

# COMMANDER G3 TLF300



**WIRELESS  
3G/4G  
COMPATIBLE**

## BUILT TOUGH FOR WIRELESS REMOTE BROADCASTS

**THE COMMANDER G3 WIRELESS IP CODEC IS THE MOST POWERFUL, ROBUST AND RELIABLE PORTABLE BROADCAST AUDIO CODEC IN THE WORLD TODAY...**

All Commander G3 IP codecs feature two module expansion slots which accept your choice of Tieline hardware plug-in modules. This allows broadcasters to send high quality, low-delay live audio over a wide range of wired IP, wireless 3G and 4G networks, POTS/PSTN analog telephone lines, ISDN, X.21, GSM and B-GAN satellite networks.

### EBU N/ACIP COMPATIBLE OVER IP...

All Tieline hardware codecs are EBU N/ACIP Tech 3326 compatible over IP with other codec manufacturers using these standards. Tieline is committed to developing new IP and wireless applications that take advantage of emerging network infrastructures around the globe.

**BUILT TOUGH TO PERFORM RELIABLY EVERY SINGLE DAY IN DEMANDING REMOTE BROADCAST ENVIRONMENTS...**

Thousands of Tieline customers around the world use the Commander G3 portable IP audio codec to deliver rock-solid remote broadcasts every single day! The Commander G3 lets you choose only the network modules you need while also providing reliable auto-reconnect and automatic failover to connections that suit your broadcast requirements.



Wireless Module

### 6 NETWORK INTERFACES

Your choice of Wireless 3G/4G (cellular broadband), Wired IP, POTS, ISDN, GSM, Satellite and X.21. Buy only what you need.

### FLEXIBLE INPUTS/OUTPUTS

Flexible 3 input and 3 output digital mixing capability including 2 balanced mic/line input, 1 unbalanced auxiliary in/out, and 2 balanced outputs.

### HIGH QUALITY ALGORITHMS

Industry Standard and loss-tolerant low bit-rate algorithm options including MPEG Layer II, Tieline Music & MusicPLUS, Tieline Voice, G.711 & G.722.

### LIVE IFB COMMUNICATIONS

Configurable front panel communications buttons for real-time IFB mix-minus communications.

### SIMPLE TO PROGRAM

LAN, USB master/slave and serial interfaces for connection to PC computers for remote control.

### COMMAND & CONTROL OPTIONS

On-board relay and RS-232 control system for local and remote control of equipment at either end of your codec link; control your remote talent's audio input levels from the studio.

**Tieline**   
The Codec Company

## AUDIO OVER IP-THE INTERNET REVOLUTION ...

Attach the Commader G3 to a LAN network port or directly into an ADSL router and deliver up to 22kHz mono and stereo audio over DSL, cable, LAN, WAN and wireless 802.11x broadband networks. Uncompressed (Linear PCM) 24-bit high quality stereo for studio-to-studio managed IP links is also available.

## 3G WIRELESS FREEDOM...

Choose a dedicated 3G wireless UMTS/HSDPA/HSUPA or EVDO Rev 0/Rev1 module to broadcast up to 22kHz live wireless stereo audio from any location with wireless broadband access or failover to GSM voice (Not available in USA, Canada or Latin America). Connect over 4G with 3rd party accessories.



## DIGITAL ISDN

Plug in up to two ISDN modules for mono or stereo 64/128/256Kbps ISDN connections.

## ROCK-SOLID 15kHz POTS

- Use a single POTS module to deliver up to 15kHz mono bidirectional audio over a telephone line
- Add two POTS modules and use two phone lines to send program audio to two sites
- Use 1 channel for program and the other for off-air IFB communications or data
- Bond two POTS channels for phase-locked stereo

## X.21/V.35\*

Plug in the optional X.21 module for mono 64/128 Kbps links, or stereo 64/128/256/384/2000Kbps connections over X.21 networks.

