



# MRT1000

## Modular Receiver Transcoder

The MRT1000, from Drake Digital, is a Commercial grade Modular Receiver Transcoder for use in Shaw's QT-Plus Satellite Service. It was designed to replace the transitional Receiver/IRD and Out-of-Band Modulator with a single 1RU device. The unit comes equipped with a Satellite Demodulator module (L-band Tuner) with a frequency range of 950-2150 MHz, which tunes to the Satellite Transponder to provide the required Out-of-Band data.

The MRT1000 also includes a QPSK Modulator producing SCTE 55-1 output to feed downstream Set-Top devices. The unit extracts the data from the satellite stream, and provides it as an SCTE 55-1 QPSK output for delivery of STB authorizations, Electronic Program Guide and other data signaling used in the system.



## Features

- Designed for use in SHAW's QT-Plus systems
- Frequency range of 950 to 2150 MHz
- QPSK Agile RF Output 70 to 130 MHz; +25 to +40 dBmV (SCTE 55-1)

## Ordering Information

Model	Stock #	Description
MRT1000	1002661A	Modular Receiver Transcoder

# Specifications

## Satellite Input

Connector:	1x "F" Female (Rear-Panel)
Frequency Range:	950 to 2150 MHz
Input Impedance:	75 $\Omega$
Return Loss:	10 dB
Input Level Range:	-25 dBm to -65 dBm / Transponder
Modulation:	QPSK, 8PSK
Format:	DVB-S2, advanced Turbo modes
Symbol Rate:	2 to 45 MSymbols/sec (Mbaud)

## QPSK Modulator Output

Output Mode:	SCTE 55-1
Symbol Rate:	1.024 Ms/s
Frequency Range:	70-130 MHz (tunable in 50 kHz steps)
Max. Power Output Level:	+40 dBmV
Level Adjustment Range:	15 dB
Phase Noise:	-95 dBc @ 10 kHz offset
Broadband Noise:	-75 dBc @ $> \pm 12$ MHz
MER:	$> 30$ dB equalized
Channel Frequency Response:	$< 1$ dB

## ASI Output

Connector:	Not Applicable on this Model
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## Alarms & Monitoring

Local Monitoring:	1x Power LED (Front-Panel)
Local Control:	1x IP Reset Button (Front-Panel)
Remote Monitoring:	1x RJ45; 10/100/1000Base-T Ethernet (Front-Panel) (GUI-based menu via Web browser)

## General

Dimensions (W x D x H):	19.0 x 14.5 x 1.75 inches (482.6 x 368.3 x 44.45 mm)
Weight:	8.35 lbs (3.79 kg)
Power Requirements:	100-120 VAC/60 Hz, 20 W
Operating Temperature:	32 to 122 °F (0 to 50 °C)
Storage Temperature:	-13 to 158 °F (-25 to 70 °C)
Operating/Storage Humidity:	0 to 95% RH @ 35 °C max, non-condensation

