NTP #: 411-1333-929
Draft 01.01 July 2000

CTR 24-01MO GHz

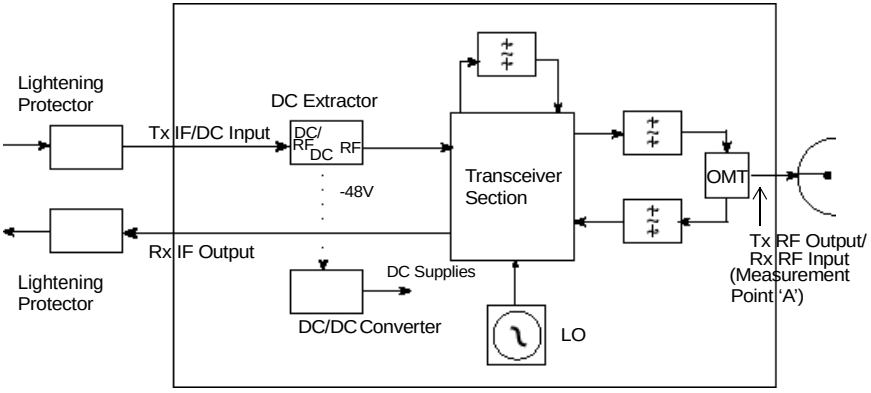
Quick Reference Guide

Product Overview

The CTR 24-01MO (NTVG12BD) outdoor transceiver is a customer premise transceiver designed to operate in various Receiver (Rx) and Transmitter (Tx) frequency bands. It is a Nortel Networks Reunion product that operates in conjunction with base station products, as well as customer premise products. It is compatible with Reunion's Release 1.2, 1.3 and 1.4 equipment.

CTR 24-01MO Transceiver

Figure 1: CTR 24-01MO Block Diagram



CTR 24-01MO Specification

Table 1: CTR 24-01MO Technical Specifications

TX	IF Input	RF Output
Frequency Range 24-01MO	450-650 MHz	25.05-25.25 GHz
Output Level (P1 dB)		≥22.5 dBm, -40° to +30° C ≥22.0 dBm, +31° to +55° C
Output Level (IP3)		>30.5 dBm, -40° to +30° C >30.0 dBm, 30° to 55° C
Input Impedance	50 Ohms	
Input/Output Connector	N-Type Female	N/A (integrated antenna)
Input/Output VSWR	1.92:1 maximum	N/A
Gain (not including antenna) @ 25° C		32 ±1 dB, minimum
Gain vs. Temperature		+2.0/-3.0 (-40° to +55° C)
Gain Flatness		±2.0 dB over bandwidth
Frequency Stability		<±4 ppm, (-40° to +55° C)

Antenna	CTR
Frequency	24.25-26.5 GHz
Bore-sight Gain (azimuth)	36.5 ±0.9 dBi, minimum
Polarity	Cross Polarized (Tx polarization determined mechanically on installation)
Beam Width (azimuth) Beam Width (elevation)	2.5± 0.2°, maximum 2.5± 0.2°, maximum
Cross-Polarization Discrimination	30 dB Minimum
Diameter	14" (35 cm)

RX	RF Input	IF Output
Frequency Range 24-01MO	24.25-24.45 GHz	150-350 MHz
Input/Output Connector	N/A (integrated antenna)	N-Type Female
Input P1 dB	-21 dBm	
Input/Output VSWR	N/A (integrated antenna)	1.93:1 maximum
Output Impedance		50 Ohms
Gain (not including antenna)		28.0 dB ±1.0 dB
Gain Flatness		±2.0 dB over bandwidth
Gain Stability		+2.0/-3.0 dB over temperature
Frequency Stability		<±4 ppm, (-40° to +55° C)
Noise Figure		7.3 dB, -40° to +30° C 7.5 dB, +31° to +55° C

Power Requirements	CTR
Input Voltage	+18 VDC
Inrush Current	7.5 A, maximum
Input Power	66 Watts, maximum
Environmental	**CTR**
Humidity	100% condensing
Altitude	10,000 feet
Operating Wind Resistance	50m/second on all surfaces
Operating Temperature	-40° to +55°C
Storage Temperature Range	-45° to +70°C (packaged)
Solar Loading	ETS 300 019 class 4.1 1120W/m^2, 50°C max.
Mechanical	**CTR**
Size (Length x Height x Width)	14" x 14" x 11” (35.6 x 35.6 x 27.9 cm)
Weight without brackets	25 lbs. (11.41 KG)

Converted Frequency Formula

Use the following formula to calculate the converted frequency:

TX: $f_{RF\ OUT}$ (GHz) = $f_{IF\ IN}$ (GHz) + 24.6

RX: $f_{IF\ OUT}$ (GHz) = 24.6 - $f_{RF\ IN}$ (GHz)

Note: The antenna has an option of a hydrophobic coating that can help to reduce ice build-up effect.

Note: Vent holes are covered with a Goretex™ patch.

Note: The transceiver mounts to a vertical pole of 2.5” to 4.5” outside diameter. It has a range of motion of 90° over and -60° under horizon. The bases of the antenna mount can rotate ±180°.

Technical Assistance Contact Information

In case additional technical assistance is required, or the transceiver unit is damaged upon receipt, contact Nortel Networks.

Nortel Networks Broadband Wireless Access (BWA) provides 24-hour customer service and technical support to ensure your service operation is trouble-free. If you have questions or need technical support, contact Nortel Networks Broadband Wireless Access at the following telephone numbers:

- In the USA and Canada, call 972-BWA-ETAS/972-292-3827