kronback tracers

X16
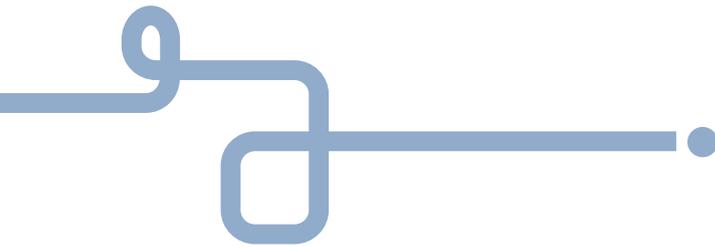## HFC ANALYZER

X16

FRONT

REAR

REVERSIBLE
RACK HANDLES

FEATURES

* Returnpath spectrum analyzer

* Up and downstream sweep system

* Downstream carrier detection up to 1000 MHz

* History logging of returnpaths

* DOCSIS burst detection with MAC decoding

* Constellation diagram display

* 16 input RF switch / combiner

* FSK control of field amplifiers and nodes

* Reversible brackets

* Access with smart phones and tablets

* Low power: less than 15 W

* Works with P4i handheld field unit

HFC NETWORK

X16

www.kronback.com

X16 HFC ANALYZER

RETURNPATH SPECTRUM ANALYZER
The Kronback Tracers X16 returnpath analyzer provides realtime and history spectrum analysis. The returnpath range is 2-85 MHz. Groups of X16 units can monitor an unlimited number of returnpaths within each headend. The X16 is accessed via all major web browsers and can also be controlled from smartphones and tablets. Multiple concurrent users can access individual returnpath signals, simultaneously with history logging of all returnpaths is performed.

SWEEP SYSTEM
The X16 features is a powerfull up- and downstream sweep system supporting the full returnpath range of 2-85 MHz and downstream from 50 up to 1000 MHz. Together with the compact and flexible P4i field unit a full and precise network alignment can be performed effectively.

CARRIER DECECTION
Carrier monitoring of all downstream carriers can be performed in the range from 50 to 1000 MHz. Indivual channel plans can be programmed for each input.
Precise readout of analog and digital carriers are presented online and as history information. Alarms can be dispatched based on programmable thresholds.

DOCSIS BURST ANALYZIS
Analyzis of DOCSIS burst are performed online. Constellation diagrams are presented live, and the MAC address of bursts are extracted and stored for history purposes. Integrating this information with GIS system can provide a powerfull proactive maintenance and fault finding system.

FULL RANGE RF SWITCH / COMBINER
The 16 inputs of each X16 can be switched and/or combined to dedicated outputs. The switch features a high linearity high isolation single-pole-16-throw switch. the combiner summes any combination of inputs to a dedicated output. The switch and combiner can be used as preselection switching for 3rd party measurement equipments in the headend.

NMS GATEWAY
Using the dedicated NMS slot, the X16 features is a full FSK communication system for control and monitoring of FSK devices in the HFC network. Support of HMS and proproitery protocols is provided and can be combined with a powerfull HFC topology view.

SPECIFICATIONS

PHYSICAL SPECIFICATIONS
- Height 43.8 mm (1 unit)
- Width 482 mm (standard 19" dimensions)
- Depth 215 mm
- Weight 2.7 Kg

ELECTRICAL
- Power over Ethernet according to IEEE803.2af (pin 4,5)
- 48V DC Connnector Reverse polarity protection
- Power consumption <15 Watt

ENVIRONMENTAL
- Operating Temperature: 5°C ~ 45°C
- Storage Temperature: -20°C ~ 55°C
- Operating Humidity: 10% ~ 90%, non-condensing
- Fanless device

CONTROL
- USB
  - USB Mini Connector
  - HID profile

NETWORK
- IEEE 802.3 10Base-T Ethernet
- IEEE 802.3u 100Base-Tx Ethernet
- IEEE 802.3af Power over Ethernet
- Fixed IP address and DHCP support

MANAGEMENT
- Remote
  - Web
  - SNMP
  - SNMP
  - USB
  Local control
  - Pushbuttons

RF SPECIFICATIONS
Input 1-16
- Connector: F-type 75 ohm, AC coupled. 100V DC isolation
- Frequency response: 2-1000 MHz
- Insertion loss: 0 dB ± 0.5 dB
- Return loss returnpath: >18dB
- Return loss downstream: 18dB@40 MHz, - 1,5 dB/oct
- Isolation: >60 dB

OUTPUT 1-4:
- Connector: F-type 75 ohm, AC coupled
- Return loss: 18dB@40 MHz, - 1,5 dB/oct
- Isolation: >60 dB
- NF: <12 dB

DISTORTION
- CTB, CSO, IM > 60dBc@output level 100dBuV
  - Specified as CENELEC 42 Channel equivalent

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Kronback Tracers is an innovative, rapidly-growing company. We operate globally and our dedicated and experienced staff are ready to serve our customers worldwide. Our philosophy is seeing is believing, so we encourage you to contact our sales organisation to test our products on your premises.