



DS INSTRUMENTS

20GHZ INTEGRATED-LO RF MIXER



Description

THE most compact and economical microwave integrated-LO-mixer on the planet.

The **MX20000** is a wideband high-performance general purpose microwave double-balanced [mixer](#) with **integrated 12GHz – 22GHz Local Oscillator**. LO frequency can be set with front controls, USB commands, or the provided windows PC application. Using its ultra-low noise internal reference source, the LO signal has extremely low phase noise. The MX20000 makes a convenient **upconverter** or **downconverter** by eliminating the need for extra cabling and a separate bulky, expensive, high-frequency signal source.

Now shipping **Rev7 (March 2020)** with external 10MHz & 100MHz reference ports!

MX20000 Integrated-Mixer Features:

- Micro-USB powered from Laptop, battery-pack, Smartphone Charger, PC...
- Compact, rugged aluminum enclosure
- Bright and efficient OLED display
- Simple and effective control interface
- Industry standard virtual COM port serial commands
- Ultra-premium gold 50-ohm microwave SMA ports
- Internal precision reference frequency source
- Reference input and output MCX ports (10MHz & 100MHz)

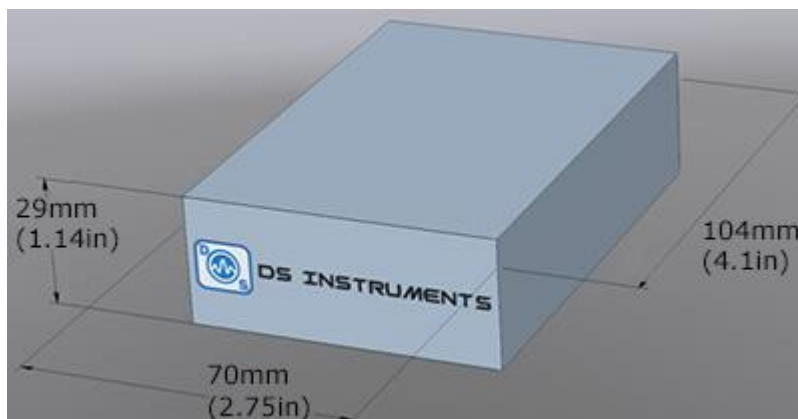
RF Hybrid Mixer Specs:

- Integrated **12 – 22GHz** low-noise programmable local oscillator
- RF range: **10 – 22GHz**
- IF range: **LF to 6GHz**
- High RF input P1dB > **+12 dBm**
- Low LO leakage:< -30 dB typical
- LO phase noise at 18GHz (10KHz offset): **~85 dBc**
- Low conversion loss (8-12dB typical)
- Return loss: 10 dB typical
- Reference Frequency: ± 280 PPB 10MHz TCXO & 100MHz VCXO

Typical Mixing Applications:

- General microwave lab applications
- Receiver development
- Communications applications
- Satellite uplink / downlink testing
- Radar systems
- Defense / electronic warfare

Mechanical Specifications:



MX20000 – LO Phase Noise:

