



One Device. Unified IP Workflows.



Reporting, Commentary & Off-Tube Remotes with:



ST2110-30



www.tieline.com

Tieline 
The Codec Company

Portable, Powerful, Redefining Broadcast Workflows

ViA Duo is the new generation of trusted ViA technology that truly bridges the gap between field reporting and commentary. Built for reporters and commentators alike, it is an ultra-portable broadcast platform that can operate as an IP codec, AoIP commentary node, or facilitate off-tube broadcasting through support for audio and video feeds.

Simply take the codec to the remote site, power it up, and connect to your preferred network and start broadcasting. There's no need for additional outboard gear like mixers, equalizers, compressors, noise gates, expanders, recorders and playback machines – with ViA Duo it is all-in-one and ready to go!

ViA Duo supports video out, multiple AoIP protocols, plus IP streaming over multiple interfaces. It delivers an all-in-one solution consolidating your remote broadcast, commentary and off-tube broadcasting requirements into a single compact and lightweight box. It is ideal for:

- Reporters to use with a guest
- Two commentators broadcasting sports events
- Announcers working from home
- Talk show and other radio show hosts on the road
- Off-tube commentary, or use as a sports commentary unit over AES67, ST2110-30, Livewire, RAVENNA, or Dante (AoIP and Dante card is optional)



Stream, Record, Play

Stream live audio and view and manage recordings, create playlists of local and imported files, then control playback routing to encoders and other outputs. Record broadcast quality podcasts to removable media or upload your recordings via FTP.



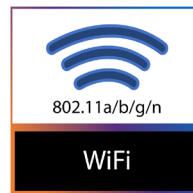
Use as an AoIP Commentary Unit

The multipurpose ViA Duo includes optional support for RAVENNA, Dante, AES67, ST2110-30, Livewire and NMOS so it can be used in broadcast commentary positions or for secondary or sideline commentary positions.



Off-Tube Commentary with Video Out

Your commentary team can receive a live video feed to call a game off-tube, or receive a video feed at the remote site.



Built-in Wi-Fi

Built-in Wi-Fi and web browser connectivity expands your connection options from access points in hotels, fast food chains, or even a smartphone's Wi-Fi hotspot.



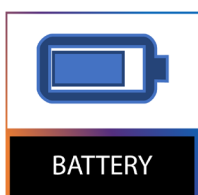
Flexible Cellular, Wi-Fi and Ethernet Connections

Connect with dual Ethernet ports, or wirelessly with a 4G/LTE Micro SIM or compatible USB aircard/modem, or use built-in Wi-Fi (supporting access points including hotels requiring web-browser login) and smartphone hotspots.



Simple & Versatile

ViA Duo is designed with simplicity and portability in mind for user-friendly operation. Plus, each input and decoded stream has a compressor, EQ, Noise Gate & Expander.



Power on the Go!

Portability and performance with a rechargeable Lithium-ion battery. Extend battery performance with features like screen sleep time-out, brightness controls, and automatic low battery power saving measures*.



Admin/Basic modes plus Remote Control

Configure the codec to power-up automatically in 'Basic Mode' to simplify operation and take the hassle out of broadcasting for non-technical users. Fully remote control with the Cloud Codec Controller or Toolbox web-GUI.

*Battery life may vary depending on the type of connection and power-saving mode configured

Live Remote Broadcasts

ViA Duo can operate as an ultra-portable remote IP codec for reporters, sports commentators and radio announcers, as well as broadcasters working from home.

The compact ViA Duo is lightweight and fits in the palm of your hand. It features 2 XLR mic/line inputs and headphone outputs and can send bidirectional stereo or dual mono audio from any remote location to the studio using cellular, Wi-Fi or Ethernet connections.

Customized Communications

With dedicated cue and talkback buttons, the codec integrates seamlessly with communications systems to facilitate mix-minus IFBs and full duplex communications over IP or AoIP networks. Customize cue and talkback matrices with the touch screen to route audio locally to headphones or outputs, or to the studio.

