MAXIMAL

BTD 10G

Summit Development

BTD 10G is a **DUAL Full Outdoor** and **Full Duplex** microwave link for the free 10,3 - 10,6 GHz band. The SUMMIT DEVELOPMENT dual radio technology uses two SW radios in one hardware (from the Ethernet port, both radios are viewed as one radio!).

Compared to the classical 10 GHz PtP technology, BTD allows the transfer of double capacity and offers longer radio distance. In addition, one of these SW radios can be turned off at any time. The configuration settings of the radio allow much more variable use of the frequency band when compared to traditional radios.

CHARACTERISTICS

- Software Defined Radio SUMMIT DEVELOMPENT (own modem)

- Transmission capacity up to 715 Mbps full duplex

- In case of failure automatically switches to a backup link

- Channel size from 1,75 to 84 MHz (or 2 x 54 MHz)

- Modulation 4 to 512 QAM with ACM in one radio version

- Modulation 4 to 256 QAM with ACM in two radios version

- 4 x Gigabit Ethernet port (2 x SFP, 2 x RJ45)

- Jumbo packet transfer of MTU size up to 11 000 bytes

- Security and Access management, digitally encrypted transmitter

- Advanced QoS Port-based nad Bandwidth control Management

- Optimal solution for Triple Play services with IPTV support

- Support IEEE 802.1Q VLAN (also QinQ)

- Support packet-flow control acc. to IEEE 802.3x

- Power supply via Ethernet cable acc. to IEEE 802.3at

- Power supply via separate cable (DC input 20 to 57V)

- Automatic switching to backup power supply (PoE1, PoE2, PWR)

- Built-in spectral analyzer for searching for free channel

- Easy aligning with the beeper, built-in RSSI indicator or measuring the DC voltage

- Configuration of radio link in Windows, Linux, Android, iOS

- Monitoring of radio parameters by means of IP protocol, with implemented SNMPv2

- Monitoring of device parameters in real time (input voltage, current, power …)

- Automatic detection of radio polarization

- Direct installation of parabolic antenna

HIGHLY RELIABLE MICROWAVE PTP LINKS

PARAMETERS

GENERAL RF

Frequency band	10,3 - 10,6 GHz
Channel size of one radio	1,75 to 84 MHz
Channel size of two radios	2 x 3,5 MHz to 2 x 54 MHz
Asymmetric Bandwidth	YES
FEC	Reed-Solomon, Interleaving
ACM	YES
Frequency stability	± 5 ppm

MECHANICAL

Mechanical concept	Full Outdoor
Dimension	145 mm x 240 mm x 240 mm
Weight	3,5 kg

TRANSMITTER

Output power (one radio)	-23 to +10 dBm (± 1 dB) *
Output power (two radios)	2 x -23 to 2 x 7 dBm (± 1 dB) **
APC (Autom. Power Control)	YES
APCmin, APCmax	YES
Regulation APC by RSSI	YES

*   +8 dBm with modulation 256Q, 512Q   *   + 9 dBm with modulation 64Q, 128Q
** + 5 dBm with modulation 256Q   ** + 6 dBm with modulation 64Q, 128Q

POWER SUPPLY & CABLE

Power Over Ethernet	IEEE 802.3at (PoE+)
Separate DC power supply	20-57 VDC
Power consumption	up to 30 W
Ethernet cable Outdoor	FTP CAT5e max. 100 m

TRANSMISSION RATE (2 x 54 MHz channel)

Capacity of radio [Mbps]	Modulation	Sensitivity for BER 10-6 [dBm]
715	256 QAM ***	-62
650	128 QAM	-65
557	64 QAM	-68
465	32 QAM	-71
371	16 QAM	-75
278	8 QAM	-76
185	4 QAM	-82

*** 2 x 52 MHz channels setting

ENVIRONMENTAL

Operational temperature	-20°C to 50°C
Ingress Protection	IP-67

ANTENNAS

Type	Diameter [cm]	Gain [dBi]
ANT 10B35-C3	35	29,4
ANT 10B65-C3	65	35,7
ANT 10A90-C2	90	37,8
ANT 10A120-C2	120	40,2

COMPLIANCE

IEEE 802.3	1000 Base-TX, 1000 Base-T
IEEE 802.3az	Energy Efficient Ethernet
IEEE 802.3x	Flow Control
IEEE 802.1q	VLAN tagging, QinQ
IEEE 802.3u	Auto-Negotiation protocol
IEEE 802.3at	Power Over Ethernet plus

USER INTERFACE

Eth1, Eth2	2 x 10/100/1000 Base-T
SFP1, SFP2	2 x 1000Base-SX / 1000Base-LX
GUI	SMS (Windows, Linux-Wine)
WUI	SMS (Web browser, read-only)
MUI	SMS (Android, iOS)

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