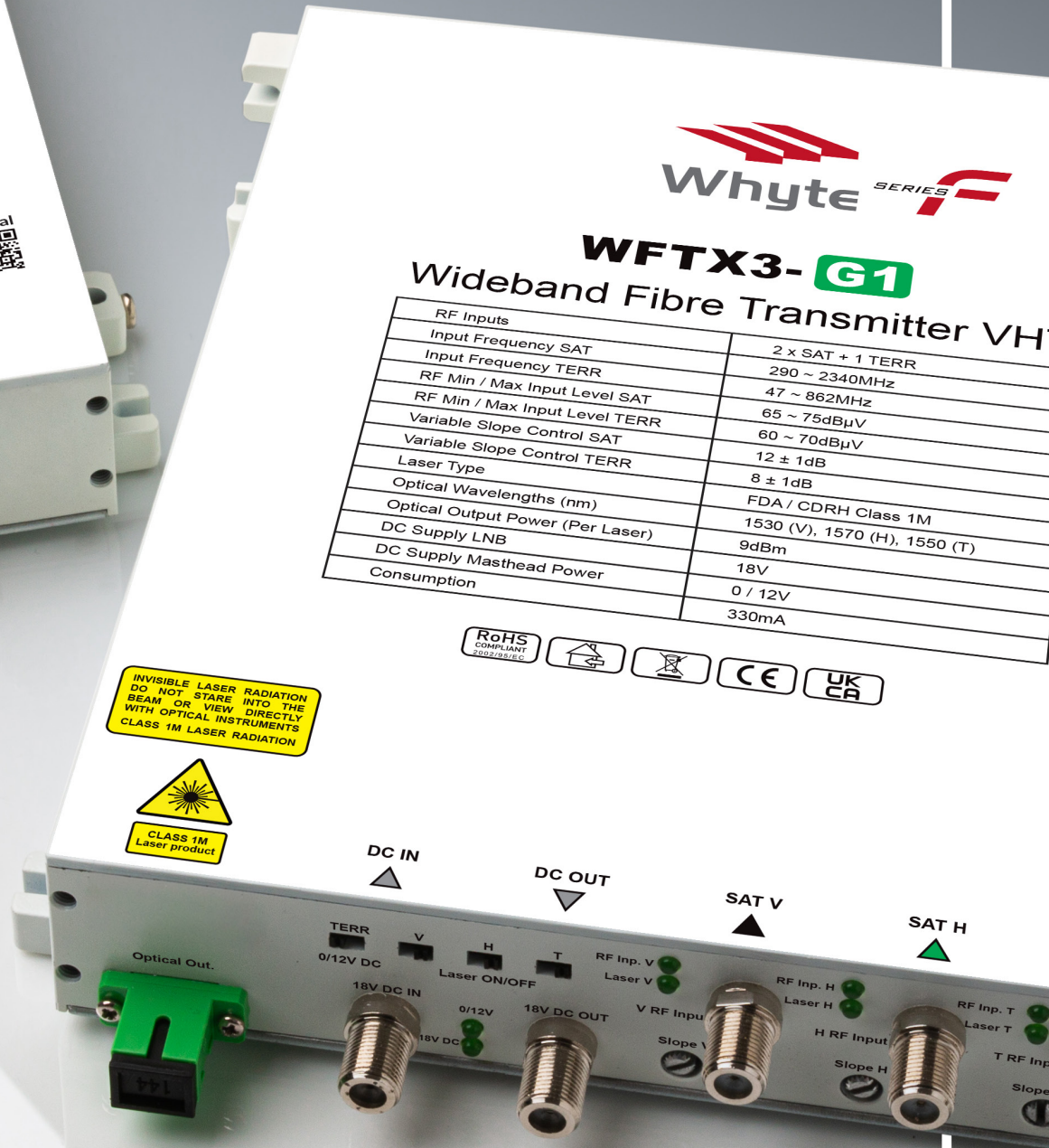




**Whyte**  
Technologies

# IRS PRODUCT BROCHURE



[www.whytetechnologies.com](http://www.whytetechnologies.com)



# Wideband Fibre Transmitter VH

RF Inputs	
Input Frequency SAT	2 x SAT
RF Min / Max Input Level SAT	290 - 2340MHz
Variable Slope Control SAT	65 - 75dBuV
Laser Type	12 ± 1dB
Optical Wavelengths (nm)	FDA / CDRH Class 1M
DC Supply Power (Per Laser)	1490nm (V), 1510nm (H)
Consumption	9dBm
	18V
	240mA



