XPM

XPM Portable HD Microwave Link

The XPM features an accurate hardware design, absence of internal cabling and full modularity

The portable microwave system XPM is a digital link working either in COFDM technique or single carrier wideband Two modulators card are available; standard module offers DVB-S/S2/T modulation techniques, while dedicated COFDM hardware option offers DVB-T/T2 technique.

It is a split type (2 boxes) system composed by a RF head, waterproof IP65 (transmitter or receiver) and a rack mount lightweight control unit, whose name is Cleber.

Cleber can host up to six different boards plug-in, such as aggregators, switches, modulators or demodulators.

The RF box is installed on a tripod, for simplex transmission, and a base plate for two boxes with orthomode transducer and combiner is available for double simplex and full duplex configurations. Moreover, the transmitter can be equipped with an external power amplifier box to get higher distances. Connection between control units and RF heads is performed through a coaxial or triaxal cable with LEMO connectors, with distance of up to 300 meters.

MAIN FEATURES

- Simplex, Double Simplex or Duplex
- Modulations:
  DVB-T COFDM 2k/8k (QPSK,16-64QAM)
  DVB-S/S2 (QPSK, 8PSK,16-32 APSK)
  DVB-T2 COFDM 1k/2k/4k/8k/16k/32k (QPSK,16-64-256QAM)
- Frequency Band 1.2 ÷ 15 GHz
- Up to 500 MHz frequency agile (step size to be established with the user)
- Very Low phase noise
- Power Output @ 1 dB Compression Point:
  XPM/T/01 +34 dBm ±1 dB
  XPM/T/02 +36 dBm ±1 dB
  XPM/T/07 +33 dBm ±1 dB
  XPM/T/10 +30 dBm ±1 dB
  XPM/T/14 +30 dBm ±1 dB
- ASI input/output interface
- Optional external amplifier, dockable

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SPECIFICATIONS

GENERAL

Central frequency: 1.2 - 15 GHz
Frequency span: 500 MHz
Channel spacing: to be specified at order
RF channels: depending on channel spacing
Frequency stability: ± 2 ppm
IF/DC connector: LEMO (ERA.3T.275.CTL or ERA.3T.675.CTL)

TRANSMITTER

Saturated RF Output Power:

- **XPM/T/01** +34 dBm ±1 dB
- **XPM/T/02** +36 dBm ±1 dB
- **XPM/T/07** +33 dBm ±1 dB
- **XPM/T/10** +30 dBm ±1 dB
- **XPM/T/14** +30 dBm ±1 dB

RF Output Connector: Female N-type
RF Output Return Loss: > 20 dB
Spurious Output Content: < -65 dB
IF Impedance: 75 Ohm

RECEIVER

Noise Fugure: < 5dB
RF Input Connector: N (f)
RF Input Return Loss: > 20 dB
Image Rejection: > 75 dB
IF Impedance: 75 Ohm

TRIPOD

Height: Maximum 125 cm
Minimum 80 cm
Weight: 13.5 Kg
Rotaton plate: +/- 160°

CLEBER CONTROL UNIT

Width: 482.5 mm
Height: 43.65 mm
Depth: 380.65 mm (without connectors)
Weight: 5 Kg
Plug-in slot: 6

MS2: MODULATOR

Standard DVB-S/DVB-S2/DVB-T
Constellation
DVB-T COFDM 2k/8k (QPSK,16-64QAM)
DVB-S/S2 (QPSK, 8PSK,16-32 APSK)
FEC according to standard
Symbol Rate up to 49.5 MBaud (DVB-S2)
Inputs

- BNC 2 x ASI (Multistream in DVB-S2)
- Internal 2 x balanced ASI lines
- 10 MHz reference

Outputs

- BNC IF 70 MHz
- Internal 2 x balanced IF lines

MT2: MODULATOR

Standard DVBT/DVB-T2
Constellation
DVB-T COFDM 2k/8k (QPSK,16-64QAM)
COFDM 1k/2k/4k/8k/16k/32k (QPSK,16-64-256QAM)
FEC according to standard
Inputs

- BNC 1 x DVB-ASI

Outputs

- SMA IF 70 MHz
- Internal 2 x balanced IF lines

CONTROL

Front panel (TFT touchscreen display)
Web browser (embedded http server, no additional software needed)
SNMP v2

ELECTRICAL

Supply: **AC** 100-240 V~ 47/63 Hz IEC 320
DC 12 ÷ 36 or 22 ÷ 65 V 2 pins plug
Power consumption: < 130W

ENVIRONMENTAL

Operative Temp.: -10 ÷ 55°C
Relative humidity: 0 - 95% non condensing

Elber reserves the right to make changes to specifications of products described in this datasheet at any time without notice and without obligation to notify any person of such changes.

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