

## A new breed of analyzers for a new world



RANGER Neo 4    RANGER Neo 3    RANGER Neo 2    RANGER Neo +    RANGER Neo Lite    HD RANGER UltraLite    HD RANGER Eco

- ✓ Included
  - Optional
- ALL VERSIONS
  - DVB MODELS ONLY
  - ISDB-T MODELS ONLY
  - ATSC MODELS ONLY

	RANGER Neo 4	RANGER Neo 3	RANGER Neo 2	RANGER Neo +	RANGER Neo Lite	HD RANGER UltraLite	HD RANGER Eco
4K decoder	✓						
HEVC H.265 decod. + 4K Frame Grabber	✓	✓	✓	✓	✓		
MPEG-2 and MPEG-4 H.264 decoder	✓	✓	✓	✓	✓	✓	✓
Touch screen	✓	✓	✓	✓	✓		
Wide band LNB Compatibility (wbLNB)	✓	✓	✓	✓	✓		
2.4 GHz Wi-Fi analyzer	✓	✓	✓	✓	✓		
1.8 GHz LTE	✓	✓	✓	✓	✓		
OTT	✓	✓	✓	✓	✓		
Service recording	✓	✓	✓	✓	✓	✓	
HDMI output	✓	✓	✓	✓	✓		
Video/Audio input	✓	✓	✓	✓	✓	✓	✓
USB interface	2x Type A	2x Type A	2x Type A	2x Type A	2x Type A	1x Mini USB	1x Mini USB
Battery time	> 4 hours	> 4 hours	> 4 hours	> 4 hours	> 2 hours	> 2 hours	> 2 hours
Resolution filter 100 kHz	✓	✓	✓	✓	✓	✓	✓
Resolution filters 200 kHz, 1 MHz	✓	✓	✓	✓		✓	
Resolution filters 2, 10, 20, 30, 40 kHz	✓	✓	✓				
Echoes analysis	✓	✓	✓	✓	✓	✓	✓
Constellation diagram	✓	✓	✓	✓	✓	✓	✓
Web server and Video/Audio Streaming	✓	✓	✓	✓			
Spectrogram and Merogram	✓	✓	✓	✓			
MER by carrier	✓	✓	✓	✓			
SCAN + TILT	✓	✓	✓	✓			
IPTV analyzer	✓	✓	✓				
TS-ASI input and output	✓	✓	✓				
TS analysis and recording	✓	✓	✓				
Common Interface (encrypted channels)	✓	✓	✓				
Shoulder attenuation measurement	✓	✓	✓				
T2-MI	✓	✓					
Network delay Margin	✓	✓					
GPS for drive test	✓	✓	○	○			
DAB/DAB+ digital radio	✓	✓	○	○			
5 GHz WiFi + 2.6 GHz LTE + 6 GHz RF in	○	○	○	○			
Optical measurements and optical to RF converter	○	○	○	○			
ATSC standard			✓	✓	✓		
ISDB-T standard			✓	✓	✓		
DVB-T/T2 standard	✓	✓	✓	✓	✓	✓	✓
DVB-S/S2, DSS and ACM/VCM standards	✓	✓	✓	✓	✓	✓	✓
DVB-C standard	✓	✓	✓	✓	✓	✓	✓
DVB-C2 standard	✓	✓	✓	✓	✓	✓	✓
QAM annex B standard			✓	✓	✓		
PSIP analysis			✓				
Closed Caption			✓				

DESIGN AND SPECIFICATIONS ARE SUBJECT TO CHANGES WITHOUT PRIOR NOTICE. 0 IP4625 11/17

SPECIFICATIONS	RANGER <i>Neo</i> Lite	RANGER <i>Neo</i> +	RANGER <i>Neo</i> 2	RANGER <i>Neo</i> 3	RANGER <i>Neo</i> 4
<b>DIGITAL BROADCAST STANDARDS</b>	DVB-T/T2, DVB-T2 lite DVB-C/C2 DVB-S/S2 DVB-S2 Multistream DSS, ACM / VCM / CCM	... Also includes: DAB, DAB+ (optional)	... Also includes: MPEG-TS	... Also includes:	
<b>AUDIO CODECS</b>	MPEG-1, MPEG-2, HE-AAC, Dolby Digital, Dolby Digital Plus				
<b>VIDEO CODECS</b>	MPEG-2, MPEG-4 / H.264, HEVC / H.265				
<b>INPUTS AND OUTPUTS</b>	- Universal RF input 75 Ω - HDMI output - IP interface for remote control - Analogue Video/Audio input - 2xUSB (Type-A) for data transferring	... Also includes:	... Also includes: - ASI-TS input and output (BNC Female, 75 Ω) - IPTV multicast input (UDP / RTP, RJ45) - Common Interface slot	... Also includes: - 1 pps input	
<b>FUNCTIONS</b>	- Constellation diagram - LTE ingress test - Dynamic echoes analysis - StealthID (instant identification of tuning parameters) - PLS (Physical Layer Scrambling) - Ultra fast spectrum analyzer (70 ms sweep time) - 4K Frame grabber - MAX and MIN hold - FM RDS radio measurement and decoding - Screenshots and Datalogger for meas.reports - Beacon-Flyaways SND and VSAT - Wideband LNB - WiFi 2.4 GHz - LTE 1.8 GHz - OTT - Service Recording - Field strength measurement - Task planner	... Also includes: - Merogram - Spectrogram - Signal monitoring - Remote control (webserver) - MER by carrier - GPS coverage analysis (optional) - Video/Audio Streaming - SCAN + TILT	... Also includes: - TS recording - TS analysis - IPTV multicast measurement and decoding - Shoulder attenuation	... Also includes: - Network delay - DVB-T2-MI analysis	... Also includes: - 4K decoder
<b>SPECTRUM ANALYZER</b> Frequency Margin  Measurement range Span Resolution bandwidths	From 5 - 1000 MHz (Terrestrial) From 250 - 2500 MHz (Satellite) From 10 - 130 dBμV Full / 500 / 200 / 100 / 50 / 20 / 10 MHz		2 kHz (terrestrial) 10, 20, 30, 40, 100, 200 kHz 1 MHz		
<b>MEASUREMENT MODE (please refer to STANDARDS section)</b> Frequency Margin  DVB-T COFDM DVB-T2 Base and Lite COFDM DVB-C QAM DVB-C2 COFDM PAL, SECAM and NTSC FM radio DVB-S QPSK DVB-S2 QPSK, 8PSK, 16/32APSK DSS QPSK	From 5 - 1000 MHz (Terrestrial) From 250 - 2350 MHz (Satellite) Power (35 to 115 dBμV), CBER, VBER, MER, C/N, Link margin Power (35 to 115 dBμV), CBER, C/N, LBER, MER, Link Margin, BCH ESR, LDP iterations, Wrong packets Power (45 to 115 dBμV), BER, MER, C/N, Link margin Power (45 to 115 dBμV), CBER, MER, C/N, LBER, BCH ESR, LDP iterations, wrong packets M, N, B, G, I, D, K and L Level measurement Power (35 to 115 dBμV), CBER, MER, C/N, Link Margin Power (35 to 115 dBμV), CBER, LBER, MER, C/N, BCH ESR, Wrong packets, Link Margin Power (35 to 115 dBμV), CBER, VBER, MER, C/N, Link margin				
<b>INTERNAL STORAGE</b>	7 GB for measurement protocols, screenshots and transport stream recordings				
<b>PC CONNECTION (via ethernet interface)</b>	NetUpdate 4 (free software) + Free and automatic firmware updates + User customised channel plans + Measurement reports and screenshots				
<b>GENERAL</b>	Hybrid operation: Touch screen (7") or conventional keyboard DiSEqC 2.x generator (DiSEqC 1.2 commands implemented) dCSS / SCD 2 (EN50607) and SATCR/SCD (EN50494)				
<b>BATTERY</b>	> 2h	> 4 h (smart battery)			
<b>HARD CASE</b>	Optional	Included			

OPTIONS	RANGER <i>Neo</i> +	RANGER <i>Neo</i> 2	RANGER <i>Neo</i> 3	RANGER <i>Neo</i> 4
DAB, DAB+ GPS Coverage Analysis Rack assembly OPM + Optical-to-RF converter + WiFi 5 GHz + LTE 2.6 GHz + 6 GHz RF input WiFi 5 GHz + LTE 2.6 GHz + 6 GHz RF input	Available Available Available Available Available	Available Available Available Available Available	Included Included Available Available Available	Included Included Available Available Available