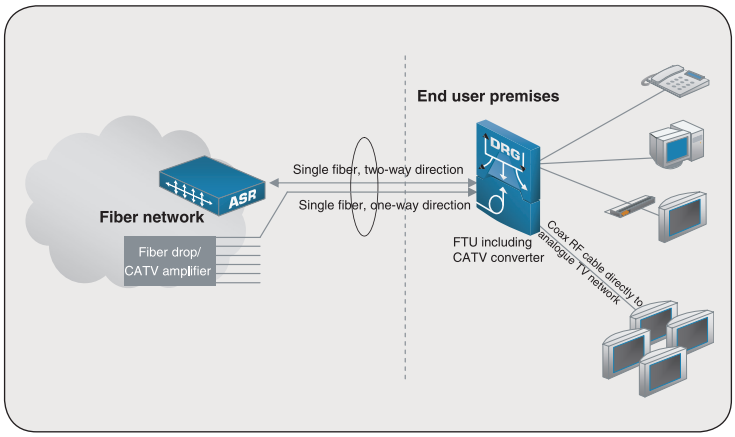
CATV converter

CATV receiver/MCC

Enables distribution of analogue CATV services over the FTTH network

Key benefits:

- Utilize the FTTH network for both advanced triple-play services and analogue CATV services
- Easily installed in the Fiber Termination Unit, FTU 500, and the DRG 500 series
- Eliminates the need for Set Top Boxes
- Allows a smooth migration to an all-IP infrastructure as existing coax cabling can be utilized during the process
- Enables CATV operators to extend their service portfolio with other IP based services, relieving the pressure on CATV as the only revenue carrier



The Fiber Termination Unit, FTU 500, can optionally be equipped with a CATV converter (two products available: CATV receiver and Media Converter for CATV, MCC). The CATV converter converts TV signals from the fiber to RF signals for distribution over the 75 Ω coax cabling to a standard TV antenna outlet. Hence, broadcast TV services are distributed over the fiber networks. The existing coax cabling in residential homes can be re-used, which is an advantage during the migrating to an all-IP infrastructure.

High quality TV signal

The high output signal in the CATV converter enables the use of multiple TV sets and VCRs simultaneously. At the same time the high amplification between optical and electrical signals reduces the cost of the head-end equipment.

The wide frequency range supported, guarantees that it is suitable for all typically used TV frequencies around the world.

The CATV converter is “HD ready”, meaning that it is completely transparent for HDTV signals and compliant with the transport of High Definition Video.

A supervision LED indicator shows if the input signal is too weak for optimal operation, which simplifies the installation and support of the TV service.

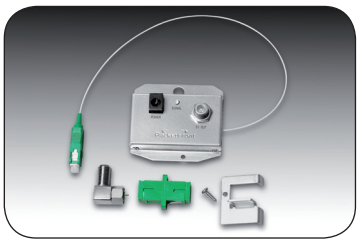
Triple-play support

The CATV converter, the FTU 500 and the DRG 500 series of customer premises equipment form together a highly integrated solution. It is especially suitable together with the single fiber DRGs. This combination allows one pair of fiber to carry both FTTH and RF signals, enabling all triple-play services, including analogue and digital TV, broadband telephony (VoIP) and fast Internet over the same infrastructure.

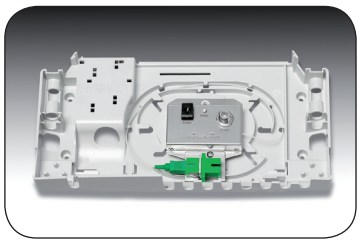
This solution allows CATV operator to extend their service portfolio, and offers revenue streams from other services than CATV services, hence relieving the pressure on CATV as the only revenue carrier.

No need for Set Top Boxes

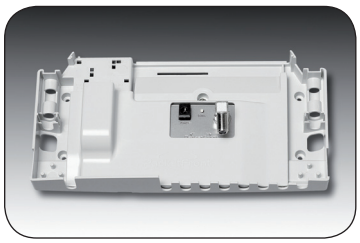
The CATV converter converts the RF signals in the fiber to coax-based signals. The coax cable from the F-connector, see picture below, is then directly connected to the analogue TV network at home, eliminating the need for Set Top Boxes.



CATV receiver



Mounted in the FTU 500



Demarcation cover on and F-connector mounted

PacketFront®
The Future of Broadband. Today

CATV receiver

Connectors supported

Fiber in	SC/APC
Coax out	F-type male metric

Optical parameters

Optical input power range	-10 dBm to +0 dBm
Optical wavelength	1100 nm to 1600 nm

RF parameters

Operating bandwidth	45 MHz to 870 MHz
RF output impedance	Unbalanced 75 Ω
RF output level	5.0% OMI, -10 dBm optical power input: ≥ 70 dBµV/ch
PAL, NTSC	

Environmental and indicators

Operating temperature	-5 to + 60°C, 23 to 140°F (for indoor use only)
Optical power indication	< -10 dBm: red color
Optical power indication	≥ -10 dBm: green color

Regulatory compliance

CE
UL
EN50083-2

MCC

Connectors supported

Fiber in	Integrated SC/APC
Coax out	F-type female

Optical parameters

Optical input power range	-10 dBm to +0 dBm
Optical wavelength	1100 nm to 1650 nm
Optical return loss	> 40dB

RF parameters

Operating frequency range	40 MHz to 862 MHz
RF output impedance	Unbalanced 75 Ω
Output return loss	> 14dB @ 862MHz
RF output level	> 10dBmV, 4.0% OMI, -6dBm optical
Flatness	+/-1.5dB
Equivalent noise current density	8 pA/√Hz
C/N (carrier-to-noise)	> 46dB[1]
CTB (composite triple beat)	> 58dB with Cenelec 42 channels RF load[2] > 62dB with NTSC 78 channels RF load[3]
CSO (composite second order)	> 58dB with Cenelec 42 channels RF load[2] > 62dB with NTSC 78 channels RF load[3]
Output RF-signal	The MCC unit provides an output RF-signal strong enough to “drive” up to 4 TV sets connected in cascade over 50m CoAX cable

Physical and environmental

Input voltage range	11 to 15 VDC
Input current	125 mA typical
Power consumption	1.5 Watt
Dimensions	30mm (H) x 35mm (D) x 50mm (W), 1.181˝ (H) x 1.37˝ (D) x 1.96˝ (W)
Weight	100 gr, 0,22 lbs
Operating temperature	-5 to 60°C, 23 to 140°F
Storage temperature	-40 to 85°C, -40 to 185°F
Optical power indication	< -10dBm: Red color
Optical power indication	> -10dBm: Green color

Regulatory compliance

EN 60950-1 first edition
IEC 60950-1 first edition
CB 60950-1 first edition
EN 60825-1
IEC 60825-1
CB 60825-1
RoHS and WEEE directives

[1] Calculated at -6dBm optical received power and 4% OMI minimum per channel, considering an equivalent RIN (relative intensity noise) of the link ≤ -150dB/Hz (including transmitter RIN, optical fiber RIN, etc) in 5MHz noise bandwidth
[2] 4% OMI on each RF channel, assuming angled optical connectors (APC) only on the optical link, average values
[3] 3% OMI on each RF channel, assuming angled optical connectors (APC) only on the optical link, average values

For more information go to:
www.packetfront.com

PacketFront®
The Future of Broadband. Today