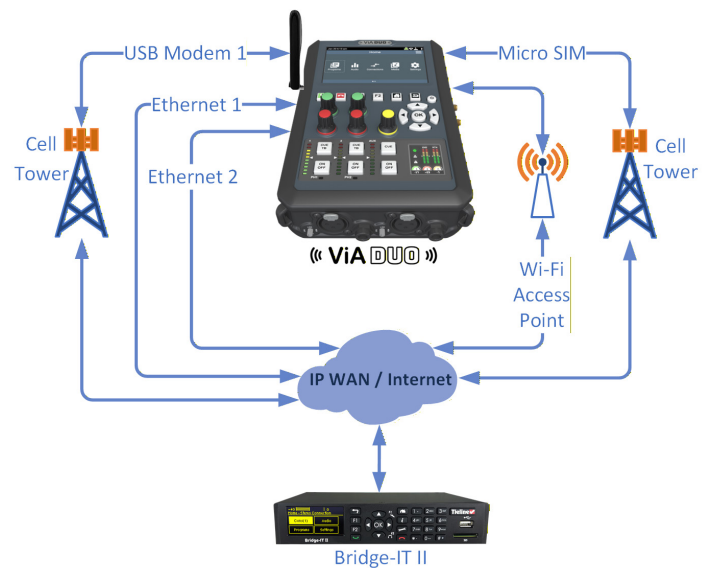
Rock Solid Redundancy Options

ViA Duo delivers reliability with multiple layers of redundancy that can be fully automated to ensure rock solid connections. Auto backup is provided through Tieline's proprietary SmartStream PLUS hitless packet switching, which sets the benchmark for redundant IP streaming over the public internet. Unlike some other manufacturers, hitless packet switching is included FREE!



Tieline's proprietary Fuse-IP data aggregation bonds any two of the following IP interfaces to increase bandwidth capacity:

- Internal Global LTE Modem (Optional)
- External USB air-card/Modem
- LAN1 or LAN2
- Built-in Wi-Fi



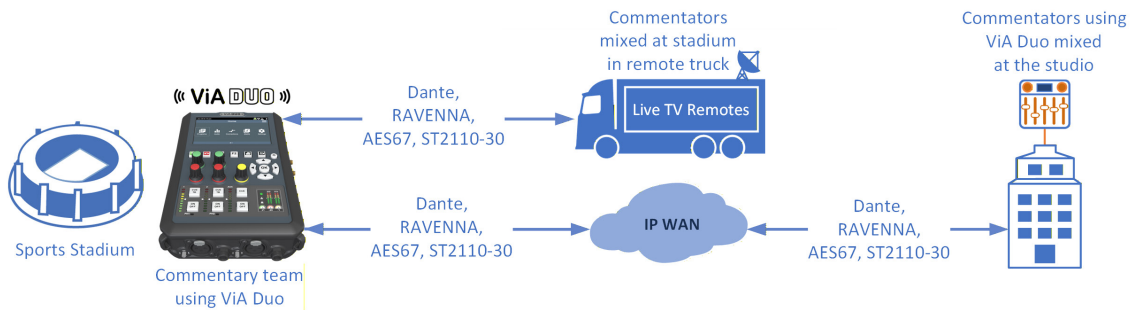
Radio Commentary using Dante

ViA Duo seamlessly integrates with existing analog and AES3 digital infrastructure with optional support for Dante to deliver unprecedented flexibility for radio remotes. Featuring functionality for one or two commentators, you can also integrate Dante audio in/out to expand production possibilities. For example, use ViA Duo to integrate with other equipment like mixers, sound effects mics and more, and send full duplex stereo program audio back to the studio.



