



HARDWARE TECHNICAL SPECIFICATION

VisionMaster FT X Band Scanner

Transmitter Characteristics

Magnetron Nominal Peak Power 10kW
(Typical 12.5kW) or 25kW
Magnetron Frequency 9410MHz

Transceiver Power Supplies

Nominal Input
AC 92V to 276V RMS at 47-64Hz or
DC 21.6V to 32V (10kW only)

Pulse Length/PRF

0.05µs/1760Hz Nominal
0.25µs/1760Hz Nominal
0.75µs/785Hz Nominal

Power Consumption

10kW TxRx
Standard Speed 210W
High Speed 330W
25kW TxRx
Standard Speed 250W
High Speed 370W

Pulse Generator

Solid State with pulse forming network driving a magnetron

Note: All power consumption figures assume maximum antenna size in 100 knot wind.

Antenna Characteristics

| | 4 ft. (1.2m) | 6 ft. (1.8m) | 8 ft. (2.4m) |
|------------------------------|--------------|--------------|--------------|
| Antenna Aperture Length | 4 ft. (1.2m) | 6 ft. (1.8m) | 8 ft. (2.4m) |
| Horizontal beamwidth | 2° max | 1.3° max | 1.0° max |
| Vertical beamwidth | 24° nom | 24° nom | 24° nom |
| Sidelobes within 10° (min) | -23dB | -23dB | -23dB |
| Sidelobes outside 10° (min) | -30dB | -30dB | -30dB |
| Gain (nominal) | 29dB | 30dB | 31dB |
| Polarization | Horizontal | Horizontal | Horizontal |
| Nominal Rotation Rate | 28/45rpm | 28/45rpm | 28/45rpm |
| Limiting relative wind speed | 100 knots | 100 knots | 100 knots |

Receiver Characteristics

Logarithmic
Low noise front end
Automatic or manual Tuning
IF centred at 60MHz
IF bandwidth 20MHz (Short pulse) nom
IF bandwidth 20MHz (Medium pulse) nom
IF bandwidth 3MHz (Long pulse) nom
Noise factor 5dB nominal