INVISIBLE LASER RADIATION  
DO NOT STARE INTO THE  
BEAM OR VIEW DIRECTLY  
WITH OPTICAL INSTRUMENTS  
CLASS 1M LASER RADIATION



CLASS 1M  
Laser product



DC IN ▲

DC OUT ▼

SAT V ▲

SAT H ▲

18V DC IN

18V DC

18V DC OUT

V RF Inp V Laser V

V RF Inp H Laser H

H RF Inp

Stop

Stop



# Series F Whyte Fibre Optic Transmitters



## WFTX3-G1

- 4 Year Warranty
- Single laser per Input
- Wideband SAT Input
- Full band TERR Input
- Variable Slope Control
- RF and Laser Indicators
- Multiple mounting options
- Ultra Low MER Degradation <0.2dB
- Satellite and Terrestrial Optical Transmitter
- 9dBm Optical Power supporting 64-Way split

The Whyte WFTX range of Optical Fibre Transmitters offer an efficient quality solution for Fibre IRS systems. Whyte Optical Transmitters utilise a single laser per input which are multiplexed (CWDM) for a single optical output. This configuration ensures minimum signal degradation. The V and H SAT inputs are compatible with all Wideband LNB's and will accept any signals within the 290~2340MHz range. The TERR input 47 ~ 862MHz supports FM, DAB and DTT.

The WFTX3-G1 features DC in and DC Output, Laser On/Off switches for V, H & TERR, Variable Slope Control for V, H and TERR and Masthead Power switch for enabling/disabling 12V DC at the TERR RF input. The WFTX3-G1 is a three-laser CWDM device.

Dual wideband satellites can be supported using the loop-in loop-out function (two transmitters) WFTX3-G1 and WFTX2-G2 and their matching receivers. Where a Quattro LNB source is required, Transmitters and Receivers are also used in pairs via their optical loop-in loop-out connectivity. Each individual path is supported by Variable Slope Control (VSC) and can be adjusted to present the flattest output for your Fibre IRS system.

When combined with other products from the Whyte Series F range, large scale FTTH (Fibre To The Home), FTTC (Fibre To The Cabinet) and FTTB (Fibre To The Block) Fibre IRS systems can be successfully implemented.



MODEL	WFTX3-G1
RF Inputs	2x SAT + 1 TERR / 75Ω Female F-Type
Input Frequencies SAT	290 ~ 2340MHz
Input Frequencies TERR	47 ~ 862MHz
RF Input Sequence	V, H, T (left to right)
RF Min/Max Input Level SAT	65 ~ 75dBµV
RF Min/Max Input Level TERR	60 ~ 70dBµV
SAT Input Return Loss	>10dB
TERR Input Return Loss	>8dB
Variable Slope Control SAT	0 (Flat) to 12 ±1dB
Variable Slope Control TERR	0 to 8 ±1dB
RF Input Isolation	>30dB (port to port)
RF Input Status	Below Min Input LED = Off
Laser type	FDA/CDRH Class 1M
Optical Output (SC APC)	1
Optical Wavelengths	1530nm (V), 1570nm (H), 1550nm (T)
Optical Output Power (Per Laser)	9dBm
Optical Output On/Off	Switch (per laser)
Optical Output Status	LED (per laser)
DC Supply LNB H & V	18V DC
DC Supply Masthead Power MHP	12V DC (switchable)
DC Input	18V DC
DC Indicator	LED On / Off
DC Output (Aux)	18V rated to 2.5A
Consumption	330mA
Operating Temperature Range	-10 to 50°C
Dimensions L x W x H (mm)	148 x 190 x 36
Weight	1130g

# Series F Whyte Fibre Optic Transmitters



## WFTX2-G2

- 4 Year Warranty
- Single laser per input
- Wideband SAT Input
- Variable Slope Control
- RF and Laser Indicators
- Multiple mounting options
- Satellite Optical Transmitter
- Ultra Low MER Degradation <0.2dB
- 9dBm Optical Power supporting 64-Way split

The Whyte WFTX range of Optical Fibre Transmitters offer an efficient quality solution for Fibre IRS systems. Whyte Optical Transmitters utilise a single laser per input which are multiplexed (CWDM) for a single optical output. This configuration ensures minimum signal degradation. The V and H SAT inputs are compatible with all Wideband LNB's and will accept any signals within the 290~2340MHz range.