ViA Duo for Stadium TV Commentary

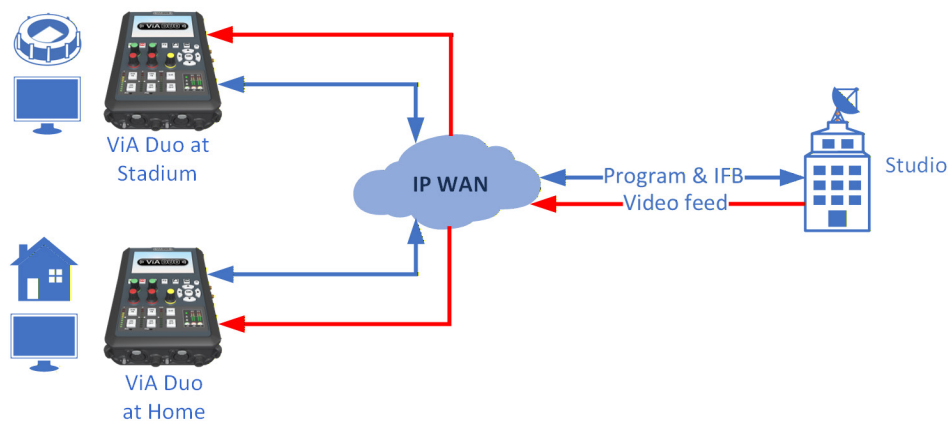
The ViA Duo can be used in a variety of broadcast commentary roles for radio and TV broadcasts. Optional support for AoIP protocols like RAVENNA, Dante, AES67, ST2110-30, Livewire and NMOS facilitates using ViA Duo as an AoIP node in stadium commentary booths or on the sideline. Flexible options include connecting over a LAN to a remote truck at a venue, or over a WAN with a REMI (Remote Integration) use case back to a mixing console at a studio hub.



ViA Duo at a stadium can connect to a remote truck or the studio in a REMI TV broadcasting use case

Off-Tube Commentary Solutions

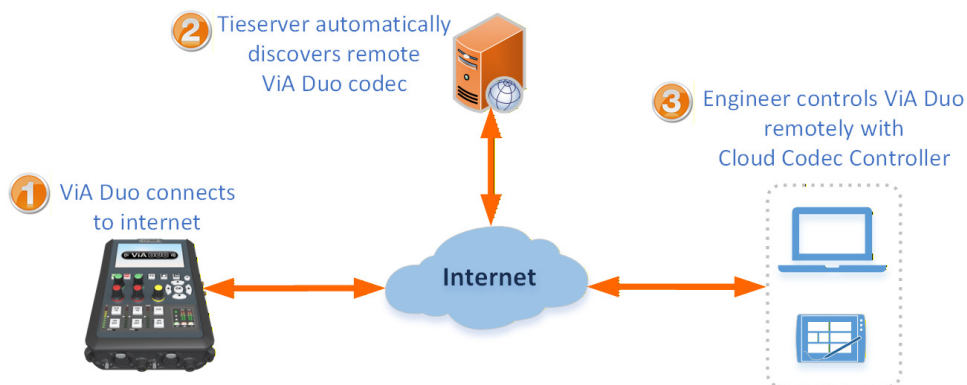
ViA Duo supports off-tube commentary so your commentary team can get a live game day feed and call live from wherever they are in the world - even from the comfort of their own home. You can even use the codec at a stadium and receive a video return feed from the studio including stats and other live or recorded elements of the broadcast. Paired with a real-time mix-minus comms feed, your commentary team will get the full picture.



Off-Tube Commentary Solutions

Full Remote Control Anywhere, Anytime...

Full control of the unit is provided in all scenarios using either the Toolbox Web-GUI embedded in every unit, or the optional Cloud Codec Controller, which is designed for network management and remote control of all Tieline IP codecs.

