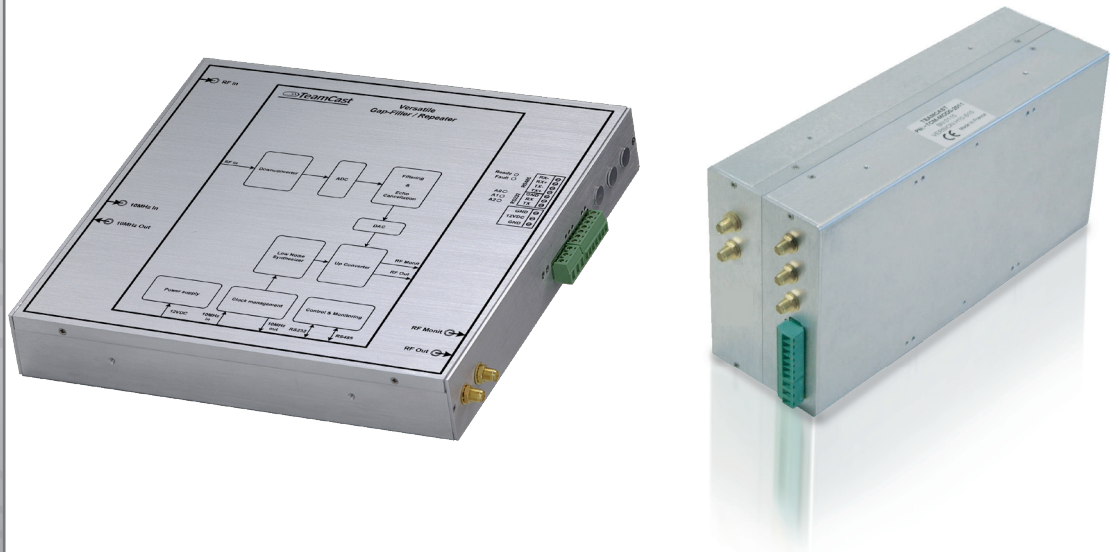


The advanced Gap-Filler engines for terrestrial TV & Radio networks.

- Compact OEM modules
- Fast time to market
- High performance digital processing
- Versatility of Standards

# GFX-0300

## Digital TV & Radio Versatile Gap-Filler Engines



### Key features :

- No need for channel input filter
- SFN compliant Gap-Filler
- High frequency selectivity
- Powerful digital echo canceller
- VHF, UHF supported - Ready for L-Band
- Linear & Non-Linear pre-correction circuits
- Compact size for easy OEM integration

### Description

The GFX-0300 is the most integrated and cost effective versatile Gap-Filler product family addressing the OEM market. It provides the opportunity for transmitter manufacturers to launch their own non-regenerative Gap-Filler and Repeater product ranges for all the major digital terrestrial TV and radio market segments such as DVB-T/H, DAB/T-DMB, ATSC, FLO™, DTMB, CMMB, ISDB-T/T<sub>B</sub>, etc.

#### Compact OEM modules

As with all TEAMCAST modules, the GFX-0300 product consists of a compact and powerful unit. GFX-0300 modules include, within a single package, a RF down-converter, a digital processing platform and an up-converter. Their small size enables the manufacturers to develop swiftly their own small-size Gap-Filler/Repeater product range, that can meet the space constraints of small transmission station installation.

#### High performance digital processing

The GFX-0300 engines can retransmit either on the same frequency (Gap-Filler mode), or on a different channel (Transposer mode). When used in the Gap-Filler mode, they exhibit a low transfer delay and enables Single Frequency Network coverage to be expanded efficiently. All signal processing is done digitally at an intermediate frequency level. An integrated digital echo cancellation algorithm enhances the overall system stability and performances. An additional benefit is the embedded digital shaping filter which enhances performance to give higher frequency selectivity (i.e. higher robustness against adjacent channel interference). Simple to use linear and non-linear pre-correction circuits are incorporated to compensate for output filter and power amplifier characteristics.