The WFTX2-G2 features DC in and DC Output, Laser On/Off switches for V and H, Variable Slope Control for V and H SAT Inputs. The WFTX2-G2 is a two-laser CWDM device.

Dual wideband satellites can be supported using the loop-in loop-out function (two transmitters) WFTX3-G1 and WFTX2-G2 and their matching receivers. Where a Quattro LNB source is required, Transmitters and Receivers are also used in pairs via their optical loop-in loop-out connectivity. Each individual path is supported by Variable Slope Control (VSC) and can be adjusted to present the flattest output for your Fibre IRS system.

When combined with other products from the Whyte Series F range, large scale FTTH (Fibre To The Home), FTTC (Fibre To The Cabinet) and FTTB (Fibre To The Block) Fibre IRS systems can be successfully implemented.



MODEL	WFTX2-G2
RF Inputs	2x SAT / 75Ω Female F-Type
Input Frequencies SAT	290 ~ 2340MHz
RF Input Sequence	V, H (left to right)
RF Min/Max Input Level SAT	65 ~ 75dBµV
SAT Input Return Loss	>10dB
Variable Slope Control SAT	0 (Flat) to 12 ±1dB
RF Input Isolation	>30dB (port to port)
RF Input Status	Below Min Input LED = Off
Laser type	FDA/CDRH Class 1M
Optical Input (SC APC)	1 For optical input from WFTX3-G1
Optical Output (SC APC)	1
Optical Wavelengths	1490nm (V), 1510nm (H)
Optical Output Power (Per Laser)	9dBm
Optical Output On/Off	Switch (per laser)
Optical Output Status	LED (per laser)
DC Supply LNB H & V	18V DC
DC Input	18V DC
DC Indicator	LED On / Off
DC Output (Aux)	18V rated to 2.5A
Consumption	240mA
Operating Temperature Range	-10 to 50°C
Dimensions L x W x H (mm)	148 x 190 x 36
Weight	1100g

# Series F Whyte Fibre Optic Receivers

## WFRXVHT-G1 | WFRXVH-G2



- 4 Years Warranty
- Optical Input LED indicators
- Powered via the SAT Outputs
- Ultra Low MER Degradation <0.2dB
- SC APC Fibre Input / Output connector
- WB SAT V, H & TERR Output (WFRXVHT-G1)
- WB SAT V & H (WFRXVH-G2)



WFRXVHT-G1 and WFRXVH-G2 are Wideband Optical Receivers from the Whyte Series F Range. When used with a Whyte Fibre Optic Transmitter, signal degradation between the RF source (the LNB) and the Wideband Optical Receiver is a mere 0.2dB MER. A Tri-colour LED indicator per laser wavelength indicates the optical input status of the receiver.

The Whyte Series F wideband receivers connect directly to all Whyte Series D dSCR Multiswitches and Series 5WB Amplifiers, Taps and Splitters providing a convenient, compact, and robust solution. These wideband fibre receivers are line powered via the SAT outputs.

The WFRXVHT-G1 and WFRXVH-G2 receivers can be linked together (loop-through) enabling two satellites (Wideband) and terrestrial to be received over one fibre using five laser wavelengths, or one Quattro SAT + TERR (also over a single fibre). This configuration requires two Whyte Fibre Optic Transmitters that are also interconnected via the Optical Loop-through.

MODEL	WFRXVHT-G1	WFRXVH-G2
Optical Input/Output	SC APC	SC APC
RF Outputs	3 (V & H Wideband SAT + TERR)	2 (V & H Wideband SAT)
Optical Wavelengths	1530nm – 1550nm – 1570nm	1490nm - 1510nm
Frequency Range	47 – 790MHz / 290 – 2340MHz	290 – 2340MHz
Optical Input Level	0 ~ -12dBm	0 ~ -12dBm
Optical Input Levels LED	Low, Nominal and High	Low, Nominal and High
RF Output Level Wideband SAT	78 ±3dB	78 ±3dB
RF Output TERR	74 ±4dB	-
RF Return Loss	>10dB	>10dB
RF Output Connector Type	75Ω F Type (Female)	75Ω F Type (Female)
Power Indicator	Green LED	Green LED
DC Supply	Via SAT Outputs (18V DC)	Via SAT Outputs (18V DC)
Power Consumption Max @ 18V DC	220mA	160mA
Dimensions L x W x H (mm)	140 x 72 x 38	140 x 60 x 38
Weight	354g	236g

