



TRACKING RECEIVER - NEYRPIC® DTR-500

THE NEXT GENERATION IN SATELLITE TRACKING RECEIVER

High performance fully synthesized tracking receiver, for high quality and cost-effective solution as a beacon receiver for satellite tracking in steptrack, tracking receiver for precise and reliable monopulse tracking during critical LEOP and TT&C application, and spectrum display.



PRODUCT OVERVIEW

- The next generation NEYRPIC® Digital Tracking Receiver (DTR-500) is an essential element in tracking geostationary and orbiting satellites. It benefits from NPC SYSTEM 50 years' experience in satellite tracking systems. Its unparalleled attributes and reliability resulting from proven track records alongside major satellite industry leaders, places the NEYRPIC® DTR-500 at the forefront of tracking receiver technology.

- Acquisition and Monopulse processing are powered by an high-performance DSP with Dual Processor Floating Point Unit; Dual core Arm Cortex-M7+ and a Cortex-M4 MCU clocked at 480 Mhz.

Other tasks like spectrum analysis, Human Machine Interface and Monitoring & Controls are handled by a quad-core ARM Cortex-A72 64-bits SoC running at 1.5 Ghz, equipped with 4GB RAM and 8GB of flash memory.

- The DTR-500 is provided with DSP and latest 64 bits processor generation and embedded digital RF control, providing flexibility and real-time analysis.

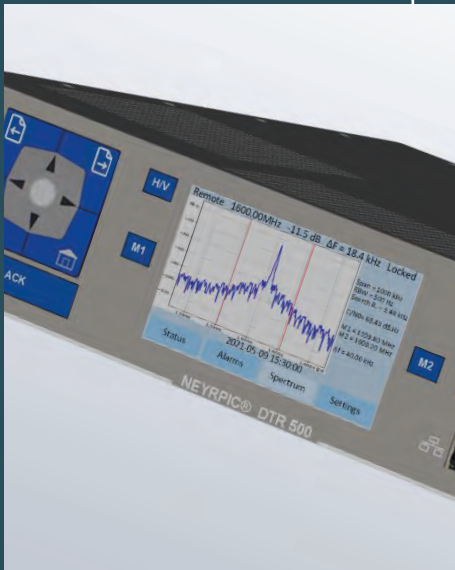
- Touch screen display is offered on a 5" resistive screen. It is associated with an alphanumeric keypad allowing the user to interact directly and configure specific applications in a very easy and timely manner. On the 800 x 480 pixel resolution touch screen, the user can easily view real time amplitude vs. frequency data. Software controlled signal detection can accommodate any modulation scheme.

- The NEYRPIC® DTR-500 can be configured for numerous input frequency ranges from L-band to Ka-band . Multi-band applications are easily accommodated by selecting one of 4 internal or external BDC. The NEYRPIC® DTR-500 technology allows 1 kHz frequency resolution for any input frequency range.

- The NEYRPIC® DTR-500 uses Ethernet Connectivity and runs an internal web server for a fast commissioning and maintenance which can be used for
 - Saving and restoring parameters
 - Fast software updates
 - Monitoring and recording physical I/O and system variable

The NEYRPIC® DTR-500 offers multiple monitoring and controls options such as SNMP via its MIB file, RPC and UDP Ethernet. For refurbishment projects a RS232 interface is also available.

- The NEYRPIC® DTR-500 can control an external monopulse RF scanner plate using up to 10 bits digital phase shifter for maximum accuracy and reliability in critical Launch and Early Orbit Phase (LEOP).



KEY FEATURES

The NEYRPIC® DTR-500 is an integrated rack mounted (2RU) chassis that includes:

- Touch screen display system associated with its Alphanumeric keypad
- Spectrum display
- Latest 64bits processors generation, and DSP dual core processors
- Digital receiver
- 100MB Ethernet and RS-232 serial ports
- 16 bits ADC digitized at 15 MHz and transferred to a 480 MHz, 32-bit Digital Signal
- Processor for real-time analysis.
- Ethernet Connectivity
- Ethernet webserver for commissioning and maintenance
- Monopulse capability (with optional RF monopulse plate)

SPECIFICATION

CARACTERISTICS	
INPUT	50 Ohm, Type SMA
DYNAMIC RANGE	> 90 dB
QUICK-LOCK ACQUISITION	(<1 second)
FREQUENCY	0.95 – 2.150 GHz (L Band configuration)
VSWR	2:1
IMAGE REJECTION	50 dB
STABILITY	+/- 5kHz
TOTAL INPUT POWER LEVEL	+10 dBm max
INPUT BEACON LEVEL RANGE	0 to -96dBm
BEACON TUNING STEP SIZE	1 kHz
RBW	250, 50, 20, 10, 5, 2, 1, 0.5 kHz
SIGNAL STRENGTH LINEARITY ERROR	+/- 1 dB
C/NO FOR NARROWBAND ACQUISITION	20 dB-Hz (1kHz BW)
DETECTION TYPE FFT	Based
SEARCH RANGE	+/- 8 to +/- 500 KHz
ACQUISITION TIME	300 ms (0.5 kHz BW, 1 MHz Span)
ADAPTATIVE ATTENUATION UP TO	15 dB



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