FRACARRO

New Quad DVB-S2 transmodulators with double slot C.I. Flexmode and USB playing feature.

3DG-4S2-4T / 3DG-4S2-BP

3DGFLEX Evo

The new **3DGFlex Evo** professional headend will introduce many innovative features.

Extreme flexibility!! One of the most innovative features of the new generation modules is the **"Smart & Pool"** function: all the new modules inserted on the same 3DG-BOX exchange between them bidirectionally the contents through the very high speed Back Panel interface (up to 1Gbit/s bidirectional).

In this way each new 3DG "Evo" module is able to manage the signals coming from all the other new modules, with the advantage of being able to create flexible configurations, optimizing the number of elements of the system, especially in case of complex installations.

Also the **"backward compatibility"** concept is very advantageous: the new EVO modules can be managed on the same 3DG-BOX together with the "twin" existing modules (for ex. 3DG-2S2-2T), thus ensuring maximum comfort during the network design. In this way the installer could deploy many digital contents through every MATV coaxial network.

3DG-4S2-4T   **3DG-4S2-BP**

By using the **3DG-4S2-4T** is possible to tune up to 4 indipendent satellite HD or SD transponders coming from the four inputs and even take the contents available on the Back Panel (i.e. "Smart&Pool feature"), decrypt the contents through the Professional CAMs and remodulate the programs on the four "customized" output digital multiplexes.

The **3DG-4S2-BP (without output modulators)** allow to add "reception's capability" on the complete headend system. The module is able to tune up to 4 indipendent satellite HD or SD transponders, decrypt the content and "pool" all the programs to the other new modules inserted on the same 3DG-BOX through the very high speed Back Panel (i.e. "Smart&Pool").

NEW FEATURES: thanks to the new **FlexCAM** operation mode feature, it's possible to decrypt many programs coming from the different SAT inputs, by using the same CAM module (i.e. *Flexible CAM on the OUTPUT*). **3DG-4S2-4T** quad trasmodulator as well as **3DG-4S2-BP** are equipped with two universal slots Common Interface each module that can be used on **FlexCAM** operation mode. With the 3DGFlex EVO new generation modules is now possibile to manage even **the external Audio/Video file playback stored, for ex, in the USB pendrive** (.**TS** file format).
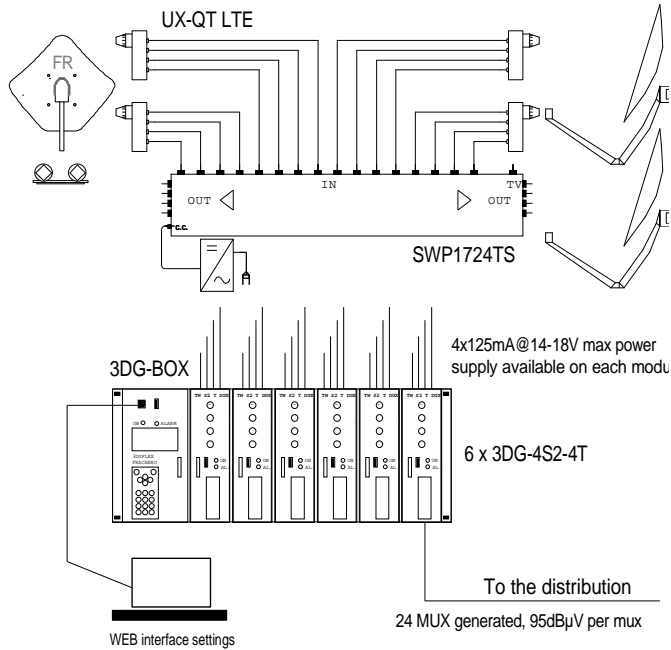
Main Specifications (*)

- **Multi Inputs**: 4 indipendent SAT inputs (DVB-S2/S), "USB input" for external playback content management and Back-Panel in/out (programs shared between the new modules inserted on 3DG-BOX).

- **4xDVB-T or 4xDVB-C output multiplexes** (two pairs of adjacent digital modulators) on **3DG-4S2-4T** version

- **2 Common Interface slots and Optimized CAMs Management**: the new 3DG-EVO modules allows to manage both CAMs modules in two different operation modes:
    - **FlexCAM mode**: it can be forwarded to the same CAM module the programs coming from any SAT input (i.e. Flexible CAM on the OUTPUT)
    - **STANDARD mode**: each CAM module can be associated with a SAT input SAT in order to decrypt the encoded programs coming only from this specific input.

- **New "Smart&Pool" contents management feature:** it's possibile to manage up to 1Gbit/s bidirectional data throughput between all the modules inserted into the headend. (3DGFlex evolution family)

- **3DGFlex-Evo backwards compatibility:** in this way it's possibile to mantain the old modules or use the new modules into the same 3DG-Box

- **ARP 2.0** = Automatic Recovery Procedure to save the higher priority programs and guarantee Continuity of Service when bit rate overflows occurr. All the program are sequentially restored when the global bit rate returns within the limits.

- **AUTO REMAPPING function**: you can change in real time the program inside the mux without rescanning all the TV set along the network.

- **USB Port** to upload/download pre-setted set up or for the firmware upgrade, external audio/video file's playback (.**TS file** format).

- **DVB-T/DVB-C "agile output modulation" selectable via sw on 3DG-4S2-4T transmodulator:** one product to fit every coax network distribution.

- **WEB interface based headend: today is even more intuitive.** The headend setup, and configuration must be done by using the improved web interface built-in; basic setup available by on board keyboard.