Optical Input    Optical Output

**Whyte** SERIES **F**

TERR (1550nm)    **Over**  
 H SAT (1570nm)    **Normal**  
 V SAT (1530nm)    **Under**

DC IN 18V

**WFRXVHT-G1**  
 Wideband Fibre Receiver

Single Laser Input Power	0 ~ -12dBm
RF Output Level TERR	74dBμV ± 4dB
RF Output Level SAT	78dBμV ± 3dB
Output Frequency Range TERR	47 ~ 862MHz
Output Frequency Range SAT	290 ~ 2340MHz
Consumption	220mA

RoHS COMPLIANT 2002/95/EC    CE    UK CA

Manual

SAT V **+DC**    SAT H **+DC**    TERR

Optical Input    Optical Output

**Whyte** SERIES **F**

**Over**    H SAT (1510nm)  
**Normal**    V SAT (1490nm)  
**Under**

DC IN 18V

**WFRXVH-G2**  
 Wideband Fibre Receiver

Single Laser Input Power	0 ~ -12dBm
RF Output Level SAT	78dBμV ± 3dB
Output Frequency Range SAT	290 ~ 2340MHz
Consumption	160mA

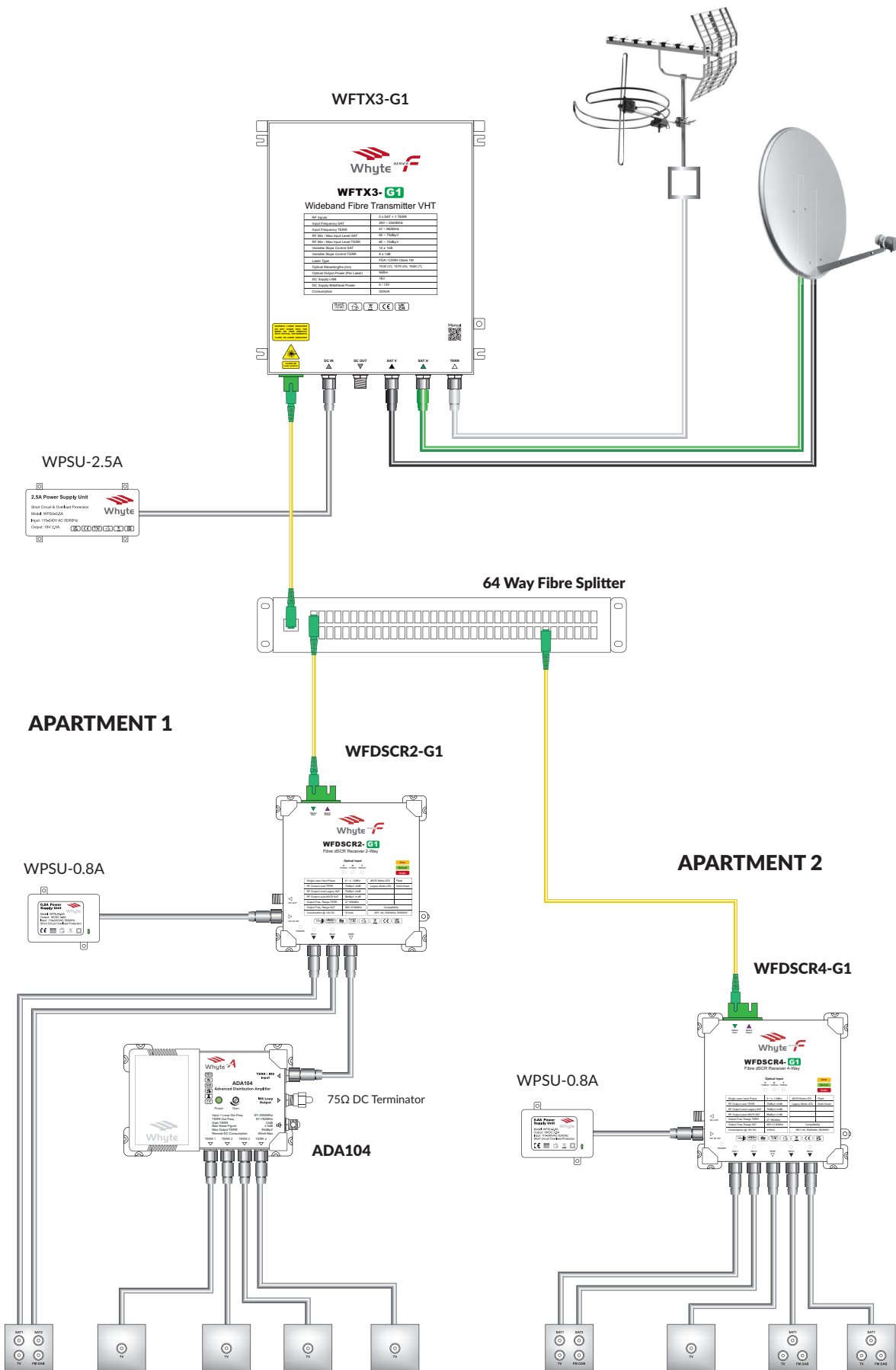
RoHS COMPLIANT 2002/95/EC    CE    UK CA