#### Emergent DTV standards

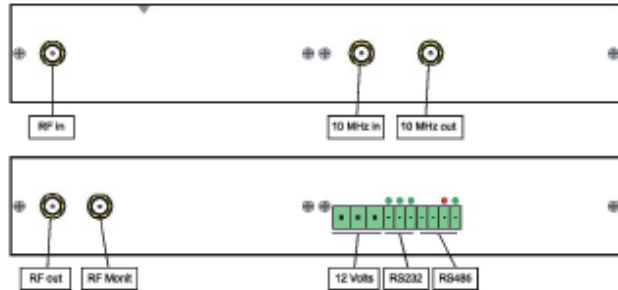
The GFX-0300 takes benefit from TEAMCAST's strategy for rapid module development as new standards and specifications evolve. Initially developed for DVB-T and DVB-H, the GFX-0300 product range now includes new versions for ATSC, FLO™, DTMB (for the Chinese market), CMMB, ISDB-T/T<sub>B</sub> and DVB-T2. A specific model is also available for DAB and T-DMB radio network applications. The GFX-0300 platform can be easily adapted on-request to operate also at L-Band frequencies.

# GFX-0300

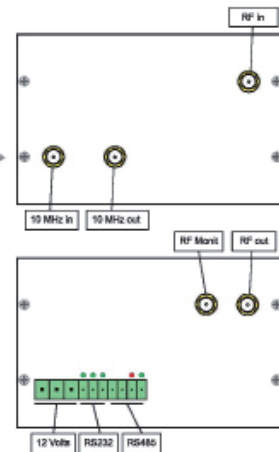
## Digital TV & Radio Versatile Gap-Filler Engines

### Connectors

Size format A



Size format B



### Specifications

#### ■ Standard compliance <sup>(1)</sup>

- (depending on spectrum band/channel bandwidth)
- o UHF/ 8 MHz: DVB-T/H, DTMB, CMMB, DVB-T2
- o UHF or VHF/6 MHz: ATSC\*, FLO™\*, ISDB-T/T<sub>B</sub>
- o VHF/ 1.5 MHz: DAB/T-DMB
- o L-BAND: DAB/T-DMB (on request)

#### ■ Applications

- o SFN Gap-Filler & Transposer

#### ■ RF Input <sup>(1)</sup>

- o VHF frequency range: 170 MHz to 240 MHz
- o UHF frequency range: 470 MHz to 860 MHz
- o L-BAND: on request
- o SMA female connector
- o -72 dBm to -15 dBm, max. 0dBm

#### ■ Echo cancellation

- o Latest state-of-the-art technology
- o Very reactive algorithm
- o High echo signal rejection
- o Multipath and coupling echoes

#### ■ Digital pre-correction circuits

- o Linear pre-correction (for output filter)
- o Non-Linear pre-correction over a 20 MHz bandwidth

#### ■ Output shoulders <sup>(2)</sup>

- o > 55 dB @ 970 kHz with shaping filter (DAB)
- o > 45 dB @ 4.2 MHz with shaping filter (DTV)

#### ■ Control & Monitoring

- o RS-232 C & RS-485

#### ■ Physical

- o Single supply voltage (12 VDC)
- o Power Consumption: 38 W max
- o 220 x 220 x 35 mm (size A)
- o 220 x 110 x 70 mm (size B)
- o Temperature: 0°C to 50°C

(1) Depending on the model.

(2) Values measured with an input signal having a shoulder level

### Ordering Information

xTTM-GFX1-0320	Gap-Filler/Repeater engine - VHF - 1.5 MHz DAB/T-DMB
xTTM-GFX8-0330	Gap-Filler/Repeater engine - UHF - 8 MHz
xTTM-GFX6-0330	Gap-Filler/Repeater engine - UHF - 6 MHz
xTTM-GFX6-0320	Gap-Filler/Repeater engine - VHF - 8 MHz

\*L-BAND versions: available on request, please contact us.