# Subscriber Networks

## Model D9492
## DAVIC QPSK Demodulator

### Description

The Model D9492 DAVIC QPSK Demodulator is an integral component of Scientific-Atlanta's Digital Headend product line. This device works in conjunction with digital set-tops (including Scientific-Atlanta's Explorer® family of set-tops) and the D9482 DAVIC QPSK Modulator to provide a forward signaling and reverse path communications for interactive video and data systems over a conventional two-way CATV network. Combined, the D9492 QPSK Demodulater and D9482 QPSK  Modulator create a DAVIC-compliant headend QPSK signaling hub.


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### Features

- Interfaces with the D9482 QPSK Modulator through ATM-25 interfaces to create a DAVIC-compliant headend QPSK signaling hub
- Provides Reed-Solomon error correction for improved performance
- Provides simple-to-use front panel controls for easy operation
- Provides provisioning, control, and status monitoring information through interface to the D9482 QPSK Modulator from remote Ethernet access

# Model D9492
# DAVIC QPSK Demodulator

## Specifications

Baseband Interface to QPSK Modulator
Type: ATM-25
Connection Architecture: Star (from D9482 QPSK Modulator to multiple D9492 QPSK Demodulators)

**RF Specifications**

Tuner Frequency Range
5.0 MHz to 42.0 MHz
Tuning Step Size
250 kHz
Tuner Input Ranges
-13 to +3 dBmV (range 1)
-5 to +11 dBmV (range 2)
+3 to +19 dBmV (range 3)
+11 to +27 dBmV (range 4)
Maximum Input Power
> 35 dBmV (range 4) over specified tuner frequency range
Input Return Loss
> 12 dB
Tuner Spurious Output Response
< -50 dBc
Tuner LO Leakage at Input
< -15 dBmV (range 1)
Maximum Co-channel Single-tone Interferer
< -16 dBc for BER ≤ $1x10^{-8}$
Maximum Total Adjacent Similar QPSK Carrier Power for BER ≤$1x10^{-8}$
< +14 dBc at nominal carrier input level (no in-band noise)
Tuner Output Frequency
44.004 MHz nominal

**Modulation Specifications**

Modulation Type
Differentially encoded QPSK
Error Correction
Shortened Reed-Solomon (59, 53), t = 3
Channel Spacing
1 MHz
Data Rate
1.544 Mbps (nominal)
Maximum Cell Rate (exclusive TDMA)
3,000 ATM cells per second
Payload Datagram
ATM cell; AAL-5 compliant
Scrambling Generator
PRBS-6 synchronized to first bit after 4 octet preamble
Burst Alignment
Preamble detection, followed by unique word correlation
Bit Error Rate (BER)
Better than $1x10^{-8}$ @ 18 dB Eb / N0 (19.89 dB C/N) over the full RF input range.
Burst Noise Immunity
No lost cells for noise bursts up to -60 dBc/Hz of duration 1 µsec in any 350 µsec period

**Electrical Specifications**

Voltage (2 options)
-42 VDC to -56.7 VDC (option 1)
90 VAC to 260 VAC (option 2)
Power
< 20 W

**Connector Specifications**

DC Input (with option 1 only)
Terminal block
AC Input (with option 2 only)
3-prong male socket
RF Input
Type F (75 Ω)
IF Monitor Port
Type F (75 Ω)
ATM-25
RJ-45
Alarm Relay
Terminal block
Alarm Contact Closures
Contact type: 1 form C (NO, NC) contacts
Contact rating: 115 VAC; 1A; switched

**Mechanical Specifications**

Rack Mount Type
EIA RS-310
Dimensions
1.75 in. H x 19 in. W x 16.5 in. D

**Environmental Specifications**

Operating Temperature
0°C to +50°C
Operating Humidity
0% to 95% non-condensing

Specifications and product availability are subject to change without notice.



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