Manual

SAT V **+DC**    SAT H **+DC**

# Series F Configuration Example

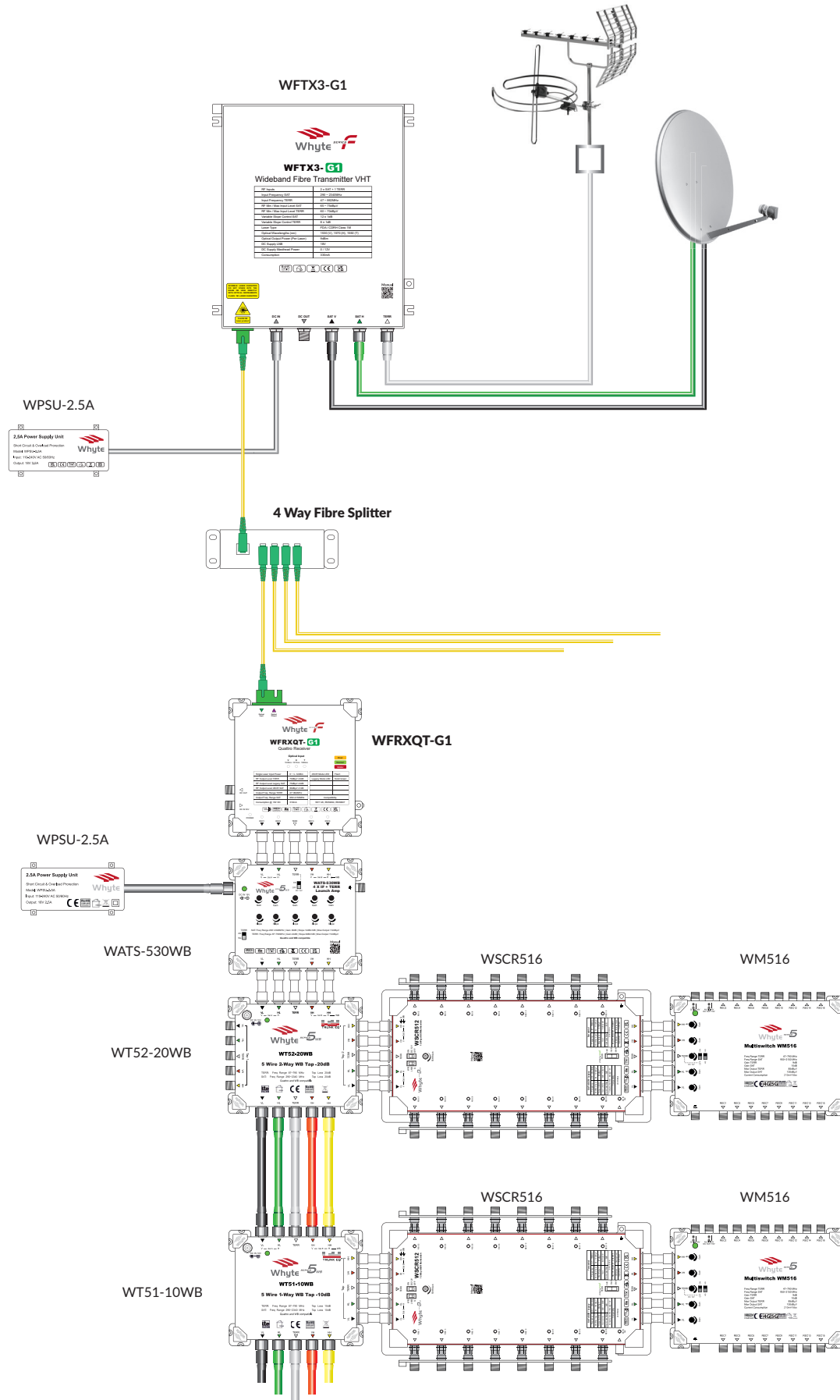
## FTTH - FIBRE IRS TO THE HOME





# Series F Configuration Example

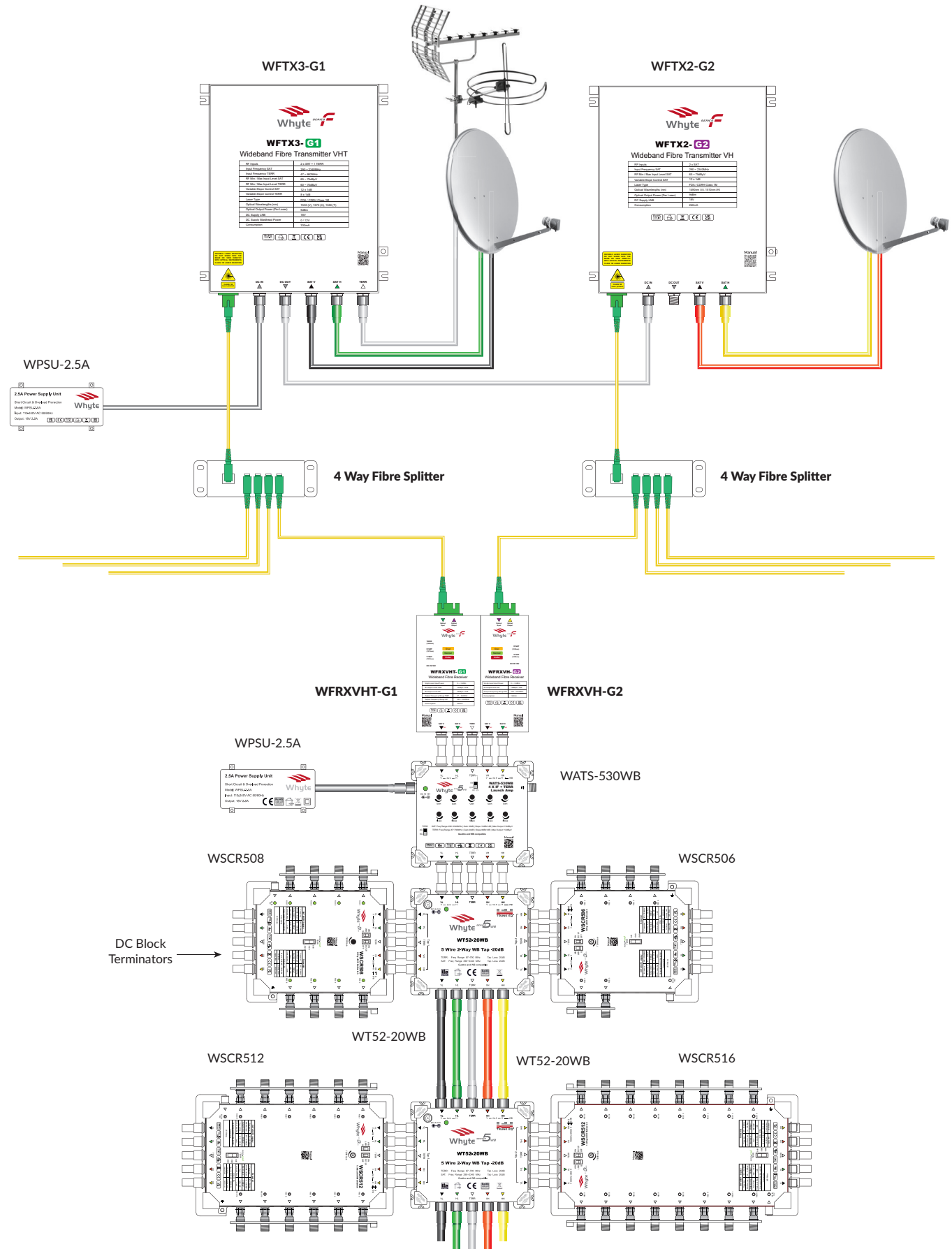
## FTTB - HYBRID FIBRE IRS





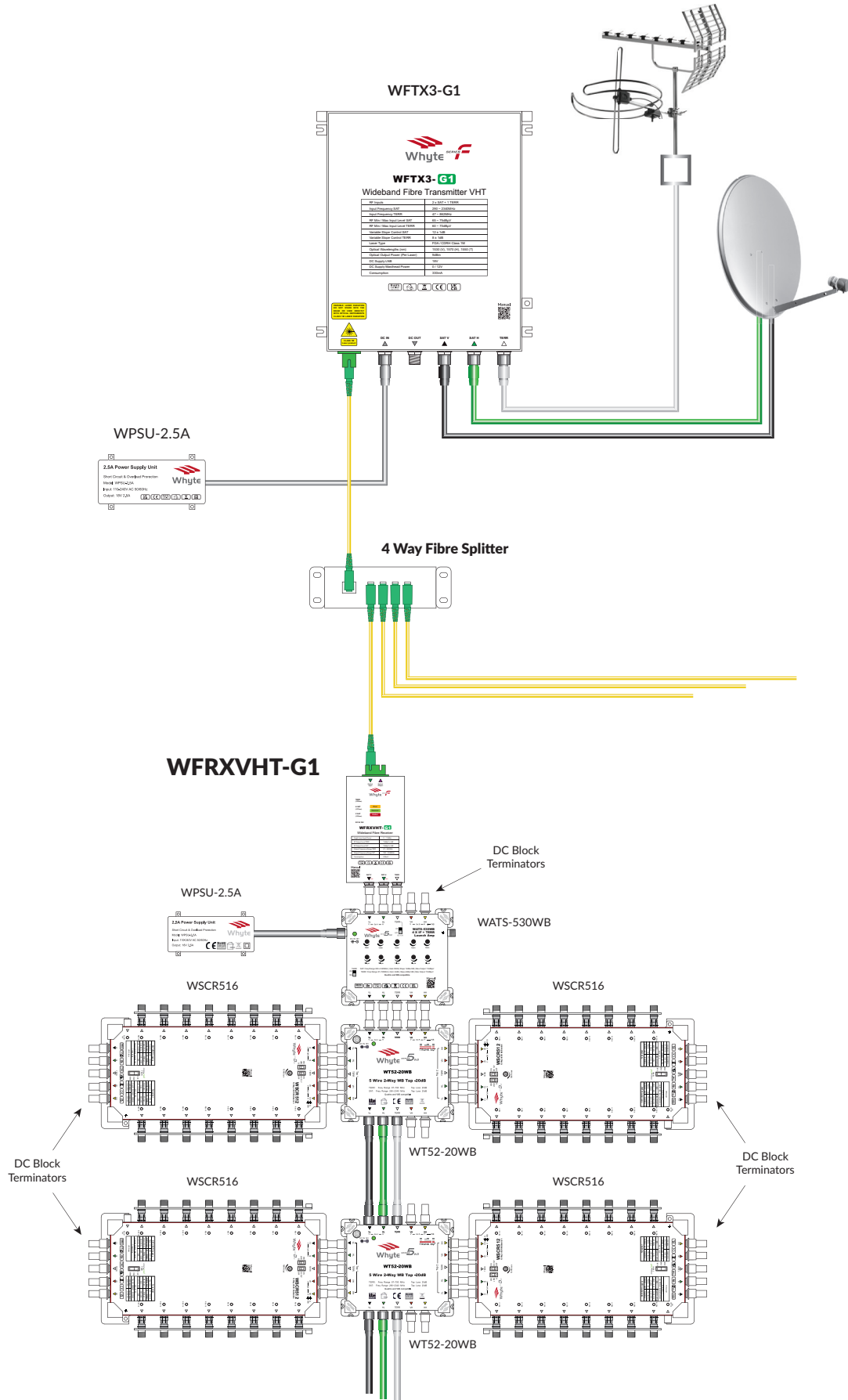