- **"Mux-ad-Hoc":** you can create the available muxes by choosing the programs tuned from all the new modules inserted on a same BOX and manage all the descriptor parameters of each mux (ONID, TSID, NetID,…) and each program inside the mux (LCN, SID, PID, Program name..).

		3DG-4S2-4T (*)		3DG-4S2-BP (*)
Fracarro code		283162		283163
Front-End				
N° input	N°	4		
Input frequency	MHz	950÷2150		
Input level	dBµV	50÷80		
Input step tuning	MHz	1		
LNB control		0/14/18VDC, 0/22KHz, DiSEqC 1.0		
Demodulation		DVB-S2 (8-PSK, QPSK), DVB-S (QPSK)		
FEC		1/2, 2/3, 3/4, 5/6, 7/8, AUTO		
Symbol rate	MS/s	2 ÷ 45 (DVB-S/ DVB-S2)		
AFC Range		-5 ÷ +5MHz		
Output Modulation				
N° of generated mux	N°	4 (two pairs of adjacent digital multiplexes)		-
Trasmission standard		DVB-T	DVB-C	-
Bandwidth	MHz	6, 7, 8	(depends on the output SR that was set)	-
Carriers		2k, 8k	-	-
Modulation		QPSK, 16-QAM, 64-QAM	16QAM, 32 QAM, 64QAM, 128QAM, 256QAM	-
Guard interval		1/4, 1/8, 1/16, 1/32	-	-
FEC		1/2, 2/3, 3/4, 5/6, 7/8	Reed Solomon (204, 188)	-
Symbol Rate	MS/s	-	1000 to 6999	-
Spectrum		Normal/Inverted		-
Operating Mode		Normal, Single Carrier		-
RF Output				
Output frequency	MHz	111÷862		-
Output channels		S2÷E69		-
Output step tuning	KHz	250		-
Typical RF output level	dBµV	95		-
Output level adjustment	dB	0÷20		-
Flatness	dB	± 1.5		-
Typical Output MER	dB	36		-
Spurious rejection	dBc	< -50		-
Back Panel In/Out				
Max bitrate	Mbit/s	1000 (bidirectional)		1000 (bidirectional)
Connector		48 pin on back-panel		48 pin on back-panel
General features				
Power consumption	W	20 (typ. with CAMs)		12 (typ. with CAMs)
Connectors	Type	F female (RF), USB (fw upgrade, **TS video file playback**)		
Common Interface		2 x PCMCIA (Standard EN50221, TS10169) , **FlexCAM** or STANDARD mode		
Dimensions (L.x W.x H)	mm	245x208x54		
Operating temperature	°C	-5 ÷ +50 (without CAMs)		
Compliant		The full text of the EU declaration of conformity is available at the following internet address: http://ce.fracarro.com		

(*)Definitive specifications may change without notice.

3DG-4S2-4T / 3DG-4S2-BP examples installation

Example #1

UX-QT LTE

OUT ◁   IN   ▷ TV OUT

SWP1724TS

3DG-BOX

4x125mA@14-18V max power supply available on each module

6 x 3DG-4S2-4T

To the distribution
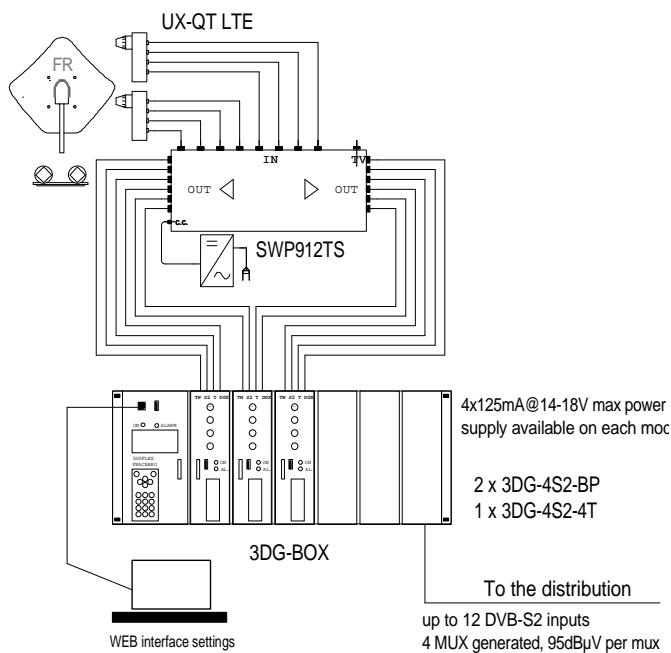
24 MUX generated, 95dBµV per mux

WEB interface settings

The new **3DG-4S2-4T** quad transmodulator can tune up to four different SAT trasponders, decrypt the programs (through CAMs & Smart-Cards – *NOT INCLUDED*) and generate four separate full-band RF Digital Multiplex (DVB-T or DVB-C), 95dBµV each.

Remote supply for LNB is available on each module (max 4x125mA@14/18V total).
Back-panel content sharing between all the new modules contained inside the 3DG-Box

All settings can easily be made using the integrated WEB INTERFACE.

Example #2

UX-QT LTE

OUT ◁   IN   TV ▷ OUT

SWP912TS

4x125mA@14-18V max power supply available on each mod

2 x 3DG-4S2-BP
1 x 3DG-4S2-4T

3DG-BOX

To the distribution

up to 12 DVB-S2 inputs
4 MUX generated, 95dBµV per mux

WEB interface settings

The new **3DG-4S2-BP** increase the reception capability of the complete headend.