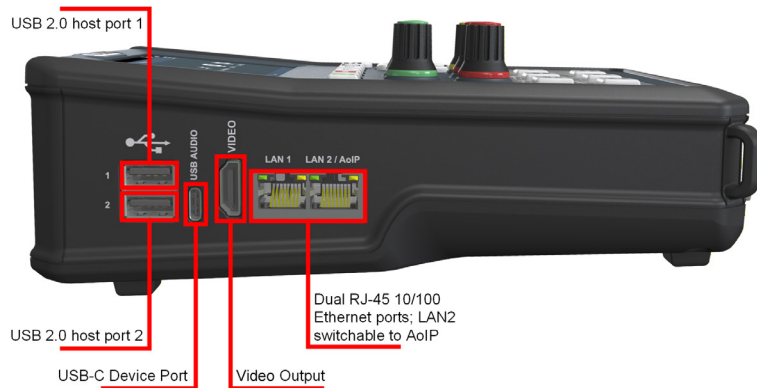


ViA Duo controlled using the Cloud Codec Controller over the internet



Micro SD card slot for backups, firmware upgrades, file record and playback

Dual SMA antenna connections



Optional Features

Internal Global LTE Modem

Internal Dante Card

AoIP Streaming (RAVENNA, AES67, SMPTE 2110-30, Livewire, NMOS)

Video Output Support

Input/Output Specifications

Analog Audio Inputs	2 x Female XLR mic/line inputs
AES3 (AES/EBU) Left/Right Input	1 x female XLR (Channel 1 in; shared with Ch1 analog input); 24 bit inputs with support for sample rates from 32kHz to 96 kHz
LAN1 Port	10/100 Ethernet port for IP streaming over WANs
LAN2/AoIP Port	10/100 Ethernet port for IP streaming over WANs, or configure as Gigabit AoIP port for AoIP streaming* (AES67, ST 2110-30, Livewire+, RAVENNA, or optional Dante*). Note: Dante only supports 10/100.
AoIP Inputs/Outputs* (AoIP Port)	4 x Digital AoIP inputs/outputs via AES67, ST 2110-30, Livewire+, RAVENNA, or optional Dante. Note: AoIP inputs 1 and 2 are shared with USB Aux inputs 1 and 2. Simultaneous AoIP 1 and2 out and Aux USB out supported.
USB-C Device Port	USB-C connector supports bidirectional USB audio via Aux inputs 1 and 2 (Aux inputs 1 and 2 are shared with AoIP inputs 1 and 2)
Micro SIM Card Slot	3FF SIM (Micro SIM) card slot for internal 4G LTE cellular modem* (Optional)
Dual SMA Antenna Connectors	Antenna connections for the internal SIM card
USB 2.0 Host Port 1	USB Type-A supports connecting a single device like a cellular modem, or a tethered cellphone; supports up to 1A for charging and/or powering modems
USB 2.0 Host Port 2	USB Type-A for future use
Video Output	For video out
Headphones	2 x 6.35mm (1/4") Jacks
Micro SD Card Slot	Push-push Micro SD card slot for backup/restore of config, firmware upgrades, and simultaneous file record/playback of MPEG Layer 2, MPEG Layer 3, AAC, uncompressed 24-bit stereo PCM
Mic Phantom Power	Switchable 12V/48V phantom power on analog XLR inputs 1 and 2 (max 10mA per input)
Mic Input Rotary Switch	Line = TBC, Medium = TBC , High = TBC, and CFG = TBC
Preamp Gain	User selectable at TBC
Audio Input Impedance	High Impedance > 5K ohm (line input); approximately 2K ohm (mic input)
Clipping Level	+18dBu
A/D & D/A Converters	24 bit
Frequency Response	20Hz to 20kHz
Total Harmonic Distortion (Analog)	< 0. TBC % (-TBC dB) at TBC dBu unweighted
Total Harmonic Distortion (Digital)	<0.0001% (-120dB) at -1 dBFS
Analog Signal to Noise Ratio	> TBC dB at +TBC dBu, unweighted, 20Hz – 20kHz
Crosstalk	< TBC dB between adjacent channels