# Series F Configuration Example

## FTTB - DUAL SAT + TERR FIBRE IRS TO THE BLOCK



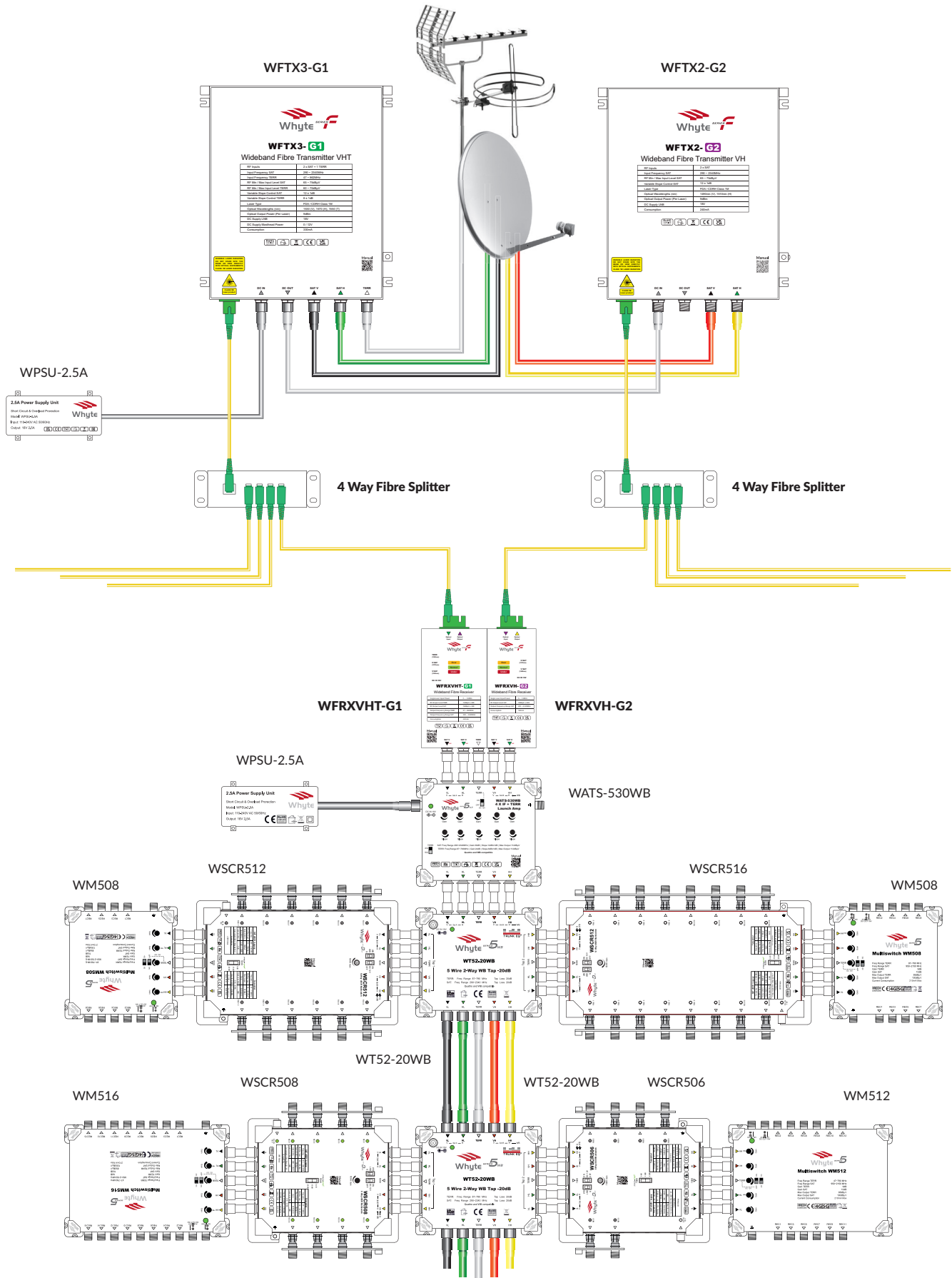
# Series F Configuration Example

## FTTB - WIDEBAND SAT + TERR IRS



# Series F Configuration Example

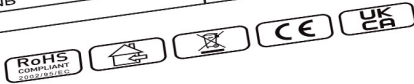
## FTTB - HYBRID QUATTRO IRS





# WFTX2-G2 Wideband Fibre Transmitter VH

RF Inputs	2 x SAT
Input Frequency SAT	290 ~ 2340MHz
RF Min / Max Input Level SAT	65 ~ 75dBµV
Variable Slope Control SAT	12 ± 1dB
Laser Type	FDA / CDRH Class 1M
Optical Wavelengths (nm)	1490nm (V), 1510nm (H)
Optical Output Power (Per Laser)	9dBm
DC Supply LNB	18V
Consumption	240mA



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CLASS 1M LASER RADIATION



DC IN ▲ DC OUT ▼ SAT V ▲ SAT H ▲

V H Laser ON/OFF

18V DC IN 18V DC 18V DC OUT

RF Inp. V Laser V V RF Input Slope V

RF Inp. H Laser H H RF Input Slope H

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CLASS 1M LASER RADIATION



Optical Out.