

Requirements for NQR / NMR console

2 transmitter channels:

- 0.1 to 300 MHz minimum frequency range;
- At least 40 dB amplitude control in at least 100 steps;
- 0.01° or less phase control over 360°;
- 0.2 Hz or less phase-continuous frequency switching;
- Minimum 0 dBm output;
- Maximum 50 ns switching time for amplitude, phase, and frequency.

1 digital receiver channel:

- At least 20-bit effective dynamic range;
- At least 10 MHz signal bandwidth;
- At least 16 MB of signal averager memory.

1 (single axis) gradient controller:

- At least 16-bit resolution;
- 1  $\mu$ s or smaller time resolution;
- At least 16 million waveform points.

Pulse programmer:

- Minimum 10 ns event time;
- At least 2048 sequence steps;
- External trigger;
- At least 2 levels of loops;
- 4 user assignable lines;
- At least 16 million waveform points for shaped pulses;
- Tachometer synchronization.

Commercial computer with standard operating system (Windows, Mac OS, Linux, etc.) and monitor for controlling the console and storing the data.

Software for controlling the console and processing the data. Data should be translatable for processing in third party software.

Cables for system connection.