

»»»» Connecting the world

BKtel develops and manufactures state-of-the-art devices for FTTH, RF Video Overlay and HFC broadband networks. According to customer requirements, our product lines provide modular and flexible solutions, enabling high-performance data transmission, telephony and TV services.

With R & D and production "made in Germany", BKtel can look back on 20 years of experience in the field. Since BKtel runs its own production facilities, the highest quality standards (ISO 9001) are guaranteed.

»»»» Products

BKtel's product portfolio is wide-ranging: optical transmitters, optical amplifiers, optical receivers, optical return channel systems, customer premises equipment. BKtel is also able to provide a full range of customer support services, such as planning, installation and training. BKtel: a partner you can rely on.



»»»» About BKtel

Growing out of the CATV networks division of Alcatel Cable, BKtel launched itself onto the cable television systems market in 1997 with a workforce of 14, all experts with many years' experience in the development, production and marketing in this technology field.

Today, BKtel operates from two locations in Germany, as well as having offices in China, Japan, Indonesia and LATAM. The company's workforce of 100 is busy serving customers all over the world and has built up a world-wide reputation in the field of CATV & SAT.



BKtel communications GmbH

Benzstrasse 4, 41836 Hueckelhoven-Baal
Phone: +49 (0) 24 33 / 91 22-0
Fax: +49 (0) 24 33 / 91 22-99

Office Kornwestheim:

Bahnhofstrasse 82, 70806 Kornwestheim
Phone: +49 (0) 71 54 / 1 59 90-0
Fax: +49 (0) 71 54 / 1 59 90-77

www.bktel.com
info@bktel.com

»»»» RF Video Overlay

Solutions for TV Services
via FTTH Networks



TV Services over FTTH: The Benefits of an RF Overlay Solution

Besides providing virtually infinite data transmission capacity, optical fiber is also the ideal medium for video transmission. RF Video Overlay technology enables the distribution of video/ TV signals over FTTH networks, allowing end-users to enjoy both digital and analog TV at a data rate equal to several Gbit/s.

Upgrade your FTTH network

RF Video Overlay allows you to add a large range of TV services to your offering, thus providing a sharp competitive edge.

Cost-effective and always available video solution

RF Video Overlay provides reliable, high-end quality video transmission. Based on a mature technology, RF Video Overlay is easy to install with low CAPEX and is adaptable to any size of network.

Off-load your data traffic

Data traffic is not blocked by TV Video content, reducing the data capacity you need as well as the complexity of your network.

Reduce your OPEX

Reducing complexity is the key to easier maintenance and cutting your network operating costs.

Benefit from easy subscriber connection

Nothing changes for the subscriber: the TV experience remains the same. However, the range of the offering is greater: analog or digital, SDTV, HDTV or UHDTV (with no need for reinstallation or modification of the home network).

RF Video Overlay: Multiple Options for TV Services

The kind of signals transmitted by the RF Video Overlay can come from a whole range of different sources. The classical approach is the transmission of cable television (CATV). Satellite TV can also be provided. At the same time, both digital

cable TV (DVB-C, DVB-C2) and satellite TV services (DVB-S, DVB-S2) can be offered. The output signals of RF Video Overlay solutions are inherently compatible with standard TV or (U)HDTV sets and STBs (set-top boxes).

The table shows the extremely high DVB data rate capacities for the various RF Video Overlay options.

RF video Overlay solution	No. of AM TV channels (PAL, NTSC)	No. of QAM channels (DVB-C)	No. of 8-PSK channels (DVB-S)	DVB total data rate
CATV	35	59	-	3.04 Gbit/s
DVB-C	-	94	-	4.85 Gbit/s
CATV + 1xDVB-S	35	59	25	5.54 Gbit/s
DVB-C + 1xDVB-S	-	94	25	7.35 Gbit/s
1xDVB-S	-	-	25	2.50 Gbit/s
2xDVB-S	-	-	50	5.00 Gbit/s
4xDVB-S	-	-	100	10.00 Gbit/s

Notes:

CATV: average number of TV channels

AM TV: transmission usually with ~36 FM radio channels

QAM: 256-QAM with 6.8 Mbit/s symbol rate and 188/204 RS FEC recommended

DVB-S: L-band 950 ... 2200 MHz with 8-PSK and 36 Mbit/s symbol rate, 9/10 BCH-LDPC and 188/204 RS FEC recommended

BKtel Product Range RF Video System Solutions

FiberSURF: Optical Ethernet and RF Video Overlay

FTTH networks based on point-to-point fiber optic connection and optical Ethernet can deliver data rates of up to 1 Gigabit (1Gbit/s) usable for bidirectional services, such as data and Voice over IP.

TV services are provided by RF Video Overlay. Analog TV, digital TV (DVB-C / DVB-T2) and satellite TV (DVB-S + DVB-S2) transmission is possible. Integrated customer premises equipment for all three services is available from BKtel.

Fiber.xSAT: Full-Scale Satellite-TV

This solution enables full feed-in of the complete range of satellite TV channels over FTTx (fiber optic access) networks (e.g. ASTRA19°), making these available to subscribers. This technology is based on the transmission of (DVB-S) TV signals consisting of multiple independent SAT IF bands (satellite feeds).

Fiber.DOCSIS: RFoG-All-Fiber Solution for CATV operators

BKtel's Fiber.DOCSIS is an RFoG-based optical transmission system delivering not only CATV but also a DOCSIS-compliant optical reverse path. In particular for CATV operators, Fiber.DOCSIS offers an easy migration path from an HFC to an all-fiber-based network.