Encoding and IP Streaming

Encoding Formats	Tieline Music, Tieline MusicPLUS, Opus, G.711, G.722, MPEG Layer 2, MPEG Layer-3 LC-AAC, HE-AAC, HE-AACv.2, AAC-LD, AAC-ELD, 16/24 bit aptX® Enhanced algorithm. MPEG audio technologies licensed by Frunhofer IIS (http://www.iis.fraunhofer.de/audio)
Uncompressed IP	Linear PCM16/24 bit 32kHz, 44.1kHz, 48kHz sampling
IP Sample Frequencies	8kHz, 16kHz, 32kHz, 44.1kHz, 48kHz
Asymetric Encoding	Supports asymetric multi-format encoding
Protocols	RTP, RIST, DHCP, SIP, DNS, HTTP, IGMP, IPv4/IPv6, RTCP, RTSP, STUN, FTP, SNTP, SSL Security Certificate
SmartStream PLUS	Primary stream plus multiple redundant streams
Fuse-IP	Bond up to 2 IP interfaces to aggregate data
Forward Error Correction	Tieline in-band FEC or separate FEC stream as per RFC2733 and RFC5109

Front Panel

Main Display	4.3 inch TFT Color LED screen with touch screen
Smaller Display	160 x 128 RGB OLED display
Navigation	Touch screen or 5 button keypad navigation
Phantom Power LEDs	PH LED illuminates TBC colour if input 48V phantom power is enabled

Data and Control

Configuration and connectivity	HTML5 Toolbox Web-GUI, AoIP Web-GUI, Cloud Codec Controller (CCC), TieLink Traversal Server
Wi-Fi	Wi-Fi 6: Dual-band (2.4/5 GHz) 1x1 IEEE 802.11a/b/g/n/ax WLAN

IP/AoIP Standards & Specifications

EBU N/ACIP Tech 3326	SIP compliant for audio contribution
I3P EBU Tech 3347	Intercom over IP compliant
N/ACIP 3368	SIP Profiles Compliant
AES67 Compliant	44.1.kHz, 48kHz, 96kHz Sample rates; 16 & 24 Bit, SDP*
SMPTE 2110-30 Compliant	Class A, Ax, B, Bx Sender and Receiver Compliant*
RAVENNA Compliant	Natively supports RAVENNA Stream Discovery and Advertisement*
Livewire Compliant	Natively supports Livewire+ for AoIP streaming*
Dante (Optional)	Install an optional Dante card at purchase for Dante AoIP streaming support*
NMOS Compliant	NMOS IS-04, IS-05, IS-07 Discovery, Registration and Connection Management, Events and Tallys
Ember+	Supports Ember+ control protocol
Supported Audio Frames	125us, 250us, 333us, 1ms, 4ms, 5ms
Clock Modes Supported	Primary Leader, Follower, Follower Only

Advanced Networking

Quality of Service (QoS)	Support for DiffServ (DSCP)
Synchronization	IEEE 1588-2008 (PTPv2)
SAP	SAP v2 (Session Announcement Protocol) as defined in RFC 2974

General

Dimensions	5 5/8" x 2 11/16" x 8 5/32"; 143mm (W) x 68mm (H) x 207mm (D)
Weight (without cellular modem)	2 lb 9 oz/1.16kg (includes 6700mAh battery); 2lb 1oz/0.94kg without battery
Power	Li-ion battery or External 12VDC 3A Power Supply
Power Consumption	TBC
Operating Temperature	0°C to 45°C (40°F to 113°F)
Humidity Operating Range	30% ≤RH ≤90% (0 to 40°C), non-condensing

Battery

Battery Type	Jupio ProLine NP-F750 (7.2V 6700mAh 48.2Wh)
Battery Operation	Up to TBC Hours **
Battery Storage Temperature	1 Month: -20°C - 50°C (-4°F - 122°F); 3 Months -20°C - 40°C (-4°F - 104°F); 1 year: -20°C - 25°C (-4°F - 77°F)
Battery Charge Time (inside codec with power supply attached)	Standard charge time with maximum charge current TBC hrs
Battery Life Expectancy	Discharge capacity drops to 80% of initial capacity at ≥ 500 charging/discharging cycles, as per manufacturer's specifications

* Optional Purchase

**Battery life may vary depending on the type of connection and power-saving mode configured

**Extensive dealer network with global telephone support
in 2 strategic locations around the world**

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