\*Leased line mode only



## AUDIO SPECIFICATIONS

Audio Inputs	2 x Female XLR and 1 x RCA jack Aux
Audio Outputs	2 x Male XLR and 1 x RCA Aux
Headphones	2 x 6.35mm (1/4") Jacks
A/D & D/A Converters	24 bit sigma-delta
IP & 3G IP Sample Frequencies	16kHz, 32kHz
Linear PCM Sampling	16kHz, 24kHz, 32kHz, 48kHz with 12, 16, 20, 24 bits per sample
POTS Sample Frequencies	16kHz, 32kHz
ISDN Sample Frequencies	16kHz, 24kHz, 32kHz, 48kHz
X.21/V.35 Sample Frequencies	16kHz, 24kHz, 32kHz, 48kHz
GSM Sample Frequencies	16kHz, 32kHz
Input Impedance	5 Kohm balanced
Output Impedance	< 50 ohm Balanced
Clipping Level	+18 dBu (inputs and outputs)
Frequency Response	20Hz-22kHz PCM; 20Hz-22kHz over IP/ISDN; 20Hz-15kHz POTS/GSM
Total Harmonic Distortion	<0.01%
Signal To Noise Ratio	Better than 84dB at +4dBm

## CODING & COMPRESSION ALGORITHMS

IP	Tieline Music & MusicPLUS; Voice G3; Linear PCM; G.711, G.722, MPEG Layer 2
Wireless IP/3G	Tieline Music; Tieline MusicPLUS; Voice G3, G.711, G.722, MPEG Layer 2
POTS	Tieline Music; Voice G3;
ISDN	Tieline Music, Tieline MusicPLUS, MPEG Layer 2, G.711, G.722
X.21/V.35	Tieline Music, Tieline MusicPLUS, Linear PCM, , MPEG Layer 2, G.711, G.722
GSM	Tieline Music, Voice G3

## DATA AND CONTROL INTERFACES

LAN	10/100 base-T, RJ45 connector for IP audio and LAN connections
Serial RS232 (DB9)	RS232 up to 115Kbps, with or without CTS/RTS flow control
	Data interface port can be used as a proprietary data channel

## PANEL CONTROLS

Keypad	20 Key
Display	4 x 20 line LCD
Level Indicators	2 x 10 level LEDs with configurable source
Channel On/Off	Volume controlled and matrix router configurable
Cue/intercom	Matrix router configurable
Headphone Monitoring	Volume controlled for each channel
Send Return Mix	Switch between audio send/return or a mix of both
Programmable Hotkeys	4 software configurable Hotkey buttons

## GPIO RELAY CONTROLS

Inputs	2 x inputs: Contact Closure to ground with internal 5V feed at 5mA
	0.15" pitch male phoenix connectors. (12V power connector has two relay inputs for power sensing, one independent and 1 duplicated with phoenix connector
Outputs	2 x outputs: floating solid state switching 48V 100mA
Relay Expansion	Expandable to 8 in and 8 out using optional CAN8+8 product

## GENERAL

Operating Temperature	0°C to 45°C (32°F to 113°F)
Power	12V DC, 1A (without plugin modules) 4 PIN male XLR connector
Dimensions	216 x 218 x 7.5mm or 8.56 x 8.58 x 2.95 inches
Weight	1.2kg or 4lbs

## MODULE INTERFACES

3G	GSM/UMTS/HSDPA and EV-DO wireless modules available
4G	3rd party accessories required.
ISDN	RJ45 Basic Rate S/T; up to 2B channels per module
POTS/PSTN	POTS Modem module with RJ11 connector
GSM	HSCSD 14.4 to 28.8Kbps and CSD 9.6Kbps (requires SIM card)
X.21/V.35	Male DB15; up to 384Kbps compressed, 2Mbps uncompressed
Satellite ISDN	External Satellite phone can be connected to an ISDN module

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Tieline offers a comprehensive 2 Year Warranty.

Errors and Omissions Excepted  
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