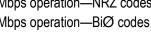


# 2152 DBS **DIGITAL BIT SYNC**

#### **FEATURES**

- Single slot module
- Serial data and clock output
- 120Ω input impedance
- 1 Kbps through 20 Mbps operation—NRZ codes
- 1 Kbps through 10 Mbps operation—BiØ codes



#### PURPOSE OF MODULE

The DBS plug-in module accepts serial digital data, recovers the clock for the data and transmits both data and clock.

## **OVERVIEW**

The DBS provides a cost effective means of reconstructing a clock from data-only signal lines and recovering the data. Bit code conversion is provided at both the input and output interfaces. The input to the DBS is an RS-422 signal on triax type connectors and the outputs are also RS- 422 signals on triax type connectors. Remote control is provided by either a serial (AL4301) or Ethernet (AL4302) link.

# SPECIFICATIONS

#### INPUT

- Signal:
  - ◊ RS-422; Differential
  - Minimum differential threshold voltage: 250mV
  - ◊ Hysteresis: 25mV
  - ♦ Common mode range: 0V to +5V
  - ♦ Overvoltage range (without damage): -7V to +12V
- Termination: 120Ω line to line
- Connector: Triax
- · Rates:
  - ♦ 1 Kbps to 20 Mbps—NRZ codes
  - ♦ 1 Kbps to 10 Mbps—BiØ codes
- Codes: NRZ-L, M, S; BiØ-L, M, S; RNRZ-15

## **CLOCK RECOVERY**

- Tracking: 6.2%, 3.1%, 1.6%, 0.7%
- · Capture: equal to tracking range
- Acquisition: < 250 bits</li>
- Retention: Retains synchronization in input signals with transition gaps up to 100 bits occurring once every 500 bit times

# OUTPUT

- Signal:
  - ◊ RS-422; Differential
  - $\diamond\,$  Minimum differential output with 50  $\Omega$  load: 2.0 V

RS-422 DATA OUT

DBS 215

- ♦ Nominal common mode output voltage: 2.5V
- Signal Format:
  - ◊ 0° clock & data
  - $\diamond$  51/75  $\Omega$  driver
- Connector: Triax
- Codes: NRZ-L, M, S; RNRZ-15

#### **COMPATIBILITY**

- AL4300 / AL6300 Chassis
- Limited to 1ms SI timing

#### **ENVIRONMENTAL**

- Operating temperature: 0° to 50° C
- Relative humidity: 15% to 95%; non-condensing
- Altitude: Sea level to 10.000 feet