



Real time DOCSIS® analyzer



Datasheet

RF Specifications

Frequency

Input Frequency	5 MHz to 204 MHz (Upstream) 85 MHz to 1218 MHz (Downstream)
Resolution	1 Hz
Sample Rate	2500 MHz
Sample Clock Phase Noise (at 10 kHz)	-115 dBc/Hz

Amplitude

Noise Floor	-165 dBm/Hz
Maximum Input (per RF Input Port)	15 dBm
Analog Automatic Gain Control	21 dB

Realtime Processing

Frontend Digitizer Type	Full Band Capture
Realtime Processor Type	FPGA

DOCSIS® Capabilities Downstream

OFDM

Maximum Number of Channels	2
Maximum Channel Bandwidth	192 MHz
Maximum Channel Bitrate	Full line rate
PLC	All message blocks (TS-MB, MC-MB, TR-MB, EM-MB)
NCP	✓
Concurrent Active Profiles	All (16 + NCP)
Supported Profile Properties	All (flat, mixed modulation, zero bit-loading)
Dynamic Profile Changes	✓
Dynamic Profile Changes	All

Any questions?

Contact us:
support.xra@excentis.com

SC-QAM

Maximum Number of Channels	32
Maximum Channel Bitrate	Full line rate
Annex A (EuroDOCSIS)	✓
Annex B (US DOCSIS)	✓
Supported Modulations	All
Supported Interleaver Depths	All

Upstream

OFDMA

Maximum Number of Channels	2
Maximum Channel Bandwidth	96 MHz
Maximum Channel Bitrate	Full line rate
Initial Ranging Messages	✓
Fine Ranging Messages	✓
Bandwidth Request Messages	✓
Probes	Software upgradable
Concurrent Active IUCs	All
Supported Profile Properties	All (flat, mixed modulation, excluded and un- used subcarriers)
Dynamic Profile Changes	✓
Supported Modulations	All

A-TDMA

Maximum Number of Channels	8
Maximum Channel Bandwidth	All (from 200 kHz to 6.4 MHz)
Maximum Channel Bitrate	Full line rate
Supported UCD Types	29 and 35
Initial Ranging Messages	✓
Periodic Ranging Messages	✓
Bandwidth Request Messages	✓
Concurrent Active IUCs	1, 3-6, 9-11
Supported IUC Properties	All (except differential encoding)
Dynamic UCD Changes	✓
Supported Modulations	All

Interface

General	Web-based GUI	✓
	Python API	✓
	CLI Commands	✓
Capture	Channel Selection	✓
	Stream Selection (PLC, NCP, Data...)	✓
	Advanced Filtering (e.g. MMM type)	✓
	Rolling File Capture	✓
	Stop Criterion Types	Manual, size-based or time-based
Output	Output File Format	✓
	DOCSIS® Message Decoding	✓
	XRA Metadata Header (Timestamps, Profile ID, FEC Statistics, MER, CCF Segment, IUC, SID, Minislot IDs, CHID, UCD CCC, Grant Size, Ranging Timing Ad-justs...)	✓

General

RF Connectivity	Web-based GUI	Type F female
	Python API	75 Ω
Ethernet	LAN IPIMI 2.0	1 × 10/100/1000 Mbps RJ-45
	LAN Management	2 × RJ-45 10GBase-T ports
Storage	Internal Data Capture Storage	1.9 TB (or higher) SSD (NVMe)
	Operating System Storage	480 GB SSD
Weight	Gross Weight	24 kg (53 lbs)

Size

Dimensions (W× H× D)	437× 178× 521 mm (17.2× 7× 20.5 in)
Rack-mountable	☒
Rack Units	4U (19 in rack)

Power supply

AC Input Voltage	100-240 V AC auto-range
Rated Input Current	8-6 A (180-240 V); 12-8 A (100-140 V)
Maximum Power	800 W
Rated Input Frequency	50 to 60 Hz

System cooling

Two 8 cm exhaust fans, one 9 cm cooling fan and one rear fan.

Operating environment

Operating Temperature	5° to 35° C (32° to 95° F)
Non-operating Temperature	-40° to 70° C (-40° to 140° F)
Operating Relative Humidity	8% to 90% (non-condensing)
Non-operating Relative Humidity	5% to 95% (non-condensing)

Regulatory compliance

Electromagnetic Emissions	FCC Class A, EN 55055 Class A, EN 61000-3- 2/3-3, CISPR 22 Class A
Electromagnetic Immunity	EN 55024/CISPR 24
Safety	CE Marking (Europe), RoHS

Online references

Setup and Unboxing	https://setup.xra31.com
API	http://api.xra31.com
Support	https://support.excentis.com



EXCENTIS
www.excentis.com

Excentis Europe
+32 9 269 22 91
Sint-Denijslaan 489
9000 Ghent
Belgium
info@excentis.com

Excentis America
+1 347 720 6896 530
7th Avenue-Suite 902
New York, NY 10018
United States
info@excentis.com