

# GENUS Benchtop Chassis

## With 100MHz internal reference

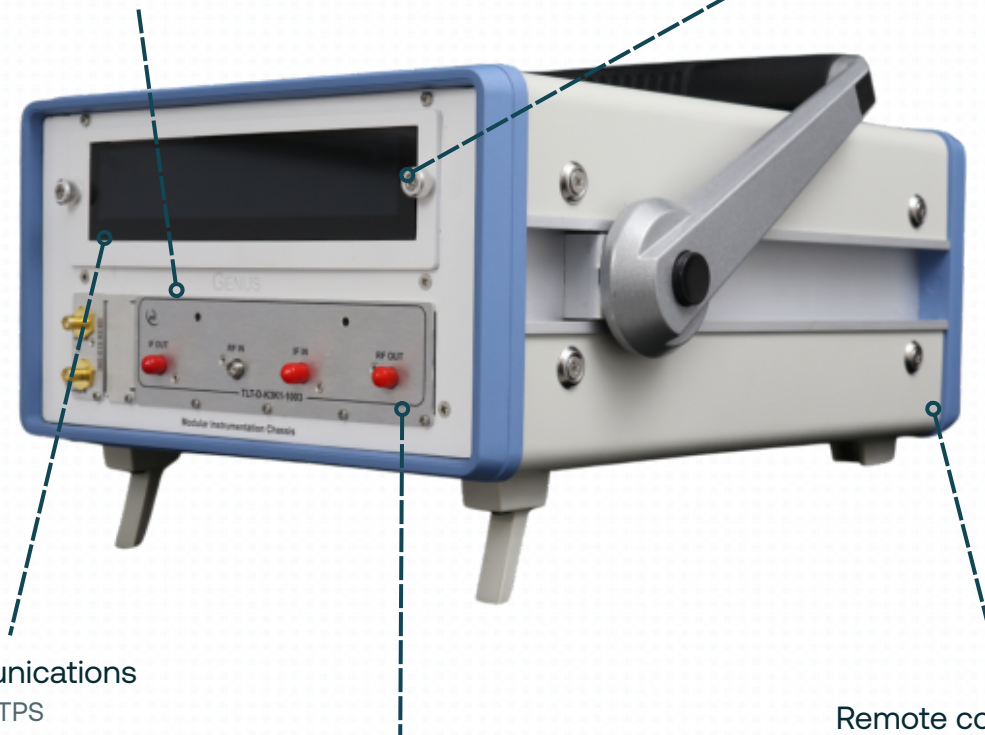
Modular benchtop instrumentation chassis. Accommodates all GENUS series 1U modules, up to 10 module slots. AC powered. Internal 100MHz card, which is not hot swappable.

### Compact & flexible

Compact chassis holding up to 10 RF modules, which can be mixed

### Local control & monitoring

via front panel capacitive HMI touchscreen. (Optional)



Secure communications  
with SNMPv3, HTTPS

### Range of RF functions

Frequency Converters, TLTs, Noise Generators, Redundancy Switches (N+1), RF Over Fibre, Splitter & Combiners, Matrices and Power Supply modules are available.

### Remote control & monitoring

via RJ45 Ethernet via RJ45, 10BaseT/100BaseTx, ETL TCP/IP protocol, SNMP & Web Browser Interfac

| General Specifications       |         |                                                                                                                                                                                     |
|------------------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AC Input                     |         | 85-264V <sub>ac</sub> 50/60Hz<br>(Fused (L+N))<br>Use T 3.15 A, 250V Ceramic 5x20mm x2<br>Lightning protection suitable for local<br>installation conditions should be<br>provided) |
| Redundancy & Hot Swap        |         |                                                                                                                                                                                     |
| PSU Redundancy               |         | N/A                                                                                                                                                                                 |
| CPU Redundancy               |         | N/A                                                                                                                                                                                 |
| Control & Monitoring         |         |                                                                                                                                                                                     |
| Local Control & Monitoring   |         | HMI, capacitive touchscreen                                                                                                                                                         |
| Remote Control & Monitoring  |         | Ethernet via RJ45, 10BaseT/100BaseTx<br>ETL TCP/IP protocol<br>SNMP v3<br>Built-in Web Server (HTTPS)                                                                               |
| Internal 100MHz Distribution |         | Optional                                                                                                                                                                            |
| Reliability                  |         |                                                                                                                                                                                     |
| MTTR                         |         | 15 minutes<br>(Assumes spares at hand.<br>Applies to LRUs only and assumed in-house stock.)                                                                                         |
| MTBF                         | Chassis | > 250 000                                                                                                                                                                           |
|                              | CPU     | > 250 000                                                                                                                                                                           |
| Physical & Environmental     |         |                                                                                                                                                                                     |
| Weight                       |         | <18kg                                                                                                                                                                               |
| Capacity                     |         | 10 module slots                                                                                                                                                                     |
| Temperature                  |         | Operating: -20 to 50°C / Storage: -40°C to 80°C                                                                                                                                     |
| Location/Humidity            |         | Indoor use only — 20 to 90% non-condensing                                                                                                                                          |
| Altitude                     |         | 10,000ft/3,000m AMSL (Above Mean Sea Level)                                                                                                                                         |

Note 1: The specification is subject to regular reviews and will be updated from time to time as part of our continuing product development and improved spec accuracy.

Note 2: Operation beyond the quoted limits stated above may cause instantaneous and permanent damage.

## Internal 100MHz reference and distribution module for GENUS Benchtop

The integrated 100MHz card has full control and monitoring via the parent chassis HMI or RJ45. The 100MHz reference source is switchable between this on-board ovenised 100MHz oscillator or the customer supplied external reference, connected to the EXT input connector.

| Internal 100MHz —High Stability Ovenised Oscillator |                                                                                                                                                                              |                                                              |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| Frequency Setting                                   | 100MHz $\pm$ 0.3ppm                                                                                                                                                          |                                                              |
| Output Type                                         | Sinewave                                                                                                                                                                     |                                                              |
| Output Power (typical)                              | 100 MHz +2 dBm                                                                                                                                                               |                                                              |
| Harmonic Rejection                                  | 2 <sup>nd</sup> >45dBc<br>3 <sup>rd</sup> >60dBc<br>4 <sup>th</sup> >60dBc<br>5 <sup>th</sup> >60dBc                                                                         |                                                              |
| SSB Phase Noise dBc/Hz (typical)                    | 10 Hz <-95<br>100 Hz <-120<br>1000 Hz <-130<br>10 000 Hz <-140<br>100 000 Hz <-150<br>1 000 000 Hz <-155                                                                     |                                                              |
| Frequency Stability                                 | Over operating temperature: < $\pm 5 \times 10^{-8}$<br>Load change( $\pm 5\%$ ): < $\pm 5 \times 10^{-9}$<br>Power supply variations( $\pm 5\%$ ): < $\pm 2 \times 10^{-9}$ |                                                              |
| Frequency Aging (per year)                          | $\pm 3 \times 10^{-7}$                                                                                                                                                       |                                                              |
| Alarms                                              | 100MHz source RF power level.<br>Card operational status.                                                                                                                    | User settable auto switchover for reference source (Int/Ext) |
| Hot-Swap                                            | Field replaceable by user                                                                                                                                                    |                                                              |

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