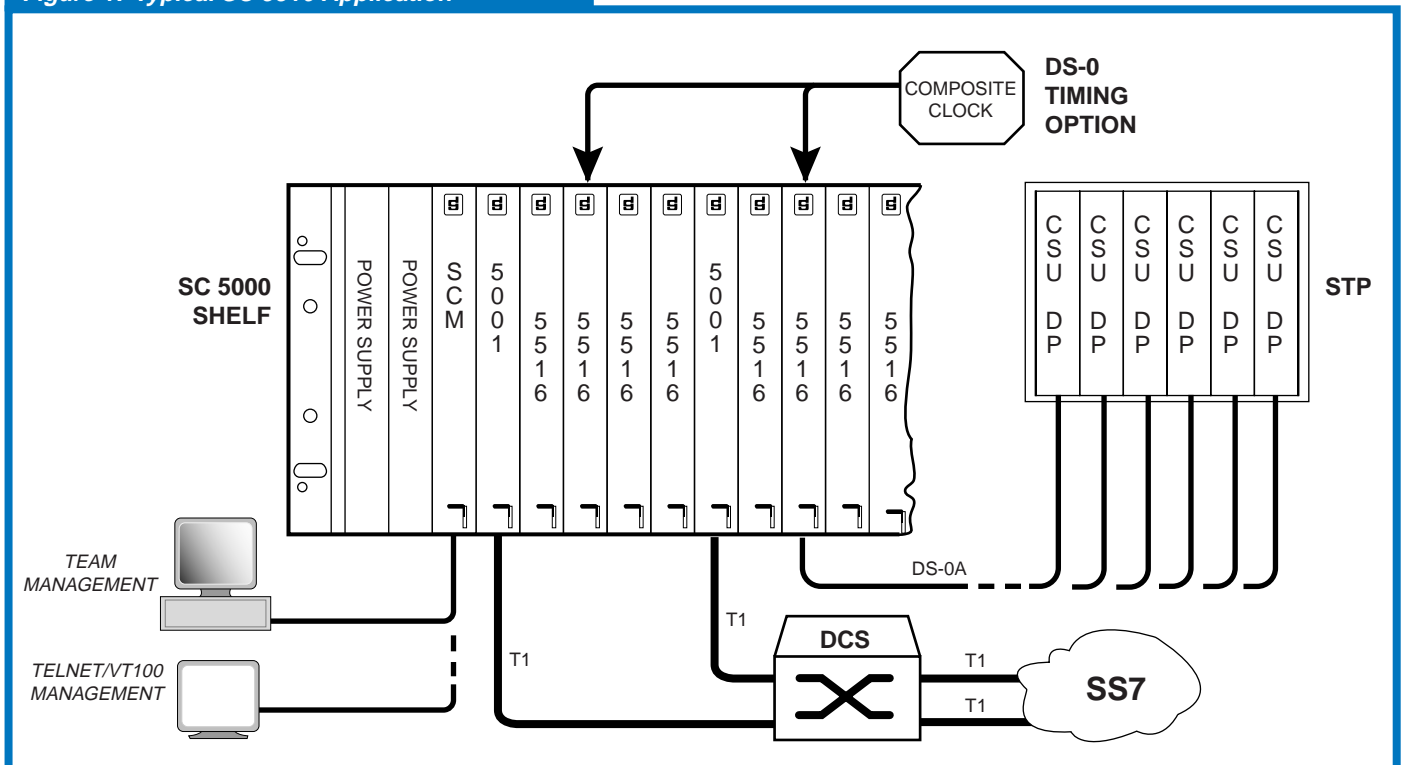
SC5516 Physical Specifications

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)
Derate by 1 degree C/1000 ft above sea level

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

Quality Assurance: ISO 9001: 2000 Certified

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 tquipment)

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

INS ON

LVL

TX

RX

1 2

3 4

5 6

Chn'l SEL

TM ALM

Test

CLK

5516

USDA
RUS
Accepted

0140_sc5516_ds05